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How emotions from content social relevance mediate social media engagement: evidence from European supermarkets during the COVID-19 pandemic

COVID-19,
emotions and
social media
engagement

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Abstract

Purpose – The purpose of this study is to examine the antecedents of consumer engagement with supermarkets' social media accounts. Drawing on regulatory fit theory and social sharing of emotions theory, the authors test if the content posted on the social media brand pages of supermarkets dealing with a topic of high social relevance, such as the COVID-19 pandemic, stimulates social media consumer engagement and if and how the engagement is mediated by the arousal of positive and negative emotions.

Design/methodology/approach – The authors retrieved data from the Facebook accounts of the top 20 European supermarkets identified in the Deloitte 2020 Global Powers of Retailing report during the first wave of the pandemic from 1 March to 30 June 2020, collecting a sample of 2,524 posts from 8 different countries. After a content analysis to classify COVID-19 content, the authors applied the Baron and Kenny (1986) methodology to verify the hypothesised relationships.

Findings – The findings highlight a positive direct relationship between the social relevance of a topic (COVID-19) and social media consumer engagement mediated by the arousal of positive and negative emotions.

Originality/value – To the best of the authors' knowledge, this is one of the earliest empirical research using Facebook data to investigate the role of the social relevance of content as an antecedent of social media consumer engagement with a specific focus on supermarkets. The paper contributes to the stream of social media literature investigating the antecedents of social media engagement behaviour, exploring the role of topics' choice and aroused emotions, which to date are both under-investigated.

Keywords Social media, Social media engagement, Sentiment analysis, Supermarket, COVID-19

Paper type Research paper

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Introduction

Social media sites are disrupting the way consumers shop and interact with supermarkets. Beyond creating a new social commerce food shopping channel (Kumar *et al.*, 2021), the rise of social media has enhanced the centrality of consumers giving them a more powerful voice, thanks to electronic word of mouth, and putting retailers under the constant pressure of judgement (Peeroo *et al.*, 2017). Therefore, retailers are obliged to accord the utmost consideration to this emerging media both for promotional and reputational reasons. Not surprisingly, a recent survey of retail marketing professionals outlined that 96% of US retailers buy ads on Facebook, and overall, 50% of them spend more than half of their total marketing budget on social networks (Smartly.io, 2020).

Scholars who study the social media phenomenon within the supermarket industry have mainly focused on retailers' knowledge acquisition (Dawson, 2013; He *et al.*, 2013; Singh *et al.*, 2018; Valacherry and Pakkeerappa, 2018) or on the ways in which consumers get food information (Henderson *et al.*, 2017; Panagiotopoulos *et al.*, 2015; Pucci *et al.*, 2019; Russo and Simeone, 2017) rather than on the investigation of the antecedents of social media consumer engagement towards supermarkets. Other studies aimed at investigating how companies can maximise consumer engagement through social media have mainly focused on the tone of the content (Dolan *et al.*, 2019; de Vries *et al.*, 2012) or on the choice of media type (Kim *et al.*, 2015; Schultz, 2017), often neglecting the role of emotions (Schreiner *et al.*, 2021) aroused by particular topics and reaching contradictory findings. Moreover, none of these studies has ever considered consumers' propensity or aversion to engage with certain types of industries. Peculiarly, supermarkets are poorly considered by consumers in terms of brand affection. Shoppers consider them anonymous "non-places" (Augé, 2015). Summing up, to the best of our knowledge, there is to date a paucity of quantitative studies investigating the role of emotions in social media engagement; we also did not find research which tries to shed light on the antecedents of social media consumer engagement in the peculiar and scarcely engaging supermarket sector. Notwithstanding that social media ad expenditure continues to grow, these communication efforts will fail if marketers do not understand how to wisely calibrate their content to enhance consumer engagement (Dolan *et al.*, 2019).

Against this background, this study aims to provide a better understanding of the antecedents of consumer engagement towards supermarkets' social media brand accounts. Drawing on the regulatory fit theory (RFT) (Higgins, 2005), this research investigates the relationship between socially relevant supermarkets' social media content publication and their consumers' engagement. In addition, referring to the social sharing of emotions theory (Rimé, 2009), the paper explores the mediating role emotions played in this relationship. Therefore, this study aims to answer the following research questions: RQ1: Does socially relevant content, posted by supermarkets' social network brand pages affect social media consumers' engagement? RQ2: What is the role of emotions, such as positive and negative sentiments, on the relationship between supermarkets' social network socially relevant content and social media consumer engagement?

As suggested by the literature, we opted to conduct the research using a quantitative analysis based on primary data in the form of brand posts (Schreiner *et al.*, 2021; Voorveld, 2019) collected from the Facebook pages of the top twenty European supermarket chains and then identifying posts related to the COVID-19 pandemic as socially relevant content. The Baron and Kenny (1986) methodology was applied to investigate the aforementioned relationships.

