



Social Media Platforms and User Engagement: A Multi-Platform Study on One-way Firm Sustainability Communication

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Abstract

There have been multiple research studies in recent days that have analyzed the growing role of social media in firms' communication strategy as well as the role of social media in shaping a firm's reputation. However, most of these studies focus on one of the multiple social media platforms that firms use. In this study, we argue that there are nuances in firms' social media communication strategies depending on the platforms. Given the rising importance of sustainability, we focus on firms' sustainability-related communication. We analyze the impact of firms' one-way sustainability communication over Twitter and Facebook on the respective platforms' user engagement. The engagement has been computed as likes and shares (likes and retweets) over the firm generated one-way sustainability communication-related posts. Using a panel dataset of a 3-year period for S&P 500 firms having active social media profiles on both platforms, we demonstrate the difference in the firms' sustainability communication on the two platforms. We also find evidence that users on both platforms have different preferences, such as messaging from firms. Using a differential metric in our analysis helps us counter the firm-level fixed effects. We find evidence suggesting that firms would do well by having different strategies for different platforms. Firms would benefit by focusing on sustainability relevant and bite-sized content on Twitter, but more positive and engaging content on Facebook.

Keywords Social media · Twitter · Facebook · Sentiment analysis · User engagement · Sustainability

1 Introduction

Increasingly social media platforms are being utilized by firms for making effective corporate communication (Nasr et al., 2022). Firms often use different social media platforms to communicate with their stakeholders for a variety of issues. However, for purpose of maintaining uniformity over different platforms, they tend to have same content on their platforms (Rowley, 2001; Schultz & Schultz, 1998). Figure 1 shows a typical content shared by Eli Lily and company over two major social media platforms as being

the same. While marketing and communications literature, over the years, has established the impact of uniform corporate communication over multiple channels (Rowley, 2001; Schultz & Schultz, 1998). However, from the perspective of information systems (IS) research, the role of digital platforms in reaching the target audience and the impact it has on the said target audience has increasingly raised interests of researchers across the world. IS literature has focused on the role of social media platforms as a channel that enables individuals and firms to communicate at a faster pace (Aral et al., 2013). As such the rise of different social media platforms represent the need for different needs in humans that are satisfied by different technological artefacts (Kapoor et al., 2018). For instance, people who like to socialize more with known colleagues would use Facebook more as it is a network of friends and known connections (McKinney et al., 2012). On the other hand, people who wish to interact with a wider but unknown community may use Twitter more (McKinney et al., 2012).

Recent studies in IS have analyzed the role of social media platforms in enabling higher brand loyalty (Fetais et

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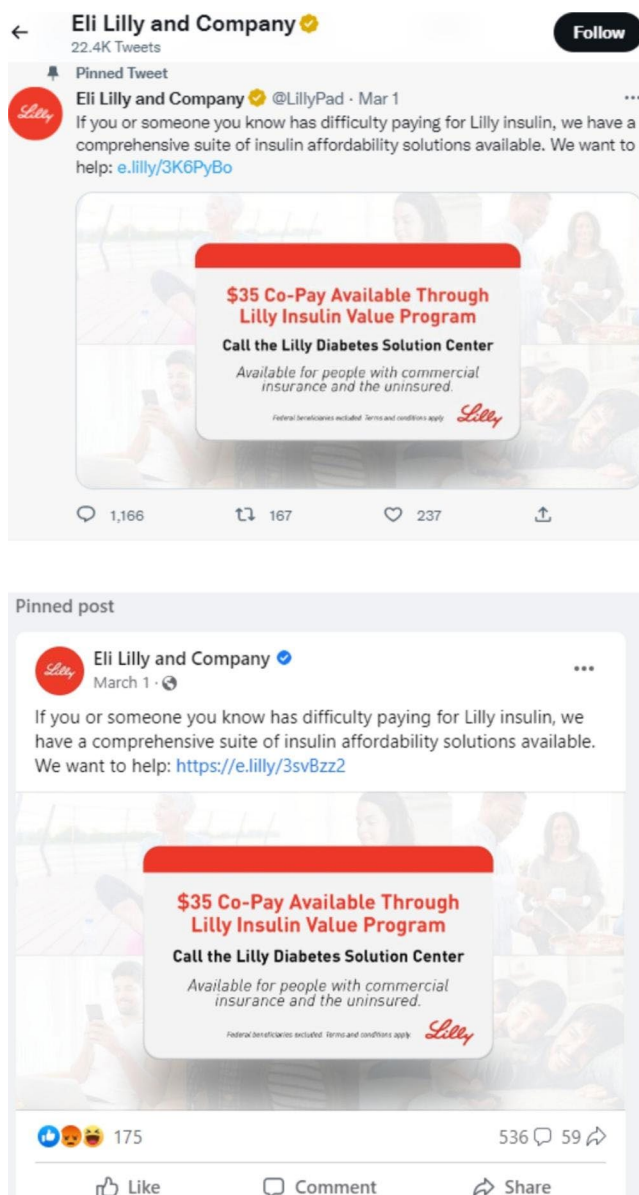


Fig. 1 An example of firms' communication on two different platforms- Twitter (above) and Facebook (below)

al., 2022) as well as business to business relationship building (Dwivedi et al., 2021). This is in addition to growing need of firms to communicate their environmental or social responsibility actions through social media (Nasr et al., 2022). This makes it pertinent to study the role of different platforms and their impact on consumer interaction.

In this study we focus on two of the most used platforms i.e. Facebook and Twitter. More than 95% of the fortune 500 companies have active accounts on Twitter and Facebook (Barnes et al., 2020). Facebook has almost seven times as many active users as Twitter, indicated by the fact that Facebook had 2910 million monthly active users in January 2022 as against 436 million for Twitter (Statista, 2022). Kemp

(Kemp, 2021) reported a huge overlap between Twitter and Facebook users, where almost 99% of all Twitter users also used Facebook.

Extant research in sociology has informed us that the same person may behave differently in different social settings (De Jaegher et al., 2010). The limited research that has been conducted on social media platforms also seems to point in the same direction. Logan (2014) studied users' brand following on multiple social media platforms and found that there are different antecedents to users following brands on different platforms. That is to say, the same individual had different motivations and hence followed different brands on different social media platforms.

The two platforms are different in many respects including their nature, length of posts allowed etc.¹ As such their usage is also different, Twitter has gained a reputation for being a platform for user complaints and engaging with firms to resolve issues (Arora et al., 2019). But within the differing nature of platforms and their usage, one thing that remains similar is the directed corporate communication from the firm to its stakeholders. To ensure consistency in its messaging, firms have same posts across different channels. Hence, it becomes interesting to study the impact of firms' communication and users' engagement to these on two of the largest social media platforms of the world.

We particularly choose to study a firm's social media communication strategy over environmentally and socially relevant discourse (*hereafter referred to as relevant in the remaining text*) as social media has been found to play a significant role in influencing firms' reputations and their message in related fields like corporate social responsibility (CSR) activities and sustainability (Laurell et al., 2019). As per the recent survey conducted by Sproutsocial, building corporate image and brand is one of the primary goals of a firm engaging in the social media (Hutchinson, 2020). Firms are increasingly concerned about building an environmentally and socially conscious image via social media discourse. This is led by the fact that 86% of consumers support corporate activism and around 66% of consumers are willing to spend more on a sustainable brand (Lein, 2018).

