The many faces of social media in business and economics research: Taking stock of the literature and looking into the future

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Abstract

Since their inception more than 15 years ago, social media have become a vibrant research topic in business and economics research. This article presents an integrative literature review taking stock of and showing the many faces of social media in extant research. Based on $N = 1419$ articles published in the leading peer-reviewed business and economics journals in the years 2008–2022, we identify and describe seven overarching research themes, namely, social media as a: (1) market-oriented interaction hub, (2) resource-oriented interaction hub, (3) information market, (4) innovation and business venturing hub, (5) societal challenge, (6) political hub, and (7) data source. Finally, we derive a research agenda to stimulate future research on this increasingly important topic.

KEYWORDS
social media, social network, social networking, Facebook, Twitter, Weibo

1 | INTRODUCTION

Over the past more than 15 years, social media (i.e., "platforms on which people build networks and share information and/or sentiments", Li et al., 2021, p. 52; e.g., Twitter, Facebook, TikTok, and Weibo) have transformed into a global phenomenon. Social media now have more than 4.76 billion active users, representing over 92% of the 5.16 billion worldwide internet users and more than 59% of the world's human population (Statista, 2023). Social media have also become an essential part of many people's lives in terms of time spent, with a daily average use time of 147 min (Statista, 2022). Conceptualized initially as social networks for connecting with friends, social media today serve many more functions, including sharing personal information with followers, discussing products and services, and engaging in political deliberation.

Accordingly, in recent years, business and economics scholars have been increasingly engaging in social media research to understand the business and economic implications of this phenomenon. While business and economics research in the early days of social media focused on the social networking and marketing aspects of social media, today, we witness an enormous bandwidth of functional perspectives that scholars have employed in this context. Thus, the variety of social media research is wide, spanning from obvious and well-researched topics, such as word-of-mouth in social media marketing (Dost et al., 2019), to niche applications, such as using the timing of the US president's Twitter activity to proxy his sleeping behavior as a predictor of his performance (Almond & Du, 2020).

This article aims to provide a broad multidisciplinary overview of the current social media research landscape in business and economics and to showcase the many faces of social media research, including research in finance, accounting, marketing, information systems, innovation, entrepreneurship, and human resource management. Since extant social media-related reviews have focused on surveying the literature within selected sub-fields and taken a narrow disciplinary approach – for example, concentrating on marketing (Cartwright et al., 2021; Lamberton & Stephen, 2016), innovation (Bhimani et al., 2019), trust (Håkansson & Witmer, 2014), business process improvement (Nascimento & Silveira, 2017), and fake news research (George et al., 2021) – the present article contributes to the literature by deliberately taking a broad and integrative approach to identify the many different facets of social media research (Cronin & George, 2023). Thus, this integrative review differs from the extant disciplinary and narrow review articles by zooming out and providing an inclusive perspective on the social media research landscape to account for the phenomenon's multifacetedness. Thereby, this review advances the field by connecting insights from multiple disciplines and highlighting the roads less traveled to inspire novel empirical and conceptual research across disciplines.

The remainder of the article is structured as follows. First, we describe our literature review method. Second, we provide a bibliometric overview of the current literature. Third, the narrative review part identifies seven main research themes and reviews the major contributions and topics within these themes. Finally, the article concludes by highlighting under-researched aspects cutting across the themes and, in closing, deriving directions for future research.

2 | METHOD

Our literature review follows an established three-step iterative process (e.g., Theurer et al., 2018). First, we define and identify the relevant literature. Second, we perform structural and content

analyses of the literature. Third, we map and integrate the literature by clustering it into research themes.

2.1 | Step 1: Definition and identification of the relevant literature

In line with common practice in the field, our literature review includes only English-language articles published in peer-reviewed academic business and economics journals. To capture the relevant peer-reviewed literature in both business and economic research, we relied on two eminent journal lists – namely, (1) for business research, the Academic Journal Guide 2021 by the Chartered Association of Business Schools ("ABS list"; $N = 1703$ journals), and (2) for economics research, the Tinbergen Journal list ("TI journal list"; $N = 399$ journals) in its latest 2016 version. Whereas both lists contain business and economics journals, the focus of the former is on business journals, whereas the focus of the latter is on economics journals. Due to the large number of journals on both lists, the number of journals needed to be restricted to arrive at a manageable number of articles. Therefore, on the ABS list, only journals ranked as 4* or 4, and on the TI journal list only journals with a score of at least 0.3 were selected. Moreover, since the ABS list also contains journals going farther beyond business and economics (e.g., general experimental psychology), we further limited our journal selection to the research area "business economics" in the Web of Science (WoS; i.e., the literature database for this literature review, see below). Due to a partial overlap between the two lists, some journals ranked below 4 on the ABS list are also included in the sample.

To identify social media research broadly and cover the most important social media sites worldwide, we used the following search terms in Clarivate's WoS database: "social media," "social networking sit*," "Facebook," "YouTube," "Instagram," "TikTok," "Douyin," "Snapchat," "Weibo," "Qzone," "Kuaishou," "Pinterest," "Reddit," "Twitter," "Tweets," "Quora," "Tieba," "LinkedIn," "Picsart," "Likee," "Stack Exchange." One of the search terms needed to be mentioned in at least one of the following fields: "Title," "Abstract," "Author Keywords," and "Keywords Plus" (i.e., reflecting the overarching search category "Topic" in WoS). We used the journals' ISSN (print) to identify articles in the respective journals. The search was finalized in March 2023 and included all articles published until December 31st, 2022 (i.e., with the publication year 2022 and excluding "early access" articles without a publication year). Using this search procedure and excluding duplicate articles resulting from the combination of both lists, our final sample consists of $N = 1419$ articles. These articles span a time period of 14 years, from 2008 to 2022. Our integrative review sample deliberately contains all articles resulting from the above-mentioned search procedure, including, for example, editorials, comments, and articles where social media plays an important role but is not necessarily the sole or primary focus.

2.2 | Step 2: Structural and automated content analyses

To get an overview of the structural properties and general content of the identified research, the articles were analyzed regarding their main contents (word cloud analysis), number of publications over time, total and per year citation numbers, and the journals with the most social media articles. Figure 1 displays a word cloud based on all keywords – except "social media" – of the identified articles, where the size of each word reflects its frequency among the keywords (WordClouds.com, 2023).

FIGURE 1 Word cloud based on all articles' keywords.

FIGURE 2 Number of social media articles per year over time.

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As evident in Figure 1, the most important words include information, management, communication, performance, technology, content, networks, data, and behavior, reflecting the focus of most social media research in business and economics. Notably, many of the largest words are related to marketing and communication (e.g., customer, product, marketing, brand), giving an indication of the share of research on this topic. Further important words include investor, sentiment, returns, communities, knowledge, news, Facebook, and Twitter, indicating further well-researched topics. In sum, the word cloud documents the variety of topics in social media research in business and economics, while revealing the well-researched focus areas.

To examine the publication frequency over time, Figure 2 plots the number of articles published per year. As expected, overall, there has been a steady growth in the number of articles, especially in the past few years.

The most frequently cited articles are displayed in Table 1 (total number of citations) and Table 2 (citations per year). Reflecting the picture of the word cloud, many of the most frequently cited articles are in the field of marketing. However, articles on social media in the context of politics, entrepreneurship and innovation, financial markets, and even recent research in the context of the COVID-19 pandemic are among the most cited publications.

Finally, Table 3 displays the journals with the highest number of articles on social media. This table shows the broad bandwidth of business and economics fields, reflecting the variety of research perspectives scholars have taken when investigating the phenomenon of social media.

2.3 | Step 3: Identification of research themes

After a detailed content analysis of the literature base, the articles were classified according to their content focus to identify the main research themes. This iterative process resulted in the identification of seven main research themes that reflect the many faces of social media research:

1. *Social media as a market-oriented interaction hub: Engaging with consumers and other stakeholders*, focusing on marketing and sales topics, such as word-of-mouth, branding, consumer engagement, sales promotion, and market intelligence.
2. *Social media as a resource-oriented interaction hub: Engaging with (potential) employees and other professionals*, including research on human resources management (e.g., applicant screening and recruitment), professional discussion forums, corporate blogging, and enterprise social media (e.g., knowledge management).
3. *Social media as an information market: Predicting financial market and firm performance outcomes*, focusing on finance topics, such as investor and general population sentiment and financial market outcomes (e.g., stock returns).
4. *Social media for innovation and business venturing*, including innovation management (e.g., idea generation communities) and entrepreneurship topics (e.g., crowdfunding).
5. *Social media as a societal challenge*, focusing on the societal problems associated with social media, such as cyberbullying, social media addiction, and fake news.
6. *Social media as a hub for political deliberation and action*, including research on social media in the context of public organizations and political processes (e.g., elections).
7. *Social media as a data source*, including research viewing social media primarily from a data collection perspective, allowing scholars to measure otherwise hard-to-assess phenomena (e.g., personality characteristics of executives and relationships between countries).