This study contributes to the literature on supermarkets (Augé, 2015; Samoggia *et al.*, 2019) by showing a positive relationship between socially relevant content communication and social media consumer engagement. Moreover, it contributes to the research stream in the social media literature (Schreiner *et al.*, 2021) by attributing to positive and negative feelings arising from the contents' topic a full mediating effect on the relationship between socially relevant content posts and consumer engagement.

The remainder of this paper is structured with a background analysis of the literature followed by a section debunking the framework and hypotheses, a report on the methodology adopted, a presentation of the results, a discussion of the findings, the theoretical and practical implications of this study and, finally, a concluding section setting out the limitations of the research and suggestions for future investigation.

Literature review

Social media and consumer engagement

Building consumer engagement through social media is essential for organisations to keep a relationship with their customers, develop customer affection towards a brand (Sashi, 2012) and actively stimulate the intention to buy (Pucci *et al.*, 2019; Rust *et al.*, 2021), thus reinforcing the necessity for firms to allocate monetary and non-monetary resources to social media. The most reliable metrics to measure consumer engagement are likes, comments and content sharing for the so-called active consumer engagement behaviour (Dolan *et al.*, 2019; Kim and Yang, 2017; Muntinga *et al.*, 2011; Schultz, 2017).

Scholars in the last decade have deepened the understanding of how brands can enhance consumer engagement through social media content. The content itself has been studied under several perspectives, such as content topic (de Vries *et al.*, 2012; Dolan *et al.*, 2019; Schultz, 2017; Zhang *et al.*, 2017) and content characteristics, including media types (for example, links, videos and photos; Kim *et al.*, 2015; Schultz, 2017) or interactivity (Gavilanes *et al.*, 2018; de Vries *et al.*, 2012). In particular, topics have been examined in terms of scope, such as informative, emotional, rational and transactional scope (Dolan *et al.*, 2019; Kim and Yang, 2017; Muntinga *et al.*, 2011) or as a topic of discussion, such as school, politics or sustainability (Holiday *et al.*, 2021; Zhang *et al.*, 2017).

Most scholars contend that content with an emotional slant positively affects consumer engagement (Dolan *et al.*, 2019; Kim and Yang, 2017; Schreiner *et al.*, 2021; Southgate *et al.*, 2010). However, studies on other content scopes have obtained contradictory outcomes. Khan *et al.* (2016) and Pletikosa Cvijikj and Michahelles (2013) outlined that informative content has a weak effect on consumer engagement, while entertaining content positively affects it. Other studies are in contrast with both of these findings (see Swani and Milne, 2017 on informative content; de Vries *et al.*, 2012 on entertaining content). Moreover, some scholars support the assertion that transactional content enhances consumer engagement (Gavilanes *et al.*, 2018; Kim *et al.*, 2015) but Schultz (2017) found some contrasts.

These controversial results may possibly conceal another element that has not yet been fully brought to light. Beyond content characteristics and scope, little research has investigated the impact of the topic discussed on consumer engagement. Zhang *et al.* (2017) found that students from American business schools tended to re-tweet (share) content posted by their universities that was close to their interests. Bianchi and Andrews (2018) stressed that the same topic can differ in performance depending on the brand's credibility. Thus, CSR disclosures in social media campaigns conducted by private brands create some engagement among less knowledgeable consumers but detachment from consumers already involved and sensitive to the issue because of a company's lack of credibility (Holiday *et al.*, 2021).

Supermarkets and social media

Examining the supermarket perspective, scholars have ascribed to social media the valency of an excellent knowledge management asset as social media is an effective vehicle to extract relevant consumer knowledge (Valacherry and Pakkeerappa, 2018). Social media enable businesses to understand consumer demographic profiles, tastes and satisfaction with food

delivery (Singh *et al.*, 2018) as well as to monitor market trends (He *et al.*, 2013) and adapt their offer accordingly Dawson (2013).

Results from a survey conducted by Henderson *et al.* (2017) show that the crucial role of social media in influencing consumer opinion is well known to everyone in the industry, from policymakers to marketers. Indeed, several supermarkets have tried to influence consumer food choice through social media, even maliciously by advertising consumption towards less healthy foods (Coates *et al.*, 2019; Ventura *et al.*, 2021). Nevertheless, other scholars support social media's importance in raising awareness of food issues (Panagiotopoulos *et al.*, 2015; Russo and Simeone, 2017).

While diverse food and beverage actors tend to steadily promote concepts such as the green economy or fair consumption through several media channels (Bresciani *et al.*, 2016), supermarkets usually adopt very cautious approaches with little communication about this kind of topics, and when they do it on social media, they generally create limited consumer engagement (Samoggia *et al.*, 2019). In addition, Gonzalez-Lafaysse and Lapassouse-Madrid's (2016) netnographic research, based on one year of social media communication by a leading French supermarket, provided support that CSR disclosure of supermarket activities in all its dimensions did not stimulate any particular consumer engagement behaviour.

