

Does the use of social media affect customer relationship performance? Evidences from Italy

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Abstract

The study investigates how social media information generation, internal information sharing and responsiveness affect the impact of the use of social media on customer relationship performance (CRP). 180 valid and complete questionnaires were collected from managers of firms operating in Italy. Results obtained from structural equation modeling analysis show that social media information generation and social media responsiveness have a significant and positive effect on the impact of social media on CRP (evaluated by managers). Moreover, internal information sharing does not directly affect CRP, but its effect turns out to be mediated by responsiveness.

Keyword: social media, customer relationship performance, social media information generation, internal information sharing, responsiveness, structural equation modeling.

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Introduction

Given the widespread use of social media, the interest in this topic among marketing scholars and practitioners has grown continuously over the years. Social media, which include a wide range of blogs, forums and online social network sites, enable people to share content, opinions, and experiences (Lariscy, Avery, Sweetser, & Howes, 2009). The interactive nature of social media not only has strengthened firm-to-customer and customer-to-firm communications, but it has also facilitated interpersonal interactions (Gallaughner & Ransbotham, 2010), transforming the role of users from passive receivers of content to active participants in creating and sharing information (Wang & Kim, 2017).

In this environment, social media have become extremely important for firms of all sizes because they provide new instantaneous ways to communicate, share information, build relationships with customers on a more direct and personal level and, in turn, create higher value (Kelly, Kerr, & Drennan, 2010). Recent data show that the budget concerning social media represents a fixed point in the firms' strategies, underlining in a lot of cases (42% of over 1,200 marketers) an increase in social media spending (Buffer, 2016).

Thanks to social media, firms have the opportunity to get closer to customers (Baird & Parasnis, 2011) but, although they represent a powerful tool to collect information regarding both existing and new customers, it is not so obvious that firms are able to exploit those information to personalize communication, better satisfy consumers' needs, creating and managing valuable relationships.

Therefore, the effectiveness of using social media depends on firms' ability to exploit this potential. In fact, if managed properly, social media can contribute to develop and maintain relationships, improving customer relationship performances, such as customer satisfaction, retention and loyalty (Hooley, Greenley, Cadogan, & Fahy, 2005; Jayachandran, Sharma, Kaufman, & Raman, 2005; Trainor, 2012).

Despite firms have recognized the potential of social media as key enablers for relationships building and performance enhancement, there is still a little understanding of how social media usage and management affect customer relationship performance (Hutter, Hautz, Dennhardt, & Füller, 2013; Rapp, Beitelspacher, Grewal, & Hughes, 2013; Trainor, Andzulis, Rapp, & Agnihotri, 2014; Tsimonis & Dimitriadis, 2014). Considering this gap, this study develops a conceptual model to empirically investigate how social media information generation, internal information sharing and responsiveness influence the impact of the use of social media on customer relationship performance (CRP), as an outcome. To conduct the empirical research, we used

an online questionnaire to collect data from Italian firms' managers involved in social media communications activities.

The results suggest that