TABLE 1 Most frequently cited articles (total).

Authors	Year	Title	Journal	Total citations
Allcott, H.; Gentzkow, M.	2017	Social media and fake news in the 2016 election	Journal of Economic Perspectives	1780
Xiang, Z.; Gretzel, U.	2010	Role of social media in online travel information search	Tourism Management	1464
Trusov, M.; Bucklin, R.E.; Pauwels, K.	2009	Effects of word-of-mouth versus traditional marketing: Findings from an internet social networking site	Journal of Marketing	1201
Verhoef, P.C.; Kannan, P.K.; Inman, J.J.	2015	From multi-channel retailing to omni-channel retailing: Introduction to the special issue on multi-channel retailing	Journal of Retailing	1026
Kozinets, R.V.; de Valck, K.; Wojnicki, A.C.; Wilner, S.J.S.	2010	Networked narratives: Understanding word-of-mouth marketing in online communities	Journal of Marketing	970
Nambisan, S.; Lyytinen, K.; Majchrzak, A.; Song, M.	2017	Digital innovation management: Reinventing innovation management research in a digital world	MIS Quarterly	796
Stieglitz, S.; Dang-Xuan, L.	2013	Emotions and information diffusion in social media-sentiment of microblogs and sharing behavior	Journal of Management Information Systems	751
Belk, R.W.	2013	Extended self in a digital world	Journal of Consumer Research	709
Goh, K.Y.; Heng, C.S.; Lin, Z.J.	2013	Social media brand community and consumer behavior: Quantifying the relative impact of user- and marketer-generated content	Information Systems Research	693
Nambisan, S.	2017	Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship	Entrepreneurship Theory and Practice	676
Hennig-Thurau, T.; Malthouse, E.C.; Friege, C.; Gensler, S.; Lobschat, L.; Rangaswamy, A.; Skiera, B.	2010	The impact of new media on customer relationships	Journal of Service Research	643

(Continues)

TABLE 1 (Continued)

Authors	Year	Title	Journal	Total citations
Tilson, D.; Lyytinen, K.; Sorensen, C.	2010	Digital infrastructures: The missing IS research agenda	Information Systems Research	574
Munar, A.M.; Jacobsen, J.K.S.	2014	Motivations for sharing tourism experiences through social media	Tourism Management	531
Liu, Z.W.; Park, S.	2015	What makes a useful online review? Implication for travel product websites	Tourism Management	516
Krasnova, H.; Spiekermann, S.; Koroleva, K.; Hildebrand, T.	2010	Online social networks: Why we disclose	Journal of Information Technology	496
Nambisan, S.; Wright, M.; Feldman, M.	2019	The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes	Research Policy	442
Aral, S.; Walker, D.	2011	Creating social contagion through viral product design: A randomized trial of peer influence in networks	Management Science	435
Hollebeek, L.D.; Srivastava, R.K.; Chen, T.	2019	S-D logic-informed customer engagement: Integrative framework, revised fundamental propositions, and application to CRM	Journal of the Academy of Marketing Science	430
Kumar, A.; Bezawada, R.; Rishika, R.; Janakiraman, R.; Kannan, P.K.	2016	From social to sale: The effects of firm-generated content in social media on customer behavior	Journal of Marketing	413
Parasuraman, A.; Colby, C.L.	2015	An updated and streamlined technology readiness index: TRI 2.0	Journal of Service Research	408

TABLE 2 Most frequently cited articles (citations per year).

Authors	Year	Title	Journal	Citations per year
Allcott, H.; Gentzkow, M.	2017	Social media and fake news in the 2016 election	Journal of Economic Perspectives	296.7
Nambisan, S.; Lyytinen, K.; Majchrzak, A.; Song, M.	2017	Digital innovation management: Reinventing innovation management research in a digital world	MIS Quarterly	132.7
Verhoef, P.C.; Kannan, P.K.; Inman, J.J.	2015	From multi-channel retailing to omni-channel retailing: Introduction to the special issue on multi-channel retailing	Journal of Retailing	128.3
Nambisan, S.	2017	Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship	Entrepreneurship Theory and Practice	112.7
Xiang, Z.; Gretzel, U.	2010	Role of social media in online travel information search	Tourism Management	112.6
Nambisan, S.; Wright, M.; Feldman, M.	2019	The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes	Research Policy	110.5
Hollebeek, L.D.; Srivastava, R.K.; Chen, T.	2019	S-D logic-informed customer engagement: Integrative framework, revised fundamental propositions, and application to CRM	Journal of the Academy of Marketing Science	107.5
Kellogg, K.C.; Valentine, M.A.; Christin, A.	2020	Algorithms at work: The new contested terrain of control	Academy of Management Annals	103.3
Altig, D.; Baker, S.; Barrero, J.M.; Bloom, N.; Bunn, P.; Chen, S.; Davis, S.J.; Leather, J.; Meyer, B.; Mihaylov, E.; Mizen, P.; Parker, N.; Renault, T.; Smietanka, P.; Thwaites, G.	2020	Economic uncertainty before and during the COVID-19 pandemic	Journal of Public Economics	98.7
Appel, G.; Grewal, L.; Hadi, R.; Stephen, A.T.	2020	The future of social media in marketing	Journal of the Academy of Marketing Science	94.0

(Continues)

TABLE 2 (Continued)

Authors	Year	Title	Journal	Citations per year
Trusov, M.; Bucklin, R.E.; Pauwels, K.	2009	Effects of word-of-mouth versus traditional marketing: Findings from an internet social networking site	Journal of Marketing	85.8
Stieglitz, S.; Dang-Xuan, L.	2013	Emotions and information diffusion in social media-sentiment of microblogs and sharing behavior	Journal of Management Information Systems	75.1
Kozinets, R.V.; de Valck, K.; Wojnicki, A.C.; Wilner, S.J.S.	2010	Networked narratives: Understanding word-of-mouth marketing in online communities	Journal of Marketing	74.6
Belk, R.W.	2013	Extended self in a digital world	Journal of Consumer Research	70.9
Goh, K.Y.; Heng, C.S.; Lin, Z.J.	2013	Social media brand community and consumer behavior: Quantifying the relative impact of user- and marketer-generated content	Information Systems Research	69.3
Laato, S.; Islam, A.K.M.N.; Islam, M.N.; Whelan, E.	2020	What drives unverified information sharing and cyberchondria during the COVID-19 pandemic?	European Journal of Information Systems	66.3
Gomber, P.; Kauffman, R.J.; Parker, C.; Weber, B.W.	2018	On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services	Journal of Management Information Systems	65.0
Berger, J.; Humphreys, A.; Ludwig, S.; Moe, W.W.; Netzer, O.; Schweidel, D.A.	2020	Uniting the tribes: Using text for marketing insight	Journal of Marketing	65.0
Liu, Z.W; Park, S.	2015	What makes a useful online review? Implication for travel product websites	Tourism Management	64.5
Lee, D.; Hosanagar, K.; Nair, H.S.	2018	Advertising content and consumer engagement on social media: Evidence from Facebook	Management Science	61.6

TABLE 3 Journals with the most articles on social media.

Rank	Journal	Number of publications	% of total number of articles in sample
1	Tourism Management	103	7.26%
2	Information Systems Research	82	5.78%
3	MIS Quarterly	73	5.14%
4	Journal of Management Information Systems	68	4.79%
5	Journal of Marketing	41	2.89%
6	Journal of the Academy of Marketing Science	40	2.82%
6	Management Science	40	2.82%
7	International Journal of Research in Marketing	37	2.61%
8	European Journal of Information Systems	36	2.54%
9	Journal of Marketing Research	35	2.47%
10	Marketing Science	32	2.26%
11	Journal of Consumer Research	28	1.97%
12	Finance Research Letters	23	1.62%
13	Journal of Information Technology	22	1.55%
14	Accounting, Auditing & Accountability Journal	21	1.48%
15	Journal of Strategic Information Systems	20	1.41%
16	European Journal of Operational Research	17	1.20%
17	Journal of Consumer Affairs	16	1.13%
18	Economics Letters	15	1.06%
19	Information Economics and Policy	14	0.99%
20	International Review of Economics & Finance	13	0.92%
20	Journal of Economic Behavior & Organization	13	0.92%
20	Futures	13	0.92%

3 | FINDINGS

The following sections review selected and representative articles in each of the seven research themes. The seven overarching research themes are further grouped into sub-themes representing specific research streams.