A firm's social media strategy may constitute multiple factors (Tsimonis & Dimitriadis, 2014). These include factors like firms' public relations strategy, brand building strategy, organizational strategy, product strategy as well as sustainability strategy (Knight et al., 2022; Kwayu et al., 2018; Li et al., 2021). While marketing and brand-building efforts on social media have been studied widely in the marketing and information systems field (Harmeling et al., 2017), there is a limited focus on sustainability communication-related strategies on the social media (Jha

¹ Twitter allows 280 characters per post while longer posts are allowed on Facebook.

& Verma, 2022). Sustainability has, in recent times, gained prominence as one of the most important factors affecting consumers' choice of brands. As such, firms have responded by making sustainability a major factor in their communication (Sigitzer & Prexl, 2007). We state our first research question as:

RQ1: Do user groups on Twitter and Facebook behave differently to corporate Sustainability related communication on these platforms?

If we move ahead with the assumption that user groups on Twitter and Facebook, indeed behave differently towards firms' communication, it raises a question about firms' response to this. Through anecdotal and marketing experience, firms do realise the kind of marketing that works best for specific platforms (Huang, 2019). The opening extract from a recent survey by social media research firm ZDNet (Brown, 2021) highlights the differences in approaches that firms take for different platforms in terms of how they engage with their customers and competitors. This can be attributed to (a) the nature of the social media platform (Hughes et al., 2012; Logan, 2014) and (b) different user demographics and usage patterns pertaining to the social media platform (Buccafurri et al., 2015; Hughes et al., 2012). For example, Facebook is more weighted toward 'who you are' in comparison to Twitter which focuses on the 'what you have to say' (Huberman et al., 2008). The latest survey by Pew Research Center in the US demonstrates the demographic differences between the user base of various social media platforms (Chen, 2020). Further, from a psychological and behavioral perspective, the personality of various social media platform users differ, leading to their preference for a specific platform (Hughes et al., 2012).

However, when we look at the recent academic research on firms' social media activities, we find a distinct lack of this nuance regarding the possible difference in firms' approaches to different platforms (Majumdar & Bose, 2019; Yang & Basile, 2021). Most studies (detailed in the next section) study one of the multiple social media platforms. Given the rising importance of social media for communicating a firm's strategy and social awareness, it is essential to study the differing nature of these platforms and firms' strategies on the same.

In this research, we bring these two strands of research (platform differences and social media sustainability communication) together to analyze if firms have different sustainability communication strategies on the two platforms. We tie this back to the RQ1 raised above to evaluate users' engagement with firms' differential strategies on the two platforms. Formally, our research question could be stated as:

RQ2: Do firms have different sustainability communication strategies for Twitter and Facebook?

RQ3: What is the impact of firms' different sustainability communication strategies for Twitter and Facebook on respective platforms' user engagement?

As discussed earlier, assuming that firms are aware of the differential user base for various social media platforms, they might have differential social media communication strategies. In other words, in the context of environmental and social discourse too, firms might have differential social media strategies to improve their corporate image. The literature around differential social media strategies for different platforms is very recent. The studies have focused largely on understanding the firm's choice of platform, and the content posted. However, the impact of a firm's social media communication on user engagement on different platforms is understudied, examining which can shed some light on whether firms really understand the social media dynamics and therefore are successful in achieving their social media goals. In this study, we first test whether user behavior is different on Twitter and Facebook. Second, if firms are adopting differential sustainability communication strategies for Twitter and Facebook. Third, we try to examine whether their communication strategy for the two platforms is able to generate the required user engagement.

Our results indicate that the user profile and preference for the type of content on the two platforms are indeed differing from each other. We find that even firms' strategy for the two platforms is different. However, our study finds an interesting mismatch between the firm's differential strategy and the users' engagement behavior on the two platforms. Whereas we find evidence for differential user engagement behavior over the two social media platforms, the firms are currently not considering the same in their social media sustainability communication decisions. Specifically, we find evidence that users on Twitter prefer more relevant and bite-sized content full of images. On the other hand, Facebook users would prefer higher content-based messaging with higher positive sentiment, and they care far too little about relevant messaging from firms. However, firms are more aggressive on Facebook in communicating relevant posts than on Twitter.

Section 2 covers the relevant literature to highlight the gap being filled by our study. Section 3 is dedicated to the theory and hypothesis development, followed by Sect. 4 discussing the findings of our study. We present the implications of our study in Sect. 5 and Sect. 6 concludes with highlighting some of the limitations of the study.

Fig. 2 Positioning of our study in extant research in ‘firm generated content’ domain

Firm Value	(Yang et al., 2020)	-	(Majumdar & Bose, 2019) (Chung et al., 2020) (Yang & Basile, 2021)
User Engagement	<i>Our study</i>	(Eslami et al., 2021) (Zhao et al., 2022)	(Rishika et al., 2013); (Lee et al., 2018) (Hewett et al., 2016) (Lee et al., 2013) (Gaber & Elsamadicy, 2020)
	Multi-Platform Firm Sustainability Communication	Multi-Platform Firm Communication	Single Platform Firm Communication

2 Research Background

2.1 Social Media Communication

Extant literature in the management domain has analyzed communication over social media in two broad categories, (a) user-generated content (UGC) and (b) firm-generated content (FGC). Studies around user-generated content dominate over firm-generated content studies, which are also more recent than the former. Primarily, such studies have examined the impact of user and firm-generated content either on user behavior (Chen et al., 2015; Goh et al., 2013; Lee et al., 2018; Miller & Tucker, 2013; Rishika et al., 2013) or on firm performance (Chung et al., 2020; Luo et al., 2013; Tirunillai & Tellis, 2012). Specifically, some recent studies have found the enhanced role of social media in enhancing the consumer engagement (Dwivedi et al., 2021) and stakeholder engagement (Nasr et al., 2022; Misirlis & Vlachopoulou, 2018) have provided a detailed mapping of the various analytics metrics used by firms in the social media space. Note that our focus is not on the communication around firms’ core products or services where the communication has a direct impact on consumer decision making, and that can further enable the co-creation processes. Rather, we focus on a firm’s sustainability communication which can largely be categorised as the ‘internal content’ (Holsapple et al., 2018) and is typically a one-way communication aimed toward specific goals of a firm, which in this is to create awareness towards its sustainability initiatives. Therefore, we restrict ourselves to the FGC content of a firm and its impact on user engagement. We define a ‘user’ in the same vein as defined by Yang et al. (Yang et al., 2019) and is widely adopted in extant literature.

“... any users who have an interest in interacting with the businesses or other customers and are consumed by recipients with a wider variety of goals that are not necessarily purchase oriented.” (Yang et al., 2019, p. 840).

Given our focus on the firm-generated content consumption by above-defined users, we briefly review the literature in this domain in the next subsection.