Social customers can represent both a blessing and a curse for supermarkets' reputation, thanks to powerful potential electronic word of mouth, and managers must calibrate social media content to avoid possible users' co-destruction (Peeroo *et al.*, 2017). The latest study by Wang *et al.* (2021), which was conducted on UK supermarkets' social media communication about COVID-19, argued that emotional content increases consumer comments expressing positive feelings. However, it neither examined the performance aspect with respect to other topics nor its impact on social media consumer engagement.

The literature on the supermarket retail sector needs to make progress in researching the factors that determine the social media engagement of its particular customer base given the paucity of research conducted on the subject at this stage and the ambiguity of the actual body of knowledge.

Theoretical foundation

The central theoretical underpinning of our research is represented by the regulatory fit (RFT) and the social sharing of emotions theories.

The majority of papers to date that examine how regulatory adaptation is predicted have applied the regulatory focus theory (Higgins, 1997; Motyka *et al.*, 2014). Such thinking has swiftly acquired importance in attempts to unfold consumer choices. It posits a radical discrimination of the motivational drivers of promotion and prevention (Florack *et al.*, 2013), with promotion-oriented people deemed to be approach focused and prevention-oriented individuals deemed to be centred on avoidance (Higgins, 1997). The promotion orientation is presumably linked to striving for progression and realisation, while the prevention orientation occurs with a search for safety and security (Idson *et al.*, 2004). These attitudes may indicate the susceptibility of individuals or they be situationally induced (Camacho *et al.*, 2003). Hence, the attitude of an individual may change between any given scenario, assignment or environment despite his/her lifelong habit towards promotion or prevention. Higgins (2005) described regulatory fit as the correspondence between an individual's motivational tendency and the chosen enabling approach, with the promotion tendency characterised by greater impatience and the prevention tendency by greater vigilance. These two approaches diverge in that the individual is active and impatient compared to more passive and vigilant. RFT suggests that an individual's actual orientation is sustained under conditions of regulatory fit and discontinued under non-fit conditions; the correspondence between the orientation towards a target and the approach used to reach that target increases

task motivation (Higgins, 2005). Aaker and Lee (2006) defined regulatory fit as the convincing gain from the fit between a statement and a consumer orientation which is asserted to enhance the effectiveness of advertising messages. RFT finds its roots in marketing and considers the company as the main actor that can trigger the consumer with its communication (Solem and Pedersen, 2016). A more psychological strand, on the other hand, examines how an individual reacts when he or she perceives an emotion (Berger, 2014; Chen *et al.*, 2020; Rimé *et al.*, 2020). According to the social sharing of emotions theory, the higher the emotional level perceived by people in an action, a communication or a fact, the higher their propensity to share their feelings (Rimé, 2009). Emotions will trigger the social sharing of emotion: individuals will openly talk with others about the specific environment where the emotional event occurred and their own feelings and emotional responses to it or they will share their own emotions through letters, journals and other indirect methods (Rimé, 2009).

Hypotheses development

The main challenge for supermarkets arises from the fact that they cannot count on a specific customer niche with a particular interest. Supermarket shoppers belong to every social, cultural and demographic status, and they are forced to shop because of a matter of necessity rather than a specific interest. Moreover, supermarkets do not enjoy a particularly favourable light and are categorised as “non-places”, indicating their social irrelevance as dull, standardised places which do not stimulate social interactions and customer engagement (Augé, 2015). The path to social media engagement for supermarkets seems to be even more uphill than for many other brands or retailers in sectors such as fashion. Therefore, if grocery stores aim to stimulate their vast and diverse clientele, it would be convenient to focus on a social media communication strategy that addresses topics that can interest a large segment of the citizenship; that is, topics with high social relevance.

According to Nederhof and Van Wijk (1999), a socially relevant topic “refers to a social rather than a personal need or problem” and must deal with (a) “concrete social institutions (e.g. police, family)” (b) large “social categories (e.g. the elderly)”, (c) “both society as a whole and (groups of) individuals (e.g. war, political participation, religion)” (d) “contemporary social issues (e.g. multiculturalism, euthanasia, environmental or socioeconomic issues)”, and (e) “a serious (mental) illness or health problem that has a (potential) severely negative influence on society is considered as potentially socially relevant (e.g. HIV/AIDS, depression)”; (f) “Topics that are frequently or largely studied [. . .]”.