3.1 | Theme 1: Social media as a market-oriented interaction hub: Engaging with consumers and other stakeholders

The largest portion of research has viewed social media as an interaction hub where consumers and other stakeholders interact with companies and with each other regarding consumer-related issues. This research can be broadly divided into three strands, namely, research focusing on social media-based (1) consumer engagement with companies and brands; (2) drivers and predictors of sales; and (3) market intelligence and consumer listening.

Consumer engagement with companies and brands. Research in this area has concentrated on the one hand on (a) how characteristics of social media contents and users influence brand and

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company engagement in the form of "liking," sharing, commenting, "following," and word-of-mouth (e.g., Dhaoui & Webster, 2021; Jalali & Papatla, 2016; Kokkodis et al., 2020; Kuem et al., 2017; Li & Xie, 2020; Malhotra & Bhattacharyya, 2022; Rishika & Ramaprasad, 2019) and on the other hand on (b) the management of complaints, crises, recalls, and firestorms (e.g., Béal & Grégoire, 2022; Golmohammadi et al., 2021; Gunarathne et al., 2017; Hogreve et al., 2019; Johnen & Schnittka, 2019; Ma et al., 2015; Sun et al., 2021).

Regarding (a) how social media contents and users influence brand and company engagement, research has concentrated on finding relevant predictors of social media users' engagement behaviors (e.g., liking and sharing). The extant results across many different empirical settings have generally established that visual content (e.g., photos; Li & Xie, 2020), ease of reading (Pancer et al., 2019), emotionality (Tellis et al., 2019), humor (Lee et al., 2018), fit between message and users (Zhang et al., 2017), messages from individuals that share followers and followees (Peng et al., 2018), social influence through contagion (Susarla et al., 2012), and higher levels of firm-induced social media activity (e.g., more posts; Dhaoui & Webster, 2021) give rise to more engagement in the form of likes and shares. Interestingly, recent research shows that too rich visual design elements (e.g., combining animations and pictographs) may actually harm engagement (Bashirzadeh et al., 2022) and that there is a u-shaped relationship between visual complexity and consumer liking (Overgoor et al., 2022). There also seems to exist temporal variation in engagement in response to different contents, such that, for example, the engagement with virtue content (i.e., offering long-term knowledge benefits) is stronger in the morning, whereas the engagement with vice content (i.e., offering immediate gratification) is stronger in the evening (Zor et al., 2022).

Whereas earlier research has used survey designs to investigate the consumer characteristics leading to higher engagement in social media (Chen et al., 2014; Kuem et al., 2017), more recent approaches use digital trace data directly on the platform to identify users that can be engaged in more participation (Kokkodis et al., 2020; Shin et al., 2020). Overall, these findings suggest that actively managing social media pays for companies in terms of user engagement with their brands. In this vein, more recent research has investigated the role of influencers (i.e., influential individuals on social media) in brand engagement and developed guidelines for successful influencer marketing (Fainmesser & Galeotti, 2021; Karaguer et al., 2022; Leung et al., 2022; Mallipeddi et al., 2022; Pei & Mayzlin, 2022).

Comparatively fewer studies in this area have investigated the role of offline firm and industry characteristics on consumer engagement. For instance, Liu et al. (2018) have shown that different types of agglomeration in the competitive environment (e.g., overlap of product types and number of firms in the industry and in the area) influence the volume of electronic word-of-mouth. Investigating the organizational and internal firm antecedents of social media engagement, Marchand et al. (2021) find that firms' social media resources and capabilities improve both social media performance and brand perception. Another less researched but emerging area is the role of mobile telecommunication (e.g., smartphones) in consumer engagement, where recent work has found significant differences in consumer behavior between desktop and mobile phone use (Melumad et al., 2019; Melumad & Meyer, 2020).

In contrast to the antecedents of positive consumer engagement with companies and brands, comparatively fewer studies have investigated (b) the management of complaints, crises, recalls, and firestorms. Customer complaints and other negative consumer interactions on social media have the potential to significantly harm firm reputation and entail further negative consequences because the complaints of single customers and firms' reactions (or non-reactions) are observed

by a large audience (Hansen et al., 2018). Thus, it is crucial for firms to find adequate ways of managing such negative customer feedback (Herhausen et al., 2019; Mousavi et al., 2020).

Interestingly, although there are positive effects of active complaint interventions (Hogreve et al., 2019), several studies also show that actively managing complaints may have adverse consequences for firms in terms of, e.g., creating more complaints and leading to lower levels of perceived brand quality (Golmohammadi et al., 2021; Ma et al., 2015; Sun et al., 2021). Scholarly attention has also been paid to strategies to mitigate the negative effects of complaints on social media, such as using humor, accommodative recovery (e.g., apologies and compensation), and defensive responses (Béal & Grégoire, 2022; Johnen & Schnittka, 2019), as well as to the role of complainer characteristics (Gunarathne et al., 2017). For instance, Gunarathne et al. (2017) demonstrate that customers who have more influence in social media tend to be more satisfied with complaint handling. Moreover, firms tend to attend more to complaining customers with more followers, and these customers also get faster responses, whereas the response rate drops if multiple users are mentioned (Gunarathne et al., 2018). Notably, recent research taking a more differentiated perspective on firestorms has found that social media firestorms can also have positive effects and enable collective action (Matook et al., 2022).

Drivers and predictors of sales. Rather than focusing on user engagement, such as sharing and virality as an outcome, the literature in this stream investigates whether social media activities (e.g., user- and firm-generated content) lead to or can predict sales. Indeed, a large body of empirical evidence, including a meta-analysis, finds positive relationships between electronic word-of-mouth (eWOM) and both online and offline sales across a variety of industries (Chen et al., 2015; Dewan & Ramaprasad, 2012; Goh et al., 2013; Hernandez-Ortega et al., 2022; Kumar et al., 2013; Stephen & Galak, 2012; You et al., 2015). Thus, there is now ample evidence that social media content may predict sales.

In this context, a specific research stream has focused on predicting movie box office revenues and TV viewership based on social media posts showing substantial predictive effects (Hennig-Thurau et al., 2015; Seiler et al., 2017; Song et al., 2019; Vujic & Zhang, 2018). For instance, Song et al. (2019) demonstrate that microblogging user-generated content and the volume of enterprise microblogging on Weibo predict movie box office revenues. Related research has focused on how similarity in characteristics between social media users influences sales (Adamopoulos et al., 2018). For instance, Todri et al. (2022) show that followers who are geographically more proximal to users posting on Twitter are more likely to make purchases, which the authors explain with increased social identity based on closer physical location.

While most studies have concentrated on the positive effects of social media engagement on sales, fewer studies have investigated its harmful effects, such as how posting about or following brands can actually backfire in terms of sales (Bar-Gill & Reichman, 2021). In this vein, Grewal et al. (2019) show that posting about identity-relevant (as opposed to purely functional) products may reduce subsequent purchase intentions, which the authors attribute to the fact that consumers may have already fulfilled their identity signaling needs by engaging with the brand on social media, which, in turn, reduces their motivation to fulfill these needs by actually purchasing identity-relevant products. Insightfully, in the context of retailing, Wang et al. (2020) show that although firms' sending out non-customized and information-only posts may increase short-term sales (in their study: by 6%), doing so may concurrently disproportionally increase the propensity to unfollow firms' accounts (in their study: by 280%), ultimately harming long-term sales. Increasingly, research has also started to compare different social media and document differential effects across platforms, such as Facebook, Twitter, LinkedIn, and Instagram (Hildebrand & Schlager, 2019; Wang, Guo, et al., 2021) as well as through the integration of platforms (Huang et al., 2017).

Similarly, there has been some research on the differential effects of mobile versus desktop-based social media use on purchase intentions (Grewal & Stephen, 2019).

Market intelligence and consumer listening. Studies in this research stream aim at investigating the potential of making market research inferences by analyzing large amounts of textual and other social media data (Abbasi et al., 2019; Berger et al., 2020; Culotta & Cutler, 2016; Hamilton et al., 2017; Hu et al., 2019; Rust et al., 2021; Tim et al., 2020; Zhang & Moe, 2021). For instance, Zhang and Moe (2021) developed a brand favorability monitoring approach based on Facebook data for 3300 brands and 205 million users that also accounts for biases related to social media posters. Similarly, Rust et al. (2021) show that brands can be monitored in real-time using Twitter comment mining for the world's top 100 brands.