2.2 Firm-generated Content and User Engagement

Our study focuses on the impact of firm-generated content (with a focus on sustainability-related content) on user engagement. We briefly discuss the literature on social media-based firm sustainability communication and the literature on user engagement. Figure 2 reflects the research gap fulfilled by our study.

Social media-based sustainability communication is considered brand communication that improves a firm image linked to its valuation and performance (Voorveld, 2019). Given the rising interest from all stakeholders in sustainability-related activities of firms, the focus on sustainability-related communication is also increasing (please see (Fernández et al., 2022; Tölkes, 2018) for a detailed literature review in this field). Literature in this space has covered various themes of research, such as (a) firm type and volume of social media communication (Reilly & Hynan, 2014), (b) type of content (Gómez-Carrasco et al., 2021), and (c) firm communication impact on stakeholders (Saxton et al., 2019). We observe that most studies focus on a single social media platform, and very few study user engagement.

User engagement can be captured using various activities performed by users on the social media platform. For instance, Rishika et al. (2013) capture it using a binary phenomenon of a user being a fan on a firm’s Facebook page. The study (Rishika et al., 2013) explores the effect of user participation on user visit frequency and firm profitability. In their attempt to understand social media management by health care institutes, Miller and Tucker (2013) attempt to capture user engagement through user posts, likes, and visits captured through an institute’s Facebook page. To understand advertising content’s effect on user engagement,

Table 1 Description of major studies in this space

Paper	Social media Platforms	Focus	Firm data	Year data
(Yang & Basile, 2021)	Facebook	CSR initiatives communication	100 firms	Single year (2017)
(Majumdar & Bose, 2019)	Twitter	Generic firm communication	1153 firms	Ten years (2006–2015)
(Lee et al., 2018)	Facebook	Advertisement communication	782 firms	Single year (2011)
(Lee et al., 2013)	Twitter	CSR initiatives communication	500 firms	Less than a month
(Eslami et al., 2021)	Instagram and Twitter	Product-related content	Not firm specific	Four years (2016–2020)
(Zhao et al., 2022)	Youtube, Twitter, Blogs	Product-related content	Single firm	Less than a year (2018)
(Yang et al., 2020)	Facebook, LinkedIn, Pinterest, Twitter, YouTube	CSR initiatives communication	84 firms	Single year (2016–2017)
Our Study	Twitter, Facebook	Sustainability related communication	90 firms	Three years (2016–2018)

Lee et al. (2018) study advertising over Facebook and capture user engagement using likes, comments, shares, and click-throughs. Some of the studies have focused on user engagement related specific topics related to social media communication. For example, Lee et al. (2013) explore the relation between firms' CSR rating and their social media adoption over Twitter, and, thereby the impact on user engagement. In a separate study, Gaber and Elsamadicy (2020) explore CSR communication and user engagement over Facebook. We observe that largely while studying user engagement over social media, studies choose a single platform, most commonly Twitter or Facebook.

Next, we cover the literature on firm communication strategies on multiple platforms (major studies are highlighted in Table 1). Tao and Wilson (2015) study and contrast firms' communication strategies over Facebook and Twitter. They find that firms largely communicate their capability content (e.g., quality of product or service) than other initiatives such as CSR. To understand a firm's CSR communication strategy, Yang et al. (2020) studies firms' CSR communication over multiple platforms and their corresponding impact on brand equity. However, very few studies in this domain consider the impact of FGC on user engagement on various platforms. The few studies that explore the role of multiple social media platforms around FGC (Eslami et al., 2021; Zhao et al., 2022) are restricted to either single firm or non-firm specific communication. Moreover, the impact of firms'

sustainability communication on user engagement across multiple platforms has not been explored in the extant literature. In this study, we aim to verify the existence of differential user engagement behavior on two different social media platforms, i.e., Twitter and Facebook and a firm's differential communication strategy on user engagement on different platforms.

2.3 FGC Type and User Engagement

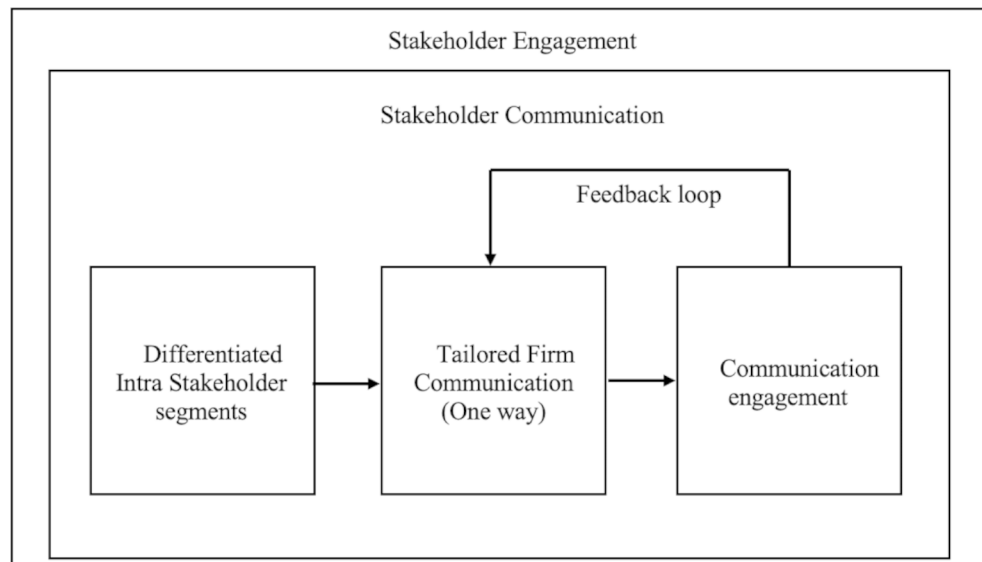
To structurally build our theoretical arguments in the next section, we bring out the different categories of firm communication that are discussed in the extant literature. Given that user engagement typically falls under a firm's marketing function, we draw upon the categorization presented in the marketing literature.

In their seminal work, Harmeling et al. (2017) categorizes firm communication from a marketing perspective into three categories, viz., engagement marketing, promotion marketing, and relationship marketing. They propose that a firm's engagement marketing differs from promotion and relationship marketing in that it involves motivating, empowering, and measuring a customer's voluntary contribution to the firm's marketing function beyond the core economic transaction. Further, the marketing function of a firm can involve customer experience around the product/service offering of the firm and/or the brand associations (brand reputation and brand personality).

Recall that our study is focused on firms' sustainability communication. A firm's communication around its sustainability initiatives and causes is part of its brand personality. In our paper, we study user engagement by measuring users' voluntary participation in a firm's communication around their brand associations (in our case sustainability-related communication).

Our hypothesis development is broadly implemented in two steps. Step 1 involves the argumentation behind the proposition that user behaviour between the two platforms, i.e., Facebook and Twitter, is fundamentally different owing to each platform's core value proposition (captured in vision and mission). We use the theory of reasoned action (TRA) for the same. Step 2 involves the argumentation behind the proposition that firms are rational actors and therefore tailor their communication depending on the choice of platform (Twitter or Facebook). We draw upon the public relations theory around corporate communications for the same.