The latest global phenomenon that the entire world population has been experiencing, that is COVID-19 totally fulfils all the characteristics of a socially relevant topic as it brings profound social consequences due to several factors, for example, mass quarantine (Chu *et al.*, 2020), it (a) concerns different social institutions from the police (Frenkel *et al.*, 2021) to families (Thomeer *et al.*, 2020), it (b) touches on a diverse set of social categories from migrants (Knights *et al.*, 2021) to the elderly (da Rocha *et al.*, 2021), it (c) impacts elections in several countries (Haute *et al.*, 2021; James, 2021), it (d) feeds the hotbed of discussion on a wide range of contemporary issues from euthanasia (Salinas Mengual, 2021) to environmental concerns (Sarkodie and Owusu, 2021) and (e) beyond being considered a pandemic phenomenon comparable to HIV (already considered by the literature as socially relevant) in terms of social weight, it is also considered to affect the spread of HIV because of prolonged lockdowns in countries with high HIV rates (Dorward *et al.*, 2021). Finally (f) COVID-19 has been a cross-cutting phenomenon studied with unmatched intensity across different academic domains (Else, 2020). Therefore, a socially relevant topic, such as Covid-19, might stimulate more engagement on supermarket pages than niche topics or product/offer posts, which may interest only a few customers. In accordance, the following hypothesis is formulated:

H1. Socially relevant content, such as COVID-19 information, posted on the social network brand pages of supermarkets positively affects social media consumer engagement.

Parkinson's (1996) research underpins how social issues and interactions are drivers of emotions. Notably, social marketing practitioners do not rely on the rationality of the people they target but on their emotions and perceptions triggered by the promoted cause (Coimbra Carvalho and Afonso Mazzon, 2013; Santoro *et al.*, 2019). In accordance with the social sharing of emotions theory, individuals who are triggered by some social issue will tend to share their sentiments (Rimé, 2009). This implies that individuals tend to express themselves when they experience positive or negative feelings. Therefore, it is conceivable that social media users who react emotionally to certain content on social media would tend to comment on it to share their feelings with the community. Some studies on social media have suggested that content expressed in an emotional way – which refers to the way the message is communicated but not necessarily the topic – can indeed generate engagement (Dennis *et al.*, 2010; Dolan *et al.*, 2019; Lin and Utz, 2015). Schreiner *et al.* (2021) reviewed social media consumer engagement and promptly called for empirical investigation on the mediating role of emotions between content choice and social media engagement. Therefore, the following hypotheses are formulated:

H2a. The positive sentiment aroused by socially relevant content, such as COVID-19 information, mediates the relationship between content social relevance and social media consumer engagement.

H2b. The negative sentiment aroused by socially relevant content, such as COVID-19 information, mediates the relationship between content social relevance and social media consumer engagement.

Methodology

Analysis strategy

To test our hypotheses, we opted to retrieve primary official social media data instead of elaborating conceptual works or questionnaires, thereby embracing Voorveld's (2019) call for research. We retrieved official social network data from Facebook's API using social media analytics software (in this case, Socialbakers), as has been previously done by marketing researchers (Holiday *et al.*, 2021; Marchand *et al.*, 2017). We also opted to quantitatively analyse the retrieved data using IBM SPSS Statistics v27 through the Baron and Kenny (1986) methodology recently adopted by other scholars investigating simple and parallel mediations in CSR and social media studies (Garanti and Kissi, 2019; Nirino *et al.*, 2022; Yadav and Choudhary, 2019).

Sampling

Our sampling and coding protocol for social media post content as adapted from Dolan *et al.* (2019) presents six steps. The first consists of identifying the brands to be monitored. The second involves the selection of the social media to be analysed. The third includes the identification of a selection criterion in case the selected brands have multiple pages in the corresponding social media. The fourth entails choosing the time period in which to analyse the content posted on the selected pages. The fifth involves the choice of keywords useful to classify the content in the way we want to analyse it (whether the coding is done through a programming language such as Python, R or through SaaS software, the protocol would not change). The sixth involves a manual verification of all the content identified through the coding of keywords.

First, sampling collection included the identification of the 20 top European supermarkets based on the Global Powers of Retailing Report annually provided by Deloitte (Su *et al.*, 2020), which identifies the top 250 world retailers ranked according to their financial year revenues. Retailer types included in the sample selection were “supermarkets”, “hypermarkets/supercentres/superstores”, “discount stores” and “cash and carry/warehouse clubs” (all other forms of non-food retail were excluded). Second, we opted to examine their Facebook accounts, as Facebook is the most common social network (Statista Inc, 2021). Third, we identified every supermarket’s most followed Facebook account (several retailers had more than one). The chain Tesco had no official Facebook account, and we decided to select the 21st European retailer to replace it. Fourth, we retrieved all the social media communication from the selected retailers posted during the “first wave” of the COVID-19 pandemic from 1 March 2020 to 30 June 2020. Fifth, we identified all COVID-19 related content by using the analytics software labelling functionality with the following COVID-19-related keywords in the relative countries’ official languages: *covid*, *covid19*, *coronavirus*, *virus*, *pandemic*, *pandemia*, *pandemie*, *coprifuoco*, *Sperrstunde*, *toque de queda*, *curfew*, *toque de recolher*, *couvre-feu*, *lockdown*, *confinement*, *confinamento*, *aislamiento*, *Ausgangssperre*, *Distanzierung*, *distancing*, *distanziamento*, *distanciamento*, *distanciation*, *salute*, *santé*, *salud*, *health*, *Gesundheit*, *saúde*, *segurança*, *sicurezza*, *safety*, *Sicherheit*, *sécurité*, *seguridad*, *sicuro*, *seguro*, *safe*, *state a casa*, *restez chez vous*, *quedate en casa*, *stay at home*, *zu Hause bleiben*, *fique em casa*, *mascherin*, *màsacara*, *maske*, *masque*, *mask*, *igienizzante*, *sanitizing*, *higienizante*, *Desinfektion*, *désinfectante*, *saneando*. The pandemic-related posts which were initially identified by the automatic labelling functionality were 204. Sixth, we conducted a manual screening of the identified posts and decided to exclude 34 posts since they were irrelevant to the pandemic issue. For example, several posts that included “health” and its translations referred to healthy food products.