Whereas most of this research has focused on text data, visual listening approaches have been recently increasingly developed since image data are proliferating and may surpass text data in the near future (Klostermann et al., 2018; Liu et al., 2020). For instance, Liu et al. (2020) developed a method that makes it possible to mine visual content posted on social media to assess users' brand images. There have also been attempts to examine potential biases when using social media data for market intelligence, such as relying on only one social media platform, ignoring differences between platforms, and not taking into account the dynamics of discussions (Hamilton et al., 2017; Schweidel & Moe, 2014).

3.2 | Theme 2: Social media as a resource-oriented interaction hub: Engaging with (potential) employees and other professionals

In this theme, research has viewed social media as a resource-oriented interaction hub where companies engage with employees, potential employees (i.e., applicants), and other professionals. Accordingly, the studies within this theme can be broadly divided into two strands: research focusing on (1) social media in the context of human resource management (HRM) and (2) enterprise social media (ESM), professional discussion forums, and corporate blogging.

Social media in HRM. Several studies have examined whether and how social media can be used for making employee recruitment decisions (e.g., Acquisti & Fong, 2020; Jeske & Shultz, 2016; McDonald et al., 2022; Roth et al., 2020; Roulin & Levashina, 2019; Van Iddekinge et al., 2016; Zhang et al., 2020). Overall, the extant findings indicate that there is currently no consensus on whether using social media is beneficial in making recruitment decisions and that the usefulness seems to depend on the specific social media platform. In this vein, whereas some studies find that LinkedIn can be used to make valid inferences about individuals' characteristics, such as extraversion, cognitive abilities, and communication skills (Roulin & Levashina, 2019), other studies suggest that Facebook may not be useful for making valid hiring decisions (Van Iddekinge et al., 2016). Moreover, more recent research shows that social-media-based assessments (i.e., cyber-vetting) can lead to biases on the grounds of political affiliation (Roth et al., 2020; Wade et al., 2020) and discrimination against minorities based on characteristics, such as religion and foreign origin (Acquisti & Fong, 2020).

Another prominent theme in this research stream is job search and career-related issues (Baruffaldi et al., 2017; Feuls et al., 2014; Garg & Telang, 2018; Gee, 2019; Gee et al., 2017; Gorbatov et al., 2021; Theurer et al., 2022). The extant findings suggest that social media help in forming support networks for unemployed individuals but that these individuals underutilize these networks (Feuls et al., 2014). In this vein, it seems that high-status individuals (i.e., individuals with high network value) are being positively selected into professional social networking sites by invitations

to join rather than individuals who are unsatisfied with their career status themselves selecting into professional social networking sites to improve their career situation (Brenner et al., 2020).

Interestingly, there is evidence that, in contrast to Granovetter's well-known weak ties hypothesis, strong ties rather than weak ties are found to be more valuable for job search success in the context of social media (Garg & Telang, 2018; Gee et al., 2017). Recent evidence shows that jobseekers devote more attention to negative than positive WOM about jobs and employers on social media (Yu et al., 2022) and that using social media (concretely: LinkedIn) for job search can also be detrimental to individuals' job search self-efficacy and success (Johnson & Leo, 2020). However, personal branding on Twitter seems to benefit executives' job market outcomes (Chen et al., 2021).

Other themes with substantial research attention include the influence of social media on unions and unionization (Frangi et al., 2020; Maffie, 2020; Panagiotopoulos & Barnett, 2015; Pasquier et al., 2020; Patrick-Thomson & Kranert, 2021), labor productivity and job performance (Ali-Hassan et al., 2015), and employee voice (Ellmer & Reichel, 2021; Martin et al., 2015). Specifically, concerning unions, there is evidence that social media interaction between workers positively influences attitudes toward unions (Maffie, 2020) and may act as a digital complement or even substitute for unionization (Pasquier et al., 2020; Patrick-Thomson & Kranert, 2021).

Regarding labor productivity, extant findings suggest that social media mostly negatively influence labor productivity (Sarbu, 2017), job performance in routine tasks (Ali-Hassan et al., 2015), and perceived task accomplishment (Sonnentag et al., 2018). On the other hand, there also seem to exist indirect positive effects on innovative job performance (Ali-Hassan et al., 2015). Moreover, research has found positive effects on job performance in the context of intra-organizational social media (Lu et al., 2015). The studies on employee voice show that social media act as an outlet for employees' emotions which not only reflect the actions undertaken by the organization (Steinbach et al., 2021) but also may trigger changes in the organization (Toubiana & Zietsma, 2017). Moreover, research has investigated the tension between firms' social media policies and employees' use of social media for private activities and negative comments about the employer, showing that many employees engage in both (Thompson et al., 2020).

ESM, professional discussion forums, and corporate blogging. A considerable amount of research has investigated the antecedents and consequences of knowledge creation and sharing (Beck et al., 2014; Kaschig et al., 2016; Leonardi, 2014; Lukyanenko et al., 2014; Lukyanenko et al., 2019; Neeley & Leonardi, 2018; Rode, 2016; Tan et al., 2022). Generally, there is evidence that ESM use benefits organizational knowledge sharing and, thus, organizational learning (Leonardi, 2015, 2018). Notably, Rode (2016) shows that primarily extrinsic motivation (i.e., reputation and reciprocal benefits) fosters employees' knowledge sharing in ESM. Similarly, Tan et al. (2022) show that appreciation (e.g., positive ratings and votes) foster continued knowledge contributions and that appreciation cannot be compensated for by attention (e.g., number of views). Interestingly, however, more politely written answers in discussion forums tend to be considered as more high-quality answers by question askers (Lee et al., 2019).

Neeley and Leonardi (2018) demonstrate that non-work-related content motivates employees to use social media sites, helping to build trust among employees and, in turn, enabling knowledge sharing. However, non-work-related content also may lead to tensions which, in turn, may hinder building knowledge for enacting routines (Neeley & Leonardi, 2018). In a similar vein, Huang et al. (2015) demonstrate that leisure-related blogging has positive effects on the readership of work-related content; thus, when organizations do not allow leisure-related blogging, work-related knowledge sharing may decrease. Further positive effects of ESM have been documented in a variety of organizational contexts, including positive effects on job performance (Lu et al.,

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2015), idea generation (van Osch & Bulgurcu, 2020), boundary spanning (Van Osch & Steinfield, 2016, 2018), and new hire socialization (Koch et al., 2012; Leidner et al., 2018).

3.3 | Theme 3: Social media as an information market: Predicting financial market and firm performance outcomes

A large body of research has investigated social media as an information hub that can be used to predict financial market outcomes, such as stock prices, market indices, and firm performance (e.g., Tobin's q). This research can be broadly divided into three strands using three different kinds of information signals to predict financial market outcomes: (1) research focusing on investor sentiment; (2) research focusing on information posted by firms' and firm executives' social media accounts; and (3) research focusing on using social media data as a measure of the general populations' sentiment (e.g., general mood) as information signals to predict financial market outcomes.

Investor sentiment as an information signal. Most research by far has focused on predicting financial market indicators, such as stock returns, trading volume, and volatility, using investor sentiment as an information signal (e.g., Affuso & Lahtinen, 2019; Cookson & Niessner, 2020; Farrell et al., 2022; Jiao et al., 2020; Rakowski et al., 2021; Renault, 2017; Sprenger, Sandner et al., 2014; Sprenger, Tumasjan et al., 2014).

The empirical evidence mainly demonstrates positive associations between social media (e.g., Twitter, used by most studies) message sentiment and further message characteristics (e.g., volume and disagreement) and financial market indicators. For instance, based on 250,000 stock-related Tweets from 2010, an early study by Sprenger, Tumasjan, et al. (2014) finds significant relationships between the Twitter message characteristics of message sentiment, volume, and disagreement on the one hand and the stock characteristics of stock returns, trading volume, and volatility on the other hand. Similarly, Affuso and Lahtinen (2019) find economically significant effects of sentiment on daily returns, such that negative sentiment has a larger impact than positive sentiment. Although microblog sentiment seems to be mostly influenced by market movements, there is evidence for a bidirectional causality between sentiment and stock returns (Deng et al., 2018). Likewise, in a quasi-natural experiment using Twitter outages, Rakowski et al. (2021) find that Twitter influences stock trading. However, other studies do not provide evidence in favor of a causal interpretation (e.g., Jiao et al., 2020).