Fig. 3 A schematic representation of the stakeholder engagement theory



3 Theory and Hypotheses

Stakeholder engagement is one of the most important initiatives that a firm undertakes in its day-to-day operations. The importance of stakeholder management has only increased in today's information age, where a firm has more ways to connect with its stakeholders than ever before (Freeman, 1984; Heavey et al., 2020). The stakeholder model of a firm and stakeholder engagement theories have also evolved substantially in the literature (Stoney & Winstanley, 2001). We develop our hypotheses using the theoretical underpinnings of stakeholder engagement theory, as depicted schematically in Fig. 3.

Stakeholder theory suggests that a firm is at the nexus of groups that can affect or are affected by the firm (Freeman, 2010). Identifying various stakeholder groups becomes critical for a firm to engage with them constructively. Rather than viewing a stakeholder group as a single homogeneous entity, a firm should take a *differentiated* stakeholder perspective, recognising intra-stakeholder group differences (Winn, 2001). Different segments within a stakeholder group may not share the same interest in a particular issue (Crane, 1998; Winn, 2001).

Given the context of our study, the stakeholder group of interest is social media users. Further, the two different social media platforms (i.e., Facebook and Twitter) act as the two segments within the "users" stakeholder group. Next, we theorize how the user (stakeholder) segment associated with Facebook might be different from the user segment associated with Twitter, thereby hypothesizing the existence of a differentiated stakeholder group based on the social media platform. Social media platforms differ from each other based on (1) nature of the platform (vision and mission of the platform), and (2) nature of the users (demographics

or other characteristics) of the platform. For our study, we choose to compare Facebook and Twitter. As stated in the introduction, Facebook is about "Who you are", and Twitter is about "What you have to say" (Huberman et al., 2008). It is therefore expected that users on Facebook engage in multiple different activities, including (but not limited to) connecting with friends, sharing photographs, sharing thoughts, celebrating events; whereas users on Twitter are more interested in expressing their views/opinions and engaging over things they believe in. This is clear when we look at each platform's mission statement:

Facebook²: "Give people the power to build community and bring the world closer together."

Twitter³: "Twitter is an open service that's home to a world of diverse people, perspectives, ideas, and information." With the purpose: "We serve the public conversation."

Studies in the existing literature show that the personality trait of a user that comes out while using a particular platform depends on the nature of the platform in use (Hughes et al., 2012; Shen et al., 2013). Further, we note that a user can be common across the two platforms, however, the purpose with which the user uses the platform is driven by the nature of the platform. For instance, in their study of common users on Twitter and Buccafurri et al. (2015) found that user behaviour (privacy, friendship, and activity level) is a function of the nature of the platform.

User engagement on social media sites can be put under the category of volitional behavior. This is because it can largely be considered unscripted, yet mindful behavior displayed by individuals' free will which need not be either impulsive or forced. We, therefore, base our arguments on

² <https://about.facebook.com/company-info/>

³ <https://about.twitter.com/en/who-we-are/our-company>.

the theory of reasoned actions (TRA) to develop testable hypotheses. TRA proposes that an individual's behavioral intention is the result of individual influence and normative influence (Hale et al., 2002). Individual influence is a person's attitude towards performing the action. In the context of our study, if a person's belief towards sustainability is strong then his/her attitude towards a firm's social media communication related to sustainability would be positive, the degree of which varies with each individual. Normative influence on the other hand is a person's belief whether significant others expect him/her to behave in a certain way. In the context of our study, normative influence translates into the larger social media community's expectations of the individuals.

As pointed out earlier, as opposed to the users on Facebook who engage in multiple different activities, users on Twitter are more interested in expressing their views/opinions and engage over things they believe in. We, therefore, argue that users on Twitter have higher individual influence weightage as compared to the users on Facebook. Owing to the higher individual influence weightage, we hypothesize that users on Twitter show higher volitional behavior towards sustainability-related communication made by firms. Moreover, given that Twitter users are using the platform largely towards "What you have to say", the normative influence weightage is also expected to be higher than that on Facebook, which in turn amplifies the intensity of users' volitional behavior toward the relevant firm communication (such as sustainability-related communication) over the platform. Hence, we hypothesize the following:

H1 *Twitter and Facebook user groups form differentiated segments within the 'social media users' stakeholder group as identified by differentiated user engagement towards sustainability-related firm communication.*

In order to engage effectively with their stakeholders, firms adopt various strategies. One of the most important of such strategies is effective communication, which is considered the essential building block of developing stakeholder relationships (Bendell, 2017; Crane & Livesey, 2003). In order to hypothesize firm communication behaviour, we draw upon the public relations theory around the corporate communications (Grunig & Grunig, 1992). The two critical elements of the communication theory are (a) One way communication, and (b) Two-way communication.

In its purest form, one-way communication made by a firm is to persuade its stakeholders through honest messaging over a subject of interest. However, it is argued that one-way communication can have two types of messages, viz., standardized messages and tailored messages (Doherty & Ennew, 1995). Whereas standardized messages are meant to

convey core and common stories, tailored messages are customized for different segments of the stakeholder group in mind their varied interest areas. In our study's context, realizing the differentiated stakeholder (social media users) segments with respect to the two social media platforms, a firm will try to customize its communication type for the two segments respectively. We hypothesize that the firm realizes that the users on Twitter are more receptive (as compared to the users on Facebook) to the sustainability-related messaging, and therefore the relative volume of such 'tailored' sustainability-related posts by the firm is going to be higher on Twitter than on Facebook.

H2 *Firms' tailored one-way communication in the form of sustainability-related posts is more intense over Twitter than on Facebook.*

For communication to be effective, it must be viewed as a two-way process. More specifically, scholars have argued that one-way communication stresses solely the information (Foster & Jonker, 2005) and misses out on viewing communication as the process of negotiation and consensus (Smircich & Stubbart, 1985). Social media platforms provide this opportunity for firms to engage in two-way communication. Drawing from the public relations and communication theory, two-way communication can be visualized in two categories, viz., *asymmetrical* and *symmetrical* communication (Foster & Jonker, 2005; Grunig & Grunig, 1992). Asymmetrical two-way communication involves the sender observing the feedback from the receiver audience to improve and adjust their messages. However, there is no direct active engagement with the receiver. Symmetrical two-way communication, on the other hand, involves an active conversation between the sender and the receiver where information is exchanged, and knowledge is acquired. Owing to the nature of user engagement data (such as likes and shares) for our study, we can consider our context to be closer to asymmetrical two-way communication. Further, firms being rational entities continually take into consideration the feedback from the asymmetrical two-way communication and incorporate that into their communication strategy leading to enhanced user engagement. With respect to sustainability-related communication and owing to users' higher appreciation of such posts over Twitter, firms' rational communication behavior over Twitter will lead to higher differential user engagement (relative to that over Facebook). Therefore, we hypothesize the following:

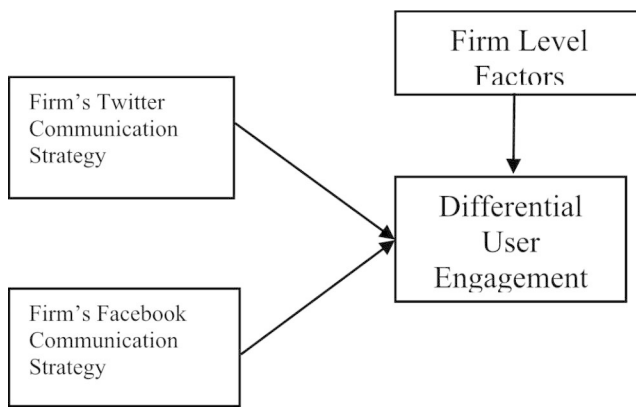


Fig. 4 Research model of the study

H3 *The higher the sustainability-related communication directed by a firm over Twitter, the higher would be the engagement by users on Twitter.*

Figure 4 depicts our model's conceptual understanding of theory and hypothesis development.