Table 1 shows the twenty selected Facebook accounts and their content communication metrics.

Measurement metrics

First, the independent variable – content social relevance (SR) – which was previously defined according to Nederhof and Van Wijk’s (1999) criteria, was categorised as content related vs not related to the selected social issue (COVID-19) with a binomial dummy variable. Second, the dependent variable was social media consumer engagement (SMCE), identified as the sum of so-called user “interactions”, which are reactions (likes, loves, smiles), comments and content sharing (Dolan *et al.*, 2019; Schultz, 2017; Zhang *et al.*, 2017). Third, to identify the mediators (emotions), we considered the feeling expressed in consumer comments. Specifically, the software in our possession (Socialbakers) includes among its functions that of cataloguing consumer sentiment into three distinct labels: positive, neutral and negative (Socialbakers, 2021). This function is carried out thanks to AI technology developed internally by Socialbakers engineers who have “trained” their algorithm to recognise the connotation of all consumer comments on the social pages analysed. The emotions are measured by counting the sum of comments expressing positive feelings (PF) and comments expressing negative feelings (NF) for each retailer’s FB post.

Finally, we added several control variables to enforce the robustness of the model and to diminish the risk of endogeneity issues. First, we considered the number of total followers (TF) defined as the total number of users following the supermarkets’ Facebook page during the day the post was generated. TF is a relevant variable since the same number of interactions generated by a post has different weights depending on the total number of brand pages (Zhang *et al.*, 2017). Second, we considered the media type chosen to communicate the posts (photo, video, carousels, status, link) by categorising these nominal variables into several dummy variables. Indeed, prior research has suggested that media

Table 1.
Sample characteristics

Retailers' page	Total posts	COVID-19 related posts	"Boosted" posts	Total reactions	Comments with positive sentiment	Comments with negative sentiment	Total comments	Total shares
Albert Heijn	74	1	42	171,851	633	211	37,853	41,951
Aldi UK	160	16	77	731,317	37,546	24,005	143,542	171,613
Auchan	84	4	19	35,046	433	248	20,552	14,889
Conad	69	1	51	88,386	335	116	6,937	17,368
Coop (CH)	72	3	22	4,937	243	29	2,481	1,205
Coop (IT)	77	8	24	33,320	179	184	4,127	11,590
E.Leclerc	124	5	14	29,661	453	330	14,919	10,139
EDEKA	122	1	25	159,735	5,408	4,658	21,604	65,105
Intermarché	123	9	24	453,751	1,415	976	49,870	148,665
Lidl Deutschland	401	37	198	1,053,358	48,050	51,976	184,791	87,121
Mercadona	85	3	67	770,011	18,769	20,086	123,651	234,811
METRO	101	4	1	5,229	175	244	699	3,203
Deutschland								
Migros	126	7	79	191,581	7,737	6,082	31,772	22,910
Monoprix	63	10	34	26,384	278	176	6,674	6,637
Morrisons	411	35	17	327,064	37,492	22,426	153,596	117,167
Pingo Doce	171	20	130	285,018	4,599	3,569	18,467	44,540
REWE	115	1	68	232,372	13,512	7,951	42,890	43,176
Sainsbury's	29	1	20	116,202	5,868	20,909	54,898	34,785
U Les	63	9	33	331,306	1,749	464	36,048	43,442
commercants partners	54	5	3	70,867	4,228	4,596	17,914	31,154
Total	2,524	180	948	5,117,396	189,102	169,236	973,285	1,151,471

choice can influence engagement (Kim *et al.*, 2015; de Vries *et al.*, 2012). Third, we defined the ratio of the COVID-19 case (CCR) as the total population that had contracted COVID-19 through 30 June 2020 per each supermarkets' country, divided by the country's total number of citizens. We retrieved this data from the European Centre for Disease Prevention and Control database (ECDPC, 2020). Fourth, we enhanced the analysis by adding the "boosted posts" variable. Facebook (2021) defines a boosted post as "a post to your Page's timeline that you can apply money to in order to boost it to an audience of your choosing". We identified the boosted posts (BP) and the non-boosted posts with a binomial dummy variable. Finally, the date of posting, defined as the date on which every supermarket post was published and classified as an ordinal variable was also included as a control variable.