Whereas some research suggests that traditional news media contain genuine news and precede social media signals that, in turn, seem to repeat and discuss the traditional news' information (Jiao et al., 2020; Peng, Zhang, et al., 2022), other research finds a two-way flow whereby the influence of social media information on traditional media is stronger than vice versa (Milas et al., 2021). However, in the former evidence, certain traders view repeated social media signals as genuine new information and trade on them, which is consistent with a "correlation neglect" or "echo chamber" effect interpretation (Jiao et al., 2020, p. 64). Relatedly, Fan et al. (2020) examine Tweets posted by automated social media bots, finding significant associations between such bot Tweets and stock returns, trading volume, and volatility in the context of FTSE 100 firms. Their findings suggest that bots play a seeding role in enhancing noise trading. Furthermore, they point to the importance of establishing social media codes of practice to prevent the potential spread of misinformation that retail investors are especially sensitive to.

However, there is also research finding no economically meaningful relationships between Twitter information and stock outcomes (e.g., Behrendt & Schmidt, 2018; Lachanski & Pav, 2017).

For instance, Behrendt and Schmidt (2018) take an intraday perspective to study individual-level stock return volatility and also find significant co-movements of intraday volatility and Tweet information for all Dow Jones Industrial Average firms. However, they also find that the effects are economically negligible. Thus, professional investors may not benefit from using Twitter information for their forecasting in intraday and individual-level stock trading.

There is now considerable evidence that the social media sentiment effect (a) is driven by retail and novice investor activity and (b) matters more for firms with higher levels of information asymmetry, such as small firms and firms with less coverage (e.g., Bartov et al., 2018; Ding et al., 2020; Peng, Zhang, et al., 2022; Rakowski et al., 2021; Renault, 2017). For instance, in the context of the microblogging platform StockTwits, Renault (2017, p. 25) finds that "the first half-hour change in investor sentiment predicts the last half-hour S&P 500 index ETF return", and, having investigated users' investment approach, he concludes that there is direct evidence of intraday level noise trading driven by sentiment. Notably, the pattern whereby social media sentiment matters more for smaller firms and firms with higher levels of information asymmetry is also evident in the context of firm-initiated social media activity which will be reviewed in the following paragraphs.

Information posted by firms and firm executives as an information signal. Fewer studies focus on the effects of firms' and firm executives' social media activity on financial market outcomes (e.g., Al Guindy, 2021; Cao et al., 2021; Chung et al., 2020; Feng & Johansson, 2019; Kim & Youm, 2017; Lacka et al., 2022). Overall, these studies document significant relationships between firm-generated content and financial market indicators. For example, Lacka et al. (2022) demonstrate that firm-generated Twitter content impacts stock prices in the context of S&P 500 information technology firms. Interestingly, Tweets comprising both valence (positive or negative) and subject matter information regarding consumer or competitor orientation had permanent price impacts, with negative-valence Tweets regarding competitors having the largest permanent price impact. In contrast, Tweets comprising only one type of information exhibited only temporary price information (Lacka et al., 2022).

Echoing this finding, Cao et al. (2021) show that firms disclosing negative news about their industry peers on Twitter experience abnormal returns over the market and industry, suggesting that negative disclosures about competitors function as positive self-disclosures for the publishing firms. Studying firm responses on Facebook business pages, Chung et al. (2020) find that firms' responses to negative customer messages (but not firms' self-initiated posts and responses to positive customer messages) are positively related to firm performance, as indicated by abnormal returns and Tobin's q.

Similar to the findings in the context of investor sentiment and investor attention, research focusing on firm and firm executive information finds that social media sentiment especially matters in the context of small firms and firms characterized by comparatively large information asymmetry (e.g., Al Guindy, 2021; Blankespoor et al., 2014; Feng & Johansson, 2019). In this vein, using all NYSE, AMEX, and NASDAQ listed firms, Al Guindy (2021) demonstrates that while firms that post (versus do not post) information on social media have a lower cost of equity capital, this effect is even more pronounced for firms with high levels of information asymmetry—that is, smaller firms and firms with few analyst followings and few institutional holdings.

Similarly, in the context of the Chinese microblogging platform Sina Weibo, Feng and Johansson (2019) show that for firms wherein a board chair possesses a Weibo account, there is more firm-specific information contained in stock prices, and this effect is stronger for firms that are smaller, newly listed, and have less analyst coverage. Generally, research has established that firms strategically use social media as a channel for financial information disclosure and dissemination

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and that investors indeed pay attention to this information (Elliott et al., 2018; He et al., 2022; Jung et al., 2018; Mazboudi & Khalil, 2017; Nekrasov et al 2022.; Yang & Liu, 2017).

Social media data measuring the general population's and consumer sentiment as an information signal. Several studies have used social media sentiment as an indicator reflecting information about external events or entities (e.g., Abu Bakar et al., 2014; Danbolt et al., 2015; Huang, 2018; Lehrer et al., 2021; Nguyen et al., 2020). For instance, Abu Bakar et al. (2014) studied the "Monday effect" (i.e., that returns are, on average, negative on Mondays) using mood data from Facebook (i.e., the Gross National Happiness index; GNH) and demonstrated that the aggregated mood contained in Facebook users' status updates significantly predicts Monday returns. Moreover, they show that the Monday effect disappears when controlling for mood, providing further evidence that mood may drive the Monday effect.

Using the same sentiment indicator from Facebook, Danbolt et al. (2015) find a positive relationship between Facebook's GNH and bidder announcement returns. Focusing on consumer sentiment, Huang (2018) shows that more positive consumer opinions sourced from 14.5 million Amazon.com product reviews from 2004 to 2015 are positively associated with abnormal stock returns, revenues, and earnings surprises. Regarding consumer confidence measurement, Lehrer et al. (2021) provide evidence that Twitter-based consumer confidence indeed improves the out-of-sample forecast of the traditional Conference Board's consumer confidence index (CCI). Together, these and related studies provide substantial support for the notion that social media-based consumer sentiment measures can forecast financial market outcomes.

3.4 | Theme 4: Social media for innovation and business venturing

There has also been substantial interest in social media as a platform for facilitating innovation (Candi et al., 2018; Marion et al., 2014; Roberts et al., 2016; Safadi et al., 2021; Schlagwein & Hu, 2017) and business venturing (Fischer & Reuber, 2014; Greenwood & Gopal, 2015; Meurer et al., 2022; Schou et al., 2022; Smith et al., 2017; Veer et al., 2022). In the research stream on innovation, most research has concentrated on investigating social media-based idea-generation communities and co-creation of new products and services with consumers, while in the research stream on business venturing, studies have focused on social media in the context of crowdfunding and as a facilitator of entrepreneurial processes.

Innovation. In sum, the empirical evidence suggests that social media use is positively related to firms' innovation performance (Lam et al., 2016; Roberts et al., 2016) and absorptive capacity (Schlagwein & Hu, 2017). In this vein, a range of studies has investigated firms' social media use in new product development (Du et al., 2016; Katona, 2015), idea generation (Stanko, 2016; Zhu et al., 2019), and customer co-creation (Bosch-Sijtsema & Bosch, 2015; Dong & Wu, 2015; Suseno et al., 2018), finding positive effects overall, while some earlier research had suggested that social media were not helpful for new product development (Marion et al., 2014).

Notably, we know much less about the dark side of social media-based idea-generation activities and co-creation. For instance, Gatzweiler et al. (2017), representing one of the few studies investigating negative aspects in social-media-based idea generation activities, conceptualize and examine "destructive deviant co-creation" (e.g., malicious protests, ridicule, and mocking), which poses a substantial risk for the hosting firm. However, they also shed light on "constructive deviant content" (e.g., provocative, humorous, and norm-violating content), which, in turn, may lead to positive outcomes, such as challenging and further developing initial ideas.

Business venturing. Studies within this theme have often investigated the role of social media in the context of crowdfunding (Hong et al., 2018; Li et al., 2017; Thies et al., 2016). The empirical evidence shows that social media may act as an amplifier of crowdfunding projects, leading to higher levels of funding success (Li et al., 2017; Thies et al., 2016). Moreover, social media have also been shown to be helpful in different stages of the entrepreneurial process. For example, growth-oriented entrepreneurial firms' communication on Twitter (e.g., conveying positive affect and relational orientation) can increase potential customers' perceptions of quality and distinctiveness (Fischer & Reuber, 2014). Moreover, using Reddit as an empirical context, Meurer et al. (2022) identify four affordances in the realm of social support that social media provide to entrepreneurs: resolving problems, reframing problems, reflecting on situations, and refocusing thinking and efforts. Likewise examining Reddit, Schou et al. (2022) show that social media may act as learning spaces for entrepreneurs where they get the opportunity to develop skills and knowledge, challenge each other, collect ideas, and talk about their fears and uncertainties. In the context of new venture internationalization, research demonstrates that social media help entrepreneurial ventures position themselves in strategic networks, which in turn helps them to address the liabilities of newness, smallness, and foreignness (Fraccastoro et al., 2021). Moreover, social networking sites may help firms become more internationally oriented (Williams et al., 2020).