4 Data and Method

For this study, we have collected data from the two most popular digital platforms in the world for firms and users to interact i.e., Twitter and Facebook. (Harrigan et al., 2021; Zhang, 2015). Recent years have seen a spurt in social media platforms as well as firms' willingness to be a part of these platforms (Kircova et al., 2018). Different social media platforms have different target consumers and communication styles. For instance, Instagram has been traditionally known as a way to share images and has developed into a platform for influencers, travel bloggers, product endorsers etc. (Lee et al., 2022). Tiktok, on the other hand, is one of the latest social media platforms that encourage users to share short videos and is known for creative video edits and video-based communication (Scherr & Wang, 2021). Amongst the rise of these and other platforms, Facebook and Twitter continue to be two of the most used platforms, especially by firms for the corporate communication (Troise & Camilleri, 2021). While firms do engage with content creators and marketers on all social media platforms, they rarely maintain their active pages on all platforms. Facebook and Twitter are the platforms where the formal presence of the maximum number of firms is found (Troise & Camilleri, 2021). Given the background of the study where we are analysing firm generated social media content, we have focused on these two platforms. Subsequent studies that analyse a wider pool and type of social media posts would need to focus on more diverse social media platforms for data collection and analysis.

As previously stated, many companies have a presence on either of these or on both platforms to connect with their users and provide formal corporate communication directly to their stakeholders. While a vast majority of social media studies utilize data of firm-user interaction on the Twitter (Martinez-Rojas et al., 2018), Facebook also remains important though understudied platform (Arora et al., 2019). For this study, we identified the firms in S&P 500 index that represents the largest and most important firms in the United States (Chen & De Bondt, 2004). To comply with the data collection norms of the two platforms as well as to ensure we have a large dataset; we identified a 3-year window (2016 to 2018) to collect data from these platforms. A 3-year window provided us with the opportunity to collect a large sample to study the firm-user interaction over a sustained period of time while ensuring we comply with the requirement of the data download terms of both these platforms⁴.

The following were our inclusion criteria for this study.

- Firms should be part of S&P 500 list of companies.
- Firms should have a verified Twitter profile.
- Firms should have a valid Facebook profile linked from their corporate website for validity.
- Both Twitter and Facebook accounts for the firms should be older than 2016.
- The firms should have maintained an active presence on both platforms during the 3-year study period.

In summary, the data consists of all firms with active and verified/valid Twitter and Facebook profiles for the study period and belonging to S&P 500 firms. For the fifth criteria, we have eliminated the firms with less than 20 posts in any particular year on any platform as it would indicate firms with less than once in a two-week presence on the platform. There are 90 such firms in the dataset. As such the dataset represents large-sized firms with an active year-on-year presence on multiple social media platforms. As such the dataset discussed above is the complete population of S&P 500 firms that have an active presence on both platforms. We have not excluded any S&P 500 firm that has an active presence on both platforms. A point to note here is that for the vast majority of the firms, Facebook was the limiting social media platform as almost all firms were active on Twitter. It is possible that firms that are active on a single social media platform i.e., Twitter have a different sustainability communication strategy than firms that are present on both. However, with the focus of this manuscript being on the difference in communication strategies and users'

⁴ While larger data collection window would be desirable to increase the robustness of the study, it would be difficult to get the data for all firms in larger window while remaining within the limits of twitter's data collection norms.

Table 2 Description of variables used in the study

Variable Type	Variable Name	Variable Definition
Dependent Variable	Difference of likes	The variable indicates the difference in average number of likes a post receives on Twitter vs. Facebook.
	Difference of shares	The variable indicates the difference in average number of shares/retweets a post receives on Twitter vs. Facebook.
Explanatory Variables	Posts Twitter	Average number of weekly posts on twitter by the firm
	Posts Facebook	Average number of weekly posts on Facebook page by the firm
	Sentiment Twitter	Average sentiment on a scale of 0–1 of posts on Twitter. Sentiments have been computed using lexicon-based approach and the average sentiment is computed as positive sentiment-negative sentiment.
	Sentiment Facebook	Average sentiment on a scale of 0–1 of posts on Facebook. Sentiments have been computed using lexicon-based approach and the average sentiment is computed as positive sentiment-negative sentiment.
	Image Twitter	Proportion of posts with images on Twitter
	Image Facebook	Proportion of posts with images on Facebook
	Relevant Twitter	Proportion of posts with sustainability specific message on Twitter
Control Variables	Relevant Facebook	Proportion of posts with sustainability specific message on Facebook
	Firm size	Annual sales revenue of firm operationalized as natural logarithm for normalization
	Market Cap	Market Capitalization of firm on last day of the year, operationalized as natural logarithm for normalization
	ESG Score	ESG Score of the firm's sustainability efforts (Bloomberg score). Definition: "Bloomberg ESG Disclosure Scores rate companies on their level of disclosure of ESG data. Disclosure scores are available for all companies in the BESGPRO Index."

responses, the dataset of 90 firms that are active on both platforms would be suitable.

For Facebook, we collected the data through the official Facebook page of the firm that is linked to their corporate website. We collected all posts made by the firm (firm generated content) on its Facebook page in the 3-year period of study, we also collected all the meta-data for the post i.e., number of replies, likes etc. for the post. The data was collected through custom-written code and using Facebook API®. For each Facebook post, we collected the text of the post as well as any image that the post is associated with.

Similarly, for Twitter, we collected data from the firm's official and verified Twitter account. For the 3-year period, we collected all content posted by the firm on its timeline⁵. We used Twitter's official API to collect the data from the timelines. We collected all posts by the firm along with its metadata i.e., number of comments, likes, shares etc. to each individual post. An important difference to note in the way content on Twitter and Facebook are collated is the way these platforms are designed. Twitter is an open platform where all conversation is available to view by everyone. So, any post that was made on any other Twitter User by a company is visible in the company's Twitter timeline and has been collected for analysis. Facebook is a more group-specific social media platform. Users need to have access to different groups, pages etc. to see what their favourite firms or friends have posted on those pages. Since this paper aims to analyze the communication from firms and the response/reaction of users to the same, we have restricted our data collection and analysis exercise to the official Facebook pages of firms. While firms may post on other Facebook pages like conference pages, industry association pages etc., these will be visible/accessible to users also following those groups and hence these are restrictive and not open to all users.