Findings

Descriptive statistics

The overall dataset consisted of about 2,524 posts, of which 180 were related to COVID-19, representing 7.1% of the total dataset, while the overall boosted posts were 948, representing 37.6% of the total. Interactions were 7,242,152, represented by reactions to 70.7% of posts, comments to 13.4% of posts and shared content by reactions to 15.9% of posts. In addition, comments expressing PF were 19.4% of posts, comments expressing NF were 17.4% of posts and neutral comments were 63.2% of posts. In particular, 162,857 comments were from COVID-19-related content (19.5% of COVID-19 total interactions) of which PF were 20.8% of comments and NF were 22.8% of comments.

Firstly, we tested Pearson's correlation to investigate potential multicollinearity issues (Table 2).

The Pearson's correlation matrix outcome shows only two control variables (video and photos) above the 0.500 thresholds, thus not representing collinearity issues (Dormann *et al.*, 2013). Therefore, in order to profoundly investigate the collinearity possibilities, we looked for variance inflation factors (VIF), finding no collinearity in the causal (SR) variable (VIF = 1,059) nor in the mediators (PF VIF = 1,319; NF VIF = 1,369).

Model results

Table 3 shows the Baron and Kenny (1986) analysis results.

Model I confirms the existence of a significant positive direct relationship (Beta = 0.082 and p -value < 0.01) between content, social relevance and, in this case, the posts concerning the COVID-19 pandemic and the variable SMCE, thereby confirming H1. Model II supports that emotions (PF; NF) directly affect SMCE (PF Beta = 0.251 and p -value < 0.01; NF Beta = 0.228 and p -value < 0.01). Models IIIa and IIIb indicate a direct relationship between content and high social relevance, in this case COVID-19, and emotions (PF and NF; Model IIIa SR Beta = 0.110 and p -value < 0.01; Model IIIb SR Beta = 0.147 and p -value < 0.01). Model II and Models IIIa and IIIb are preliminary tests necessary to consent to include both independent variables in the next and final model. Finally, Model IV, which includes all independent variables SR, PF and NF, supports that there is a strong positive relationship between emotions and SMCE (PF Beta = 0.249 and p -value < 0.01; NF Beta = 0.226 and p -value < 0.01) but the relationship between the SR and SMCE results is not significant. These findings attest that emotions (PF; NF) play a fully mediating role in the positive relationship between SR and SMCE and is also backed by R squared, which in Model IV is 0.202, gaining exponential robustness from the 0.055 from Model I, including the only SR independent variable, thereby supporting H2a and H2b. In order to double-check mediation disclosing the indirect effects, we conducted a bootstrapping analysis (5,000) in accordance with Hayes (2018). Since standardised indirect effects do not include zero, mediation has occurred

Table 2.
Pearson's correlation
matrix

	SR	SMCE	PF	NF	TF	CCR	BP	Date	link	photo	carousel	status	video
SR	1												
SMCE	<i>0.094</i> **	1											
PF	<i>0.124</i> **	<i>0.369</i> **	1										
NF	<i>0.164</i> **	<i>0.364</i> **	<i>0.477</i> **	1									
TF	0.012	0.028	0.088**	0.121**	1								
CCR	0.024	<i>0.063</i> **	<i>0.096</i> **	<i>0.089</i> **	<i>0.062</i> **	1							
BP	<i>-0.040</i> *	<i>0.137</i> **	0.033	<i>0.076</i> **	<i>0.063</i> **	<i>0.039</i> *	1						
Date	<i>-0.123</i> **	<i>-0.121</i> **	<i>-0.089</i> **	<i>-0.131</i> **	<i>0.063</i> **	-0.014	0.008	1					
Link	-0.027	-0.027	-0.016	-0.005	<i>-0.141</i> **	0.020	<i>0.083</i> **	0.000	1				
Photo	0.010	<i>0.053</i> **	<i>0.108</i> **	<i>0.103</i> **	<i>0.181</i> **	<i>-0.101</i> **	<i>-0.106</i> **	-0.019	<i>-0.296</i> **	1			
Carousel	<i>0.056</i> **	-0.040*	<i>-0.053</i> *	<i>-0.048</i> *	0.025	-0.014	0.018	<i>-0.054</i> **	<i>-0.055</i> **	<i>-0.196</i> **	1		
Status	<i>0.065</i> **	0.038	<i>0.047</i> *	<i>0.055</i> **	-0.007	0.002	<i>-0.068</i> **	-0.007	-0.025	<i>-0.090</i> **	<i>-0.017</i>	1	
Video	-0.030	-0.029	-0.088**	<i>-0.093</i> **	<i>-0.137</i> **	<i>0.110</i> **	<i>0.070</i> **	0.035	<i>-0.214</i> **	<i>-0.770</i> **	<i>-0.142</i> **	<i>-0.065</i> **	1