Social media have also been shown to act as a signal in the context of entrepreneurial finance. For instance, Tumasjan et al. (2021) show that Twitter sentiment about technologies (e.g., artificial intelligence, 5G, and blockchain technology) predicts VCs' valuations of startups whose business models build on these technologies. However, Twitter sentiment does not predict long-term startup success in terms of acquisitions and initial public offerings (IPO), whereas patents predict both valuations and long-term startup success. Similarly, startup social media activity has been shown to be related to venture capital financing (Aggarwal & Singh, 2013; Nigam et al., 2020) and IPO value, with social media use being even more effective for B2C firms and firms with more coverage by traditional media (Mumi et al., 2019). Interestingly, the social media presence of entrepreneurs also reflects entrepreneurial failure, with Twitter messages becoming less emotional in tone and indicating more psychological distress but also more self-assurance and reflection after business failure (Fisch & Block, 2021).

3.5 │ Theme 5: Social media as a societal challenge

Increasingly, especially in recent years, research has come to see social media as a challenge for society and, accordingly, focused on topics such as well-being, cyberbullying, harassment, addiction, loneliness, privacy issues, social engineering, fake news, and misinformation. These studies can be grouped into two broader research streams, namely (1) societal challenges at the individual level (e.g., cyberbullying, well-being, and addiction) and (2) societal challenges at the network level (e.g., fake news).

Individual level. Studies investigating social media as a societal challenge at the individual level have concentrated on cyberbullying (Chan et al., 2019; Wong et al., 2021), well-being (Allcott et al., 2020; Krasnova et al., 2015), addiction (Allcott et al., 2022; Bhargava & Velasquez, 2021; Osatuyi & Turel, 2020), and privacy issues (Acquisti et al., 2020; Cascavilla et al., 2018; Ong et al., 2022; Quach et al., 2022). Overall, research on cyberbullying has focused more on individual-level psychological predictors (e.g., cognitive processes of bullies) and macro-level predictors (e.g., environmental factors) than on IT artifacts; however, the latter have been the focus of more recent research (Lowry

et al., 2016). For instance, in the field of cyberbullying, studies have investigated social media affordances (e.g., information retrieval about users, editability to deny bullying acts) and design features (e.g., identifiability and monitoring awareness) as predictors of bullying (Chan et al., 2019; Lowry et al., 2017).

Regarding well-being, most studies show adverse effects of social media on individuals' well-being (Allcott et al., 2020; Bao et al., 2021; Braghieri et al., 2022; McDool et al., 2020), while only a few studies show positive effects (Wenninger et al., 2019). For instance, in a randomized experiment in the United States, Allcott et al. (2020) find that deactivating one's Facebook account led to higher levels of subjective well-being. Braghieri et al. (2022) demonstrate in a quasi-experimental setting that the introduction of Facebook negatively impacted student mental health, identifying the facilitation of unfavorable social comparisons as a mechanism. Likewise, in China, Bao et al. (2021) find that social media browsing led to decreased subjective well-being, driven mainly by relative income and social comparison. Similarly, envy was identified as a predictor of reduced well-being (Krasnova et al., 2015). In contrast, Wenninger et al. (2019) show that social media can also positively affect well-being, specifically as a result of targeted reciprocity-evoking activities (e.g., chatting, giving and receiving feedback). On the other hand, Castellacci and Tveito (2018), drawing on a comprehensive literature review, suggest that it is the interaction between personal characteristics and individuals' activities in different life domains that explains the differential effect of a more positive versus negative impact of the Internet in general, and social media in particular, on individuals' well-being.

Importantly, recent research has increasingly attended to social media addiction, noting that social media are intentionally designed to be addictive, creating ethical concerns (Bhargava & Velasquez, 2021). For instance, Chapman et al. (2021) show how Foursquare seduces its users to gain control over users' behavior in order to extract economic value, and Hoong (2021) demonstrates that individuals indeed overuse social media (i.e., use them more than they desire) because of limited self-control. Therefore, scant but emerging research has focused on designing interventions to reduce excessive social media use (Osatuyi & Turel, 2020).

Finally, in the area of privacy research, the extant findings suggest that rather than being careless, most users are not aware of privacy issues (Ozdemir et al., 2017; Tow et al., 2010) and are not capable of attaining the desired levels of privacy (Acquisti et al., 2020). In this regard, research has developed systems to detect unintentional information leakage (e.g., in the context of Facebook comments; Cascavilla et al., 2018).

Network level. The scholarly interest in the mechanisms underlying fake news has been skyrocketing in the past years. Accordingly, many studies have investigated the triggers, actions, and outcomes related to fake news (for a recent multi-disciplinary review, see George et al., 2021). In business and economics, fake news research has focused on the spread, detection, and mitigation of fake news (Wang et al., 2022; Wei et al., 2022). For instance, Horner et al. (2021) demonstrate that strong emotional reactions toward fake news headlines were predictive of increased interaction and sharing behavior related to the fake news. Moreover, the participants were more likely to believe those (fake) news stories that aligned with their own political views (see also Kim & Dennis, 2019). This pattern was also found in related research documenting increased sharing of fake news conforming to one's political views (Turel & Osatuyi, 2021).

Increasingly, not only human actors but also bots (Salge et al., 2022) are spreading fake news (Hajli et al., 2022; Ross et al., 2019), thereby creating additional challenges in fake news mitigation interventions. In this regard, several mitigation interventions have been examined, including measures such as fact-checking, fake news reporting, automatic fake news detection, flagging and correcting false news, forwarding restrictions, identity verification, verification badges, and

different kinds of ratings, such as article or source ratings by users and experts (Gimpel et al., 2021; King et al., 2021; Moravec et al., 2019; Ng et al., 2021; Schuetz et al., 2021; Wang, Pang, et al., 2021; Zhang et al., 2019).

Although some of the measures may successfully mitigate the spread of fake news (e.g., expert and user ratings), other measures may work only under specific circumstances (e.g., correction messages) or create additional challenges and side effects (e.g., increasing echo chambers). For instance, one notable side effect is the "implied truth effect," reflecting that fake headlines that are not flagged as fake news are considered validated and, therefore, are seen as more accurate than similar headlines in a control group where no tagging was used at all (Pennycook et al., 2020). Overall, as yet, there appears to be no agreed-upon or optimal solution for combatting fake news spread in social media. Interestingly, financial markets seem to price fake news correctly, such that the abnormal trading volume and stock price reaction are less pronounced for fake news than for legitimate news (Clarke et al., 2021).

3.6 | Theme 6: Social media as a hub for political deliberation and action

In this theme, business and economics scholars have investigated social media in the context of public sector organizations (e.g., social media use by public organizations), political processes (e.g., government communication, elections, movements, and revolutions), and public sentiment (e.g., polarization).

Public sector organizations. The extant studies have focused on the predictors of social media use by public sector organizations, such as administrative culture, organizational capacities, and municipal resources (Ma, 2014; Zhang & Feeney, 2020). Moreover, there is evidence regarding the conditions under which social media use by public organizations is beneficial (Kim et al., 2015; Ma, 2014; Park et al., 2016; Zhang & Feeney, 2020). For instance, government use of Twitter is related to enhanced trust in the government due to higher levels of transparency, directness of contact, and participation (Kim et al., 2015; Park et al., 2016; Porumbescu, 2016). Furthermore, social media also seem to enhance public service delivery quality (Young, 2021) and public engagement (Agostino & Arnaboldi, 2016).

Political processes. Several studies investigated the role of social media in social and political movements (Selander & Jarvenpaa, 2016), such as in the context of the Egyptian revolution (Acemoglu et al., 2018; Oh et al., 2015; Venkatesan et al., 2021) and the Russian protest movements (Enikolopov et al., 2020), and found that social media seem to play a positive role in supporting such movements (Leong et al., 2019). In turn, fewer studies have focused on how the government can use social media to build collective identity and mobilize citizens. For instance, in the context of the COVID-19 outbreak, La Torre et al. (2022) show how the Italian government engaged citizens to support social distancing using a hashtag-based campaign (#istayathome).