4.1 Variables for Analysis

Table 2 below shows the variables and their definitions that have been used in this study. There are two distinct sources of the dataset that are used in this study. First, the social media data collected, as explained above, are the primary source of data. We performed text analytics using R packages to analyze the dataset and formed the required variables. The social media variables used in this study are similar to variables used in extant literature analyzing text data from Facebook or Twitter (Jha & Verma, 2022; Kaur et al., 2021). We supplement the social media data collected from Twitter and Facebook with the firm's financial data collected from Bloomberg. As stated in Table 2, we use two dependent variables to analyze the user response to firms' communication. These are differences in the likes and shares of firms' social media posts. On social media platforms, users can interact with a firm's or other users' content in different ways. These are through likes, shares or by replying/commenting on these platforms (Srinivasan et al., 2022). However, extant literature has identified that likes and shares/retweets are more identifiable mechanisms of user engagement as commenting is limited to individuals who desire higher social recognition or may want to dispute the posts (Kalsnes et al., 2017; Srinivasan et al., 2022). Thus, commenting cannot

⁵ Twitter timeline is like a homepage on the social media platform for any user where all posts and activities of the user are stored and visible.

be considered a reliable social media interaction variable. The use of these two dependent variables allows us to study the impact of firms' social media strategy on both likes and shares, two different forms of engagement. We have computed the difference between the likes and shares of the two platforms using their logarithms. This is because the likes and shares have a long-tailed distribution with few highly viral tweets/posts getting many likes/shares. We have also used natural logarithm-based transformation for sales and market value of firms for similar reasons. These are consistent with extant literature treatment of such variables (Sonnier et al., 2011). An argument may be made that the nature of likes, shares/retweets on the two platforms are different. Twitter by the nature of the platform encourages a higher level of likes and sharing while Facebook is seen as a more passive form of social engagement. However, since we are taking the difference between the platform for all firms, such differences would not impact the core conclusions of the study. But, to enhance the robustness of the study, we also perform a supplementary robustness analysis (discussed later in the paper) where we use platform normalized metrics to compute the difference.

For the computation of sentiments, we have used a lexicon-based approach (Jha & Shah, 2019; Rathore & Ilavarasan, 2020). We have allotted a positive, neutral and negative score to all words in a tweet and the final computation is based on a difference between the positive and negative sentiment scores. The sentiment score for each tweet/post is between 0 and 1 where a higher score indicates a more positive tweet/post. To compute the list of relevant posts, we created a list of relevant keywords that relate to the dimension of sustainability. These included words like green supply chain, sustainable, water preservation etc. For further discussion on the list of keywords used to identify sustainability-related communication on social media, please see Jha and Verma (2022) and Manetti and Bellucci (2016). We used text identification to identify the posts where the content included one of these keywords. A post has one of the sets of keywords was marked as a relevant post for this study and treated accordingly. These steps are consistent with the literature in the field to identify specific text in social media posts (Jha & Verma, 2022; Van Hee et al., 2018). To ensure that the selected posts referred to the context as desired, the authors randomly selected 50 posts each and read through them. No significant misclassification was found. This could be attributed to the fact that firms would not normally post sarcastic or misleading posts from their official social media channels. These are the kind of posts that cause errors in classification on social media space.

Another control variable that we used in this study is the proportion of images in the social media posts. Extant

literature has shown that posts with images get more engagement from users (Pancer & Poole, 2016). Hence, to control for the effect of images on the likes/sharing we control for the proportion of the posts that have images for each firm. We identified each post that has an image embedded within and divided it by the total number of posts that a firm has posted in the year. This provides us with the proportion of posts with images for each of the years of our analysis. Table 3 shows the descriptive statistics as well as the correlation matrix for the variables in this study.

5 Results and Analysis

5.1 Empirical Strategy

We have a total of 90 firms for which complete 3-year data was available. As such, we have a balanced panel data for analysis. One of the major concerns in any panel-based analysis is control for and estimation of fixed effects. There are three sources of fixed effects in this study, firm level, industry level and time. In this research, our dependent variable is the difference of the user engagement metrics of the two platforms. As the dependent variable computes differences between the two platforms for the same firm, the firm-on-firm fixed effect is controlled through the design of the variable (Greenaway & Kneller, 2003). Past studies have used similar mechanisms and other difference-in-difference design features to eliminate one or many sources of fixed effect in the analysis (Foerderer et al., 2018; Tam et al., 2020). We have included industry and time fixed effects in the analysis.

5.2 Findings

5.2.1 Different user Groups

The first set of analyses was performed to establish if the users on the two platforms have any differential preferences for relevant messaging. Since Facebook is inherently a larger platform with many more users than Twitter, this analysis cannot be done through a simple comparison of means of user engagement on the two platforms. We computed the variable differential response to the relevant posts with sustainability-driven keywords as shown in Eq. 1. We computed the sustainability engagement score for both likes and share, the two kinds of user engagement on social media platforms.

$$\text{Sustainability Engagement} = \frac{\text{Average user engagement of sustainability relevant posts} - \text{Average user engagement of all posts}}{\text{Average user engagement of all posts}} \quad (1)$$

Table 3 Descriptive statistics and Pearson correlation matrix of the variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1 Differential shares	1.71	1.62	1																
2 Differential likes	2.72	1.85	0.83**	1															
3 Facebook share#	3.32	1.72	0.80**	0.669**	1														
4 Facebook like#	4.99	2.01	0.67**	0.795**	0.889**	1													
5 Twitter like#	2.27	1.24	-0.13	-0.207**	0.438**	0.429**	1												
6 Twitter share#	1.59	1.03	-0.17*	-0.205**	0.428**	0.403**	0.955**	1											
7 Firm Size#	9.85	1.02	0.29**	0.163*	0.490**	0.421**	0.437**	0.40**	1										
8 Market Cap#	10.40	1.01	0.17*	0.066	0.434**	0.381**	0.526**	0.49**	0.656**	1									
9 ESG Disclosure score	48.48	10.03	-0.10	-0.081	-0.08	-0.03	0.072	0	0.024	0.045	1								
10 Images Twitter	46.54	29.02	-0.39**	-0.336**	-0.14*	-0.102	0.336**	0.34**	-0.048	0.031	0.02	1							
11 Relevant Twitter	2.42	3.84	-0.25**	-0.244**	-0.29**	-0.28**	-0.09	-0.11	-0.266**	-0.179*	0.07	0.13	1						
12 Twitter Posts	3.80	1.57	0.02	-0.021	0.167*	0.150*	0.274**	0.20**	0.057	0.179*	-0.01	-0.033	-0.157*	1					
13 Sentiments Facebook	0.62	0.16	-0.03	0.245**	0.092	0.173*	-0.086	-0.12	0.052	-0.068	0.09	0.045	0.09	-0.12	1				
14 Images Facebook	46.19	26.70	-0.02	0.196**	0.049	0.173*	-0.014	-0.01	-0.087	-0.18**	0.11	0.177*	0.114	-0.101	0.33**	1			
15 Relevant Facebook	4.42	7.18	-0.15*	-0.061	-0.209**	-0.162*	-0.171*	-0.18**	-0.220**	-0.145*	0.08	-0.032	0.772**	-0.043	0.19**	0.12	1		
16 Facebook Posts	2.54	0.87	-0.09	0.057	0.129	0.115	0.1	0.12	0.161*	-0.001	-0.13	0.234**	-0.124	0.102	0.078	-0.05	0.03	1	
17 Difference of Relevant Posts	-1.99	4.87	0.031	-0.102	0.018	0.077	0.181*	0.185**	0.115	0.074	-0.067	0.150*	-0.348**	-0.061	-0.215**	-0.087	-0.865**	-0.142	1