Note(s): Italics data have p-values; * p < 0.05 ** p < 0.01

	Causal effect between SR and SMCE Model I	Direct effect of PF and NF on SMCE Model II	Direct effect of SR on PF Model IIIa	Direct effect of SR on NF Model IIIb	Mediation effect including PF and NF and SR Model IV
SR	<i>0.082***</i>		<i>0.110***</i>	<i>0.147***</i>	0.019
PF		<i>0.251***</i>			<i>0.249***</i>
NF		<i>0.228***</i>			<i>0.226***</i>
Total followers	<i>0.046**</i>	-0.041	<i>0.155***</i>	<i>0.196***</i>	-0.040
COVID cases ratio	<i>0.077***</i>	-0.006	<i>0.170***</i>	<i>0.178***</i>	-0.006
Boosted posts	<i>0.147***</i>	<i>0.111***</i>	<i>0.048**</i>	<i>0.090***</i>	<i>0.112***</i>
Date	<i>-0.115***</i>	<i>-0.075***</i>	<i>-0.079***</i>	<i>-0.119***</i>	<i>-0.073***</i>
Link	-0.001	-0.039	0.067	0.085	-0.037
Photo	0.087	<i>-0.003**</i>	0.181	0.188	-0.001
Carousel	-0.032	-0.023	-0.018	-0.016	-0.024
Status	0.051	0.025	<i>0.062**</i>	<i>0.071**</i>	0.024
Video	0.031	-0.010	0.075	0.086	-0.008
<i>R</i> squared	0.055	0.202	0.068	0.102	0.202
Adj. <i>R</i> squared	0.051	0.198	0.064	0.098	0.198

Note(s): Italic data have *p*-values: ***p* < 0.05, ****p* < 0.01

Table 3.
Beta coefficients and *R*-
squared results from
the [Baron and Kenny
\(1986\)](#) analysis

(PF = 0.115, SE = 0.056 CI [0.049, 0.264]; NF = 0.144, SE = 0.081 CI [0.058, 0.368]; TOTAL = 0.259, SE = 0.120 CI [0.127, 0.572]).

The BP and Date control variables were significantly positive (BP) and negative (Date) in all models. Total followers and CCR variables were positively significant in just model i and models IIIa and IIIb. All media types showed non-significant or irrelevant results except status, which positively affected emotions in models IIIa and IIIb.

Discussion

The descriptive statistics are enough to grasp supermarkets' reluctance towards disclosing information on socially relevant topics ([Samoggia et al., 2019](#)). Just 7% of total communication was concentrated on COVID-19, despite supermarkets being one of the most affected sectors during the pandemic. Nonetheless, it is interesting to note that the total incidence of comments on total interactions increased by more than 31% (from 13.4% of the total to 19.5%) when related to COVID-19. In the literature, comments are effectively deemed as more "active" interactions than simple likes and, consequently, constitute a more engaged behavioural level ([Dolan et al., 2019](#); [Kim and Yang, 2017](#); [Muntinga et al., 2011](#)).

It is necessary to remark that when examining the COVID-19 thread, the percentage of NF increased by about 23% from 17.4% to 22.8%. Negative feelings do not imply a detrimental judgement about the supermarket itself; however, according to [Peeroo et al. \(2017\)](#), there could be a possible occurrence of a co-destructive inducement leading to consumer disinvolvement with supermarkets. NF might merely be an expression of people's fear or disappointment with the pandemic situation. In contrast, [Baron and Kenny's \(1986\)](#) analysis reveals how positive and negative feelings favourably affect consumer engagement, thereby supporting [H2a](#) and [H2b](#), thereby underpinning how the social sharing of emotions theory ([Rimé, 2009](#)) holds within a consumer–supermarket relationship in the social media environment.

The direct relationship between SR and SMCE ([H1](#)) is confirmed by the analysis, albeit with a limited impact. This supports [Zhang et al.'s \(2017\)](#) research which argued that the more

a topic is related to or touches on the personal sphere of a segment of users, the more proactive will be social media engagement, thereby explaining the social relevance implied by the COVID-19 pandemic. Outcomes of control variables are partially in contrast with [Zhang et al. \(2017\)](#) related to the role of total followers as drivers of social media engagement since this is confirmed with relevant coefficients in models IIIa and IIIb, which test just emotional comments rather than the more holistic models I and IV. Moreover, this study does not support prior literature which asserts that media types affect SMCE ([Kim et al., 2015](#); [de Vries et al., 2012](#)). The only minor, relevant significant outcome on media types relates to status which positively affects both PF and NF in contrast with mainstream literature that considers status as a less vivid and less impactful media type ([Schultz, 2017](#); [de Vries et al., 2012](#)).