Beneficial effects of social media have also been found for reducing corruption (Enikolopov et al., 2018; Jha & Sarangi, 2017), reducing electoral irregularities (Garbiras-Diaz & Montenegro, 2022), enhancing the alignment between democratic representatives and their constituents (Mousavi & Gu, 2019), gathering community intelligence to cope with social crises (Oh et al., 2013), and intensifying political competition and thereby reducing the barriers to entering politics (Petrova et al., 2021). Former US President Donald Trump's heavy Twitter activity provided researchers with the opportunity to study the effect of presidential Tweets on economic outcomes. Scholars indeed found significant effects, such as negative sentiment toward Russia being associated with ruble depreciation (Afanasyev et al., 2021) and statements on the Fed (in the

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context of Trump's pressure on the Fed to cut interest rates) being related to lower long-term interest rates.

Public sentiment. Assessing public sentiment and investigating whether and how it may influence political discourse or even help predict political outcomes has long been at the heart of social media research (Tumasjan et al., 2010). In this vein, there has been mixed evidence on whether and how social media sentiment can predict political outcomes, such as election results (Cerina & Duch, 2020; Huberty, 2015), or shape public discourse (Miranda et al., 2016). On the other hand, whereas there is evidence of the polarization of public opinion in social media ("echo chambers", "filter bubbles"), more nuanced research also documents opinion diversification and increased moderation (Kitchens et al., 2020; Shore et al., 2018), partly fueled by social media bots (Gorodnichenko et al., 2021). For example, Levy (2021) demonstrates that Facebook algorithms lead to lower exposure to counter-attitudinal news, thereby increasing polarization. Similarly, in terms of Facebook likes, users engage with congenial rather than uncongenial posts regarding politicians (Garz et al., 2020). In a highly cited study in the context of the 2016 presidential election, Allcott and Gentzkow (2017) show that ideologically segregated social media networks enhance the effect of believing stories favoring the preferred presidential candidate.

3.7 | Theme 7: Social media as a data source

Research in this theme has viewed social media primarily as a data source to assess phenomena that are otherwise difficult or impossible to measure. Thus, in this research strand, the focus of the investigation is not social media as a phenomenon per se but rather the data that social media provide to study other phenomena (e.g., Barbos & Kaisen, 2022; Boegershausen et al., 2022; Bourreau et al., 2022; Chau et al., 2020; Dugoua et al., 2022; Ge et al., 2016; Jiang et al., 2018; Kuchler et al., 2022; Lee et al., 2022; Makridis, 2022; Peng, Teoh, et al., 2022; Sinclair et al., 2022; Tambe, 2014; Zhang & Ram, 2020).

Scholars have used social media data for a large variety of research purposes, such as measuring public sentiment and awareness regarding specific topics (e.g., attitude toward working from home via aggregate Twitter posts; Zhang et al., 2021); intra-firm employment-related information (e.g., working conditions via Glassdoor reviews; Hope et al., 2021); personality traits, often of samples that are hard to survey (e.g., Big Five personality traits of executives via their Twitter posts; Winkler et al., 2020); individuals' behaviors (e.g., presidential sleeping behavior via his Twitter account activity; Almond & Du, 2020); group behaviors (e.g., sleeplessness of city inhabitants via aggregate Weibo keyword analysis; Heyes & Zhu, 2019); relationships between individuals and between aggregated geographical entities, such as countries (e.g., social connectedness via Facebook connections; Bailey et al., 2021); and relationships between other entities (e.g., brand relationships via Facebook users' brand engagement; Yang et al., 2022).

For instance, based on text data analysis, Hope et al. (2021) use Glassdoor employee reviews to measure financial analysts' perceived work-life balance. In a similar vein, Min et al. (2021) use Twitter data to measure the daily emotions related to working from home at the state level in the United States. Using Twitter accounts, Winkler et al. (2020) examined the personality traits of Chief Marketing Officers to examine whether the Big Five traits moderate the relationship between venture maturity and web traffic. Based on keywords in Tweets following a TV show about teen pregnancy, Kearney and Levine (2015) assessed the interest in birth control as a result of the show.

Rather than assessing text data, Bailey et al. (2021) use Facebook network data to construct a measure of the pairwise social connectedness between 170 countries and 332 European regions to predict the extent to which there is trade between two countries. Furthermore, observing the timing of the then-US President's Twitter account activity, Almond and Du (2020) proxied his sleep duration, finding a negative relationship between sleep duration and public performance. Finally, using brand engagement data from Facebook users, Yang et al. (2022) constructed a novel market structure measure representing brand relationships that exist beyond traditional product–market boundaries as defined in the standard industry classification systems (e.g., North American Industry Classification System). Thus, overall, social media has been shown to provide a rich pool of digital trace data that can be used by business and economics researchers to validly assess different existing and new phenomena and constructs.

4 | DISCUSSION AND AVENUES FOR FUTURE RESEARCH

Social media continue to be a pervasive phenomenon influencing billions of people's daily lives. As a result, business and economics research on social media has increasingly grown over the past 15 years. Based on a comprehensive literature review, this article reveals the many faces of social media research in business and economics by identifying seven key research themes covering almost all sub-disciplines. Although, as can be expected from the nature of social media, marketing and communication topics have been most prominently investigated in extant research, ample studies cover the full range of social media use in the economy and society.

Building on the extant findings and recent developments in social media, we distilled eight overarching research topics for future investigation that cut across the identified research themes (Tables 4 and 4). These eight research topics represent, on the one hand, avenues less taken or neglected in prior research. On the other hand, these research topics reflect recent general developments in social media that scholars have paid less attention to thus far. In this vein, Tables 4 and 4 summarize the overarching eight research topics for future investigation and provide sample research avenues for each of the seven key research themes identified in this review. The following paragraphs describe the eight research topics and resulting research avenues.

Adverse effects of social media. Although, as this review has shown, studies have increasingly addressed the adverse effects of social media in terms of societal challenges (e.g., cyberbullying, addiction, fake news), the adverse effects for companies, such as in the context of customer engagement, financial market outcomes, innovation, business venturing, and data source use have been investigated to a lesser extent. Thus, we see a predominance of studies on the positive contribution and potential of social media, which calls for a better balance in examining the why, when, and how of adverse effects. Accordingly, we need more research shedding light on the reasons and circumstances under which social media use may backfire for companies and individuals (e.g., adverse effects of customer engagement, social overload in the context of ESM, and financial market manipulations; see Table 4). In this vein, we also need more intervention studies testing concrete measures to combat these adverse effects.

Beyond text data. The overwhelming majority of research to date has clearly relied on text data, which is reasonable given that text has been the dominant communication form in the past years. However, videos and pictures increasingly complement or even replace text in "traditional" social media (e.g., Twitter posts increasingly contain pictures and videos rather than only text). Moreover, "traditional" video-based social media like YouTube offer ample data and opportunities for investigation (e.g., regarding fake news spread) but have been relatively underused, probably also due to the more complex data analyses required for videos (Zhou et al., 2021). More recently

TABLE 4 Future research directions.

Research topics	Research theme	Sample research avenues within research themes
Adverse effects of social media	(1)	Caveats and backfiring effects of customer engagement, sales promotion, and market intelligence
	(2)	Dark side of social media in HRM (e.g., privacy, social engineering, manipulation of employer image)
	(2)	Negative effects of ESM engagement (e.g., oversharing, social overload)
	(3)	Financial market manipulations through social media (e.g., short squeezes)
	(5)	Testing interventions to combat negative effects (e.g., cyberbullying)
Beyond text data	(1)	Role of picture and video applications for customer engagement, branding, word-of-mouth, market intelligence
	(2)	Validity of applicant screening based on video and picture data (e.g., personality assessment)
	(3)	Predictive validity of investor sentiment measures via videos, pictures, memes, emojis, likes, re-post numbers and other data
	(5)	Comparing the spread of fake news, addictive behaviors, cyberbullying in the context of videos, pictures, and other features
	(7)	Testing videos, pictures, memes, emojis, likes, and meta-data as further data sources beyond text analyses
Differences between social media	(1)	Comparison of word-of-mouth and engagement strategies across different social media (e.g., Twitter versus TikTok)
	(2)	Antecedents of recruitment success across different social media
	(3)	Comparison of investor sentiment's and firm postings' effects across different types of social media
	(5)	Differential effects across social media designs in fostering and combating negative behaviors (e.g., addiction)
	(6)	Comparison of different social media platforms' functionality for political processes
Non-mainstream and non-US social media	(1)	Social media management strategies (e.g., engagement, seeding) on non-mainstream social media (e.g., Mastodon)
	(2)	Applicant screening and recruitment activities on non-mainstream and non-US social media (e.g., Weibo)
	(3)	Role of investor sentiment and firm executive posts on non-mainstream and non-US social media (e.g., Steemit)
	(5)	Fake news diffusion and combating interventions under alternative social media designs (e.g., Mastodon)
	(6)	Comparing political processes in main stream versus non-mainstream and non-US social media
Changes in social media over time	(1)	User base and feature changes' effects on engagement, branding, word-of-mouth, market intelligence, and other outcomes