Indicates that variable is log transformed

* p < 0.05, ** p < 0.01

Table 4 Results for a comparative firm strategy on two platforms

Metric	Mean	p-value
Average number of posts	60.94	0.004
Proportion of relevant posts	-0.41	0

The sustainability engagement score for Twitter likes was 0.21, which is significant with $p < 0.01$. Alternatively, the metric for Facebook was -0.37 with a $p\text{-value} < 0.01$. We also computed Welch two-sample t-test to examine the statistical significance of the difference between the user engagement as depicted through likes on social media posts. The t-statistic was 3.76 ($p < 0.01$). For shares and retweets, the difference was even greater, with Twitter having an appreciation score of 0.39 ($p < 0.01$) and Facebook score of -0.47 ($p < 0.01$). Welch two-sample t-test indicates a t-value of 5.91 ($p < 0.01$), indicating statistical significance for the difference in sharing pattern of the user on the two platforms. The results indicate a stark difference in the way users respond to socially and environmentally relevant posts on the two platforms. Facebook-based users do not appreciate relevant messaging in the firms' posts; they appreciate it less than other generic posts of the company, while Twitter-based users actively encourage firms and engage more with relevant posts. The finding supports H1 as we find that the Twitter and Facebook user groups form differentiated segments within the 'social media users' stakeholder group.

5.2.2 Firm Communication and user Engagement

In the second part of the analysis, we attempt to understand if firms have different strategies for different platforms. To this end, we compute firms' relative strategy metric for the strategic components on social media i.e., no. of posts and no. of relevant posts⁶. Both the components take the generic formula presented in Eq. 2. We compute Eq. 2 for an average number of relevant posts as well. The results are presented below in Table 4.

$$\text{Relative platform strategy} = \frac{\text{Average no. of posts on twitter} - \text{average number of posts on facebook}}{\text{Average number of posts on facebook}} \quad (2)$$

The results presented in Table 4 show that firms have very distinct strategies for the two platforms. While firms tend to have a higher number of posts on Twitter, they have lower relevant posts on Twitter. This may be attributed to the way firms use these platforms. Due to the nature of Twitter, firms use the platform to communicate regularly with users and

⁶ To test the efficacy of our model, we also tested the proportion of images as a firm's communication strategy by computing relative difference in proportion of posts with images (similar to Eq. 2). We found the mean to be 2.99 and significantly different from 0.

respond to their posts and queries. The word limit on Twitter also forces many firms to rely heavily on images to communicate their messages. One major point of departure from the way users view these platforms is with respect to relevant posts. We found that while users engage with relevant posts more on Twitter, companies post a higher proportion of their Facebook posts as relevant posts. Therefore, we do not find any support for H2.

The third part of the story is about the impact firm's social media strategy has on the user response. Table 5 shows the results of the analysis. To fully understand the impact of a firm's strategy on user engagement, we tested a hierarchical model for both shares and likes as modes of engagement. Models 1 and 2 have shares (retweets) as the dependent variable and models 4 and 6 have the likes as the dependent variable. In models 3 and 5, we use differential engagement for shares and likes (difference between Twitter and Facebook), respectively as the dependent variable. The use of two different user engagement metrics adds robustness to our study. We find that for both models, the results are consistent.

The results indicate that larger firms with higher market value tend to have a higher engagement with users on Twitter as compared to Facebook. This may also be attributed to the fact that larger firms over the past few years have often been technology companies that have preferred Twitter for quick connection with their users. We also find that relevant posts have higher traction on Twitter than on Facebook. Therefore, we find support for H3. However, it is critical to look at the findings of H2 and H3 in conjunction. We find that firms do not have a differentiated communication strategy over the two platforms as hypothesized. As opposed to our hypothesis, firms have higher relevant posts on Facebook than on Twitter. At the same time, the two-way communication finding reflects that an increase in the relevant posts over Twitter leads to an increased differential user engagement over Twitter compared to Facebook. This could be because the absolute number of relevant posts are increasing over the years. Analysis of the data in this direction shows that the proportion of relevant posts increased from 2.2% to 2016 to 3.02% in 2018.

5.3 Post-Hoc Analysis and Robustness Tests

To ensure the reliability and robustness of the results, we employed numerous statistical and theoretical techniques. In Table 5, all models are fixed effect models to account for the firm and year-level effects that may bias our results. We also reported robust standard errors. We also tested the models for multicollinearity and found that the average VIF for the models were significantly below 10 (the maximum reported VIF was 3.6). We also tested models 3 and 6 by

Table 5 Panel data analysis results

Metric	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)	Coefficient (Robust stan- dard Error)
DV	Facebook Share	Twitter Share (retweets)	Differential Shares	Facebook Likes	Twitter Likes	Differential Likes
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Firm Size	0.87 (0.88)	0.26 (0.76)	0.53 (0.50)	1.64** (0.68)	0.21* (0.14)	1.58** (0.64)
ESG Disclosure score	0.03 (0.03)	0.004 (0.007)	0.01 (0.01)	-0.005 (0.02)	0.003 (0.003)	-0.004 (0.20)
Market Cap	1.67*** (0.54)	0.86 (0.66)	1.65** (0.82)	1.99*** (0.41)	0.28** (0.101)	1.75*** (0.31)
Sentiments Twitter		0.05** (0.02)	0.06** (0.03)		0.03*** (0.002)	0.04*** (0.003)
Images Twitter		0.01*** (0.003)	0.008*** (0.003)		0.02*** (0.005)	0.01*** (0.003)
Relevant Twitter		0.02** (0.009)	0.03** (0.01)		0.04** (0.01)	0.02** (0.01)
Twitter Posts		2.84*** (0.73)	1.97** (0.81)		1.43*** (0.07)	1.22*** (0.05)
Sentiments Facebook	-1.94*** (0.55)		-1.71*** (0.50)	-2.89*** (0.71)		-2.12*** (0.63)
Images Facebook	-0.003 (0.003)		-0.002 (0.004)	-0.005* (0.003)		-0.006* (0.004)
Relevant Facebook	0.006 (0.03)		0.006 (0.02)	0.01 (0.02)		0.01 (0.04)
Facebook Posts	2.18*** (0.63)		1.99*** (0.55)	2.73*** (0.81)		2.15*** (0.67)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	3.41 (2.99)	4.15 (3.97)	4.37 (3.71)	4.72 (3.11)	5.07 (4.21)	5.65 (4.93)
R-squared	0.26	0.14	0.17	0.28	0.32	0.235
F-statistic	3.26***	4.11***	3.84***	4.21***	3.99***	4.15***

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.01$

replacing the difference of likes and shares with relative likes and shares (similar to Eq. 1). The models remain consistent with the change of variable definition, indicating significant robustness of our results.

An additional analysis was performed to gauge the impact of firm-level variables in Table 4 on the firms' engagement metrics tested in hypotheses 1 and 2. We ran panel regression models with the dependent variable being sustainability engagement for Facebook and Twitter respectively as well as for firms' social media communication strategy. The independent variables for these models were the firm characteristics including firm size, market capitalization, ESG disclosure score. For the models with dependent variable as sustainability engagement for Facebook and Twitter respectively, we found that proportion of relevant posts was significantly related to the relative engagement. This indicated that firms with continuous social media activity and communication on sustainability specific topics were able to engage more with users on this issue compared to firms that used sustainability communication as one-off communication strategy. On the other hand, the models for firms' social media communication strategies were statistically insignificant ($p > 0.1$). This indicated that the firm's social media strategy is independent of the firm's size and can be

an exogenous strategic choice of the social media communications divisions⁷.

As discussed in Sect. 3, one of the possible criticisms of our variables could be the fact that the primary variables of likes and shares are vastly different on the two platforms. To check for the robustness of our results against this, we performed an additional analysis where the dependent variables are platform normalized. In the main analysis reported in Table 5, the dependent variables are natural logarithms of the likes and shares along with their differences. We compute the platform normalized variables using min-max normalization technique (Arora et al., 2019; Rath et al., 2017) as predominantly used in extant literature. The resulting variables are normalized in the range 0–1 for both platforms and provide a more comparable statistic for the two platforms for each firm. The results of the analysis are presented in Table 6. The results remain qualitatively similar to the ones presented in Table 5 strengthening the validity of our findings.

We also performed a robustness analysis to check against extreme value bias. Models 3 and 4 in Table 6, also present results for the top and bottom half of the firms that receive higher and lower than average shares on the platforms. The results remain qualitatively similar. Although, it can be seen

⁷ Detailed models are not included in the paper in interest of parsimony. The results can be requested from the authors where required.

Table 6 Results of robustness tests

Metric	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)	Coefficient (Robust standard Error)
DV	Differential Shares	Differential Likes	Differential Shares (Top half)	Differential Shares (Bottom half)	Differential Shares
	Model 1	Model 2	Model 3	Model 4	Model 5
Firm Size	0.46 (0.50)	1.69* (0.82)	1.44* (0.81)	0.55 (0.68)	0.46 (0.50)
ESG Disclosure score	0.01 (0.01)	-0.004 (0.20)	0.02 (0.03)	0.01 (0.01)	0.01 (0.01)
Market Cap	1.34*** (0.67)	1.88*** (0.52)	1.22* (0.89)	2.49*** (0.71)	1.36*** (0.67)
Sentiments Twitter	0.04*** (0.01)	0.04*** (0.003)	0.81*** (0.06)	0.03** (0.01)	0.03*** (0.01)
Images Twitter	0.009*** (0.003)	0.01*** (0.003)	0.01* (0.007)	0.008** (0.003)	0.009*** (0.003)
Relevant Twitter	0.03** (0.01)	0.02** (0.01)	0.14*** (0.03)	0.25*** (0.04)	
Twitter Posts	1.65** (0.74)	1.47*** (0.08)	0.96* (0.51)	0.88* (0.49)	1.55** (0.62)
Sentiments Facebook	-1.69*** (0.66)	-1.93*** (0.423)	-1.19* (0.84)	-2.11*** (0.54)	-1.58*** (0.59)
Images Facebook	-0.002 (0.004)	-0.006* (0.004)	-0.002 (0.004)	-0.002 (0.004)	-0.002 (0.004)
Relevant Facebook	0.006 (0.02)	0.01 (0.04)	0.006 (0.02)	0.006 (0.02)	
Facebook Posts	2.07*** (0.915)	2.45*** (0.423)	3.86*** (0.554)	1.87** (0.715)	2.04*** (0.765)
Differential relevant					0.02(0.001)***
Industry	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes
Intercept	5.82 (4.81)	6.59 (6.91)	4.22 (6.19)	8.91 (8.23)	5.62 (7.88)
R-squared	0.207	0.351	0.318	0.181	0.198
F-statistic	4.49***	5.64***	5.11***	3.99***	5.25***

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.01$

that results are stronger for firms that are more active (top half) compared to less active (bottom half firms).

An additional issue could be raised on our analysis with regards to our use of differential DVs but not differential IVs. Though this would not be a statistical concern if the relationships are linear in nature, we have conducted additional robustness test to check for this effect. Model 5 in Table 6 uses differential IV (difference between relevant posts on Twitter and Facebook). The results remain unchanged.

6 Implications

6.1 Implications for Practice

Companies are indeed realizing the importance of communication with users over social media. However, what differentiates strategic communication is the clear idea of what content to be posted on which platform. To come up with such a communication strategy, a firm must understand the nature of the platform as well as the characteristics of the users of a platform.

We find that users appreciate relevant posts more on Twitter than on Facebook. Moreover, we find clear evidence of a positive impact on user engagement if a firm chooses

to post relevant content over Twitter than on Facebook. Yet, we find that the firms post relevant content proportionally more on Facebook than on Twitter. Our study, therefore, has some key implications for the practitioners:

1. The firms should categorize their communication content based on their key agenda.
2. For each such content category, a firm should conduct thorough market research on social media users over various platforms and understand their appreciation of the content category.
3. Based on the understanding drawn from such an exercise, the firm should develop appropriate content-platform matching. We believe adopting such a communication strategy will make it more effective.
4. Not only firms should content match based on user preferences, for a continuously effective communication strategy, firms should regularly understand the engagement feedback from the platform users to adapt and evolve their content over time.

6.2 Implication for Theory

We believe our study also has some key implications for theory. First, our study builds a case for the need for research

on cross-platform research topics. There is sufficient evidence on the importance of social media communication for firms; however, there is a lack of studies exploring the differences in platform characteristics and the corresponding user base characteristics and its influence on firm and user content. Specifically, future studies can address specific content types and its differential impact (if any) on specific platforms. Some content types that can be explored are disruption-linked firm communication, corporate decisions communication, among others.

7 Limitations and Conclusion

As is the case with any research, our study too has its own set of limitations. Although our study is one of the first to explore the differential communication strategy, it is still in the form of a static study. A multi-period dynamic study exploring the effect of communication over time while considering the feedback from the content recipient base could give interesting insights into the communication dynamics. Further, our study has specifically focused on the socially and environmentally relevant content posted on the platforms. However, the same framework can be extended to multiple relevant categories such as corporate social responsibility, disruption communication, corporate strategy communication, etc.

8 Declarations

All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors did not receive support from any organization for the submitted work.

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Declarations

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