Finally, it is worth commenting on the R^2 of models 1 and 4. Although H1 is confirmed by a statistically significant result, the R^2 and the SR beta coefficient in model 1 are rather low. It might be possible that content social relevance is a factor that influences the SMCE in a statistically valid but very approximate way (only 5% of the cases). However, model 4, including the variables PF and NF, achieves a very good degree of statistical reliability for research on primary social media data in line with or above the R^2 of studies in the field ([Dolan et al., 2019](#); [Kim and Yang, 2017](#); [de Vries et al., 2012](#)). This allows us to stress how fundamental emotions are and how they play a primary role in determining SMCE.

Implications

Theoretical contributions

This research provides three significant contributions to the body of literature.

First, it contributes to the supermarket stream of literature given the peculiar hardly-engaging nature of supermarkets ([Augé, 2015](#)) by identifying socially relevant topics, such as COVID-19 ([Bresciani et al., 2021](#)) and suitable social media content to enhance supermarkets' social media consumer engagement.

Second, drawing on RFT ([Higgins, 2005](#); [Higgins and Scholer, 2009](#)), the research enriches the knowledge of social media consumer engagement by indicating that regardless of the type of media used ([Kim et al., 2015](#); [Schultz, 2017](#); [de Vries et al., 2012](#)) or how content is communicated ([Dolan et al., 2019](#); [Sashi, 2012](#)), the affinity of interest with the topic under discussion is an essential direct driver of emotions and social media consumer engagement.

Third, drawing on the social sharing of emotions theory ([Rimé, 2009](#)), this study responds to the call for research evidenced by [Schreiner et al. \(2021\)](#) on the role of emotions in the relationship between social media content and social media consumer engagement. Our findings show that both positive and negative emotions arising from the social media content of a brand mediate social media consumer engagement by means of an appraised ([Schreiner et al., 2021](#); [Voorveld, 2019](#)) quantitative analysis based on primary and extensive social media data which provides original measurement metrics.

Managerial implications

The research findings provide helpful insights for both supermarket and non-supermarket practitioners beyond the tone of voice or the choice of media type.

First, social media managers from supermarkets are encouraged to communicate more on socially-related topics, which is something they usually avoid doing ([Samoggia et al., 2019](#)); especially supermarkets with the broadest range of consumers that are suffering from poor consumer attachment ([Augé, 2015](#)) could focus on communication on topics that attract the interest of all the social classes, such as the results evidenced with the COVID-19 topic. However, we must reiterate that disclosures on CSR or food issues are perceived as an exciting topic by only a niche of the vast and diverse grocery store consumer base ([Gonzalez-Lafaysse and Lapassouse-Madrid, 2016](#); [Samoggia et al., 2019](#)), who could be engaged by

more popular (and generalist) socially-relevant topics, for example, the Football World Cup or the Olympic games. However, it is fundamental to distinguish between communication on a social issue and publicly defending a position on a topic, which could cause different reactions from the consumer base.

Non-supermarket social media managers are emboldened not to limit their communication to their products and thereby risk becoming monothematic, but to seek out common interests among their customer base. If a teenage shoe brand discovers that its followers all listen to a particular singer or support the same NBA team, it would be wise to communicate content around those themes instead of systematically insisting on the content about new products or commercial offers.

Finally, social media managers should not be afraid of communicating serious themes and risking the provocation of adverse emotions since negative feelings also positively enhance social media consumer engagement.

Limitations and future research

It must be noted that this study has some limitations.

First, this study focused its attention on a particular and significant topic, namely the COVID-19 pandemic, which fits all the requirements to be considered socially relevant (Nederhof and Van Wijk, 1999) but did not test the hypothesis on other socially relevant topics which could be tested in future research. Second, the study included in its scope SMCE as a dependent variable, which is crucial since it directly affects increased brand reputation (Rust *et al.*, 2021), brand love and brand equity (Hafez, 2021) as well as consumers' purchase intention (Pucci *et al.*, 2019). However, it could be interesting to test in future studies if SMCE coming from content not strictly related to product or brand itself, such as social topics, affects at the same level of strictly product/brand-related content all the phenomena normally depending on SMCE.

Moreover, the adopted quantitative approach still has some limitations, even though it is considered valid and reliable by recent research. While it allowed the classification of the emotions of the 973,285 comments into positive, neutral and negative feelings thereby enabling us to verify our otherwise barely testable hypotheses with statistically significant results, this methodology cannot help us to identify possible comments directly expressing negative feelings against the supermarket itself instead of the expression of bad feelings about the pandemic situation. Other qualitative approaches, such as ethnographies, could further investigate the SR/SMCE relationship and deepen the research focus on distinguishing between negative feelings against the brand vs negative feelings generated by a particular social issue.

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