(Continues)

TABLE 4   (Continued)

Research topics	Research theme	Sample research avenues within research themes
	(3)	Changes in the predictive validity of investor sentiment over time (e.g., depending on feature and user base changes)
	(5)	Changes in adverse societal effects over time (e.g., addiction) based on features, user base, and further characteristics
	(6)	Changes in character of political deliberations depending on features and user base
	(7)	Changes in predictive validity of social media data over time depending on feature and user base changes
Differentiating effects between segments	(1)	User engagement differences across customer groups (e.g., gender, vulnerable customers)
	(2)	Differential effects of social media in HRM (e.g., recruitment) across segments (e.g., employee groups, industries, firm types)
	(2)	Differential effects of ESM (e.g., knowledge sharing) across segments (e.g., employee groups, industries, firm types)
	(4)	Differences in innovation performance across segments (e.g., industries, products versus services)
	(5)	Identifying risk groups and testing customized mitigation strategies (e.g., addiction)
Beyond desktop use	(1)	Influence of mobile social media use on customer and other stakeholder interactions
	(2)	Effect of mobile social media use on HRM applications (e.g., recruitment) and ESM
	(4)	Idea generation quality and quantity in idea communities on mobile devices and in virtual/augmented reality
	(5)	Testing interventions' functionality in the context of mobile devices
	(6)	Effect of mobile device use on quality and quantity of political deliberation and action
Contribution to sustainable development	(1)	Customer engagement and branding in the context of transitioning to sustainable products and services
	(2)	Recruitment strategies for sustainability-driven businesses
	(5)	Social media management strategies to contribute to sustainable development goals
	(6)	Organizing political processes to support sustainable development goals
	(7)	Social media data use to inform research and development of sustainability-driven businesses

Note. Numbering of research themes:

(1) Social media as a market-oriented interaction hub: Engaging with consumers and other stakeholders

(2) Social media as a resource-oriented interaction hub: Engaging with (potential) employees and other professionals

(3) Social media as an information market: Predicting financial market and firm performance outcomes

(4) Social media for innovation and business venturing

(5) Social media as a societal challenge

(6) Social media as a political hub

(7) Social media as a data source

developed social media, such as Instagram and TikTok, rely almost exclusively on pictures and videos, and it is to be expected that this form of communication will grow further at the expense of text. Therefore, we need more research in all the themes investigating whether and how the phenomena and relationships established in extant research (e.g., fake news, cyberbullying, customer engagement, investor sentiment) hold for picture and video communication (see Table 4). In addition, while researchers have also started to increasingly use the available social media metadata (e.g., timing and location) to investigate phenomena of interest (e.g., sleeping patterns of individuals and cities), the full potential of such metadata has not yet been tapped.

Differences between social media. Most researchers have focused their data collection and investigation on *one* out of the different social media. Accordingly, comparative studies investigating the phenomena of interest are rare. However, it is essential to understand whether the relationships found based on specific social media generalize to other social media and whether certain mechanisms in social media produce or at least support the identified relationships purely by their particular design. For instance, it would be interesting to study fake news spread comparatively across different contexts to understand the underlying spread-supporting mechanisms (e.g., design features and user base) and evaluate different designs and opportunities for mitigating fake news spread (see Table 4). Similar research questions are relevant for related contexts, such as cyberbullying and addiction, but also for the prediction of financial outcomes or the support of political processes. Results from such comparative studies would make it possible to understand problematic (and beneficial) features and designs and to find evidence-based ways to improve social media.

Non-mainstream and non-US social media. To date, comparatively few studies have investigated non-mainstream and non-US social media. However, there are considerable numbers of social media users outside the most popular and obvious platforms (e.g., Mastodon, Steemit, Snapchat, Kuaishou), providing ample research opportunities for many phenomena of interest for business and economics scholars (Table 4). For instance, social media platforms such as Steemit allow users to get immediate financial rewards for the content that they create. The social network Mastodon offers a decentralized design whereby users can join different instances with their own specific design features (e.g., privacy and moderation policies) but which together operate as a so-called federated social network. It would be interesting to understand whether the phenomena and relationships established in extant research based on the popular "traditional" social media generalize to and hold in such alternative designs (e.g., decentralized designs), especially against the backdrop of increasing criticisms and societal challenges created by traditional social media. Moreover, researching non-mainstream and non-US social media allows researchers to tap into samples of individuals that are less studied in extant research (e.g., the video sharing network Kuaishou is mainly used by individuals outside China's major Tier-1 cities and in other countries, such as Brazil and Pakistan), thereby increasing sample diversity and providing the opportunity to test the generalizability of extant findings.

Changes in social media over time. Social media's design features and user base change over time, necessitating updates of our knowledge base and providing ample opportunities to investigate the influence of features and user base on phenomena and relationships of interest (see Table 4). For instance, it could be the case that with an increasingly diverse user base over time (as well as the proliferation of social bots and troll accounts) and design changes, the predictive validity of social media sentiment for political processes (e.g., elections), financial outcomes (e.g., stock returns), and product sales may improve or decline. Thus, we generally need more longitudinal social media research and studies that account for the influence of changes over time. Future studies could also leverage such changes so as to use them as study design features (e.g., natural experiments).

Differentiating effects between segments. Since social media's user base has been diversifying over time and now covers many different social groups, it is crucial to examine the validity of effects across various segments. While many extant studies include different user group variables (e.g., socio-demographic variables) as control variables or make comparisons as a secondary objective within a study, research explicitly targeted at investigating segment differences is comparatively scant. For instance, different user groups will respond differently to companies' initiatives (e.g., seeding, recruitment, and knowledge-sharing initiatives on ESM), and there may be differences across industries, firm types, and countries. Thus, we need more studies explicitly focusing on theorizing the differential effects between segments and making them visible empirically (Table 4). Moreover, based on understanding segment differences, research could test customized strategies for companies and other institutions to cater to different groups (e.g., vulnerable customers) and address societal challenges (e.g., cyberbullying) in a more targeted and precise way.

Beyond desktop use. Social media are increasingly used on other devices than desktop computers and notebooks, most importantly smartphones, which has changed the nature of social media content (e.g., real-time streams, videos, pictures) and users' interaction patterns (e.g., attention span and length of comments). Since most studies are either based on research conducted with desktop-based social media use or have neglected the device used, it would be interesting to study how the device used influences the phenomena and relationships found in extant research (Table 4). For instance, smartphone and other mobile use may make social media even more addictive, produce suboptimal decisions in consumer choices, and increase the role of social media in political processes (e.g., coordination of protests).

Contribution to sustainable development. In light of the need for a global transformation toward more sustainable economies and societies, social media may contribute to achieving such sustainability goals (e.g., the United Nations' Sustainable Development Goals [SDGs]). For instance, social media are used to engage customers to use sustainable products and to organize political activity to reach SDGs. Moreover, there exist alternative, non-mainstream social media with the potential to address challenges inherent in traditional social media (e.g., Mastodon), which may reduce extant societal challenges (e.g., addiction), thereby contributing to SDGs. However, we lack systematic knowledge on whether and how social media can help address sustainable development (Table 4). For instance, it would be interesting to investigate research questions such as whether social media discourses about sustainability topics may also increase sustainable consumption, foster reductions in unsustainable product demand, and predict (financial) market outcomes of sustainability-driven businesses.

5 | CONCLUSION

The goal of the present article was to provide a multidisciplinary overview of the social media research landscape in business and economics, highlight well-studied and under-researched areas, and derive avenues to guide future research. Building on a broad article sample of the leading business and economics journals, this literature review has identified seven key research themes that scholars across various sub-disciplines have investigated. Notably, our knowledge of social media phenomena has grown extensively in the past 15 years, with a steadily increasing breadth and depth of a variety of topics not only in the core business and economic research areas but also in adjacent fields. In light of the increasing importance of social media as a global phenomenon and the rapid developments within existing and new social media, there is still much work to do to advance our knowledge, which concurrently provides ample opportunities for further inquiry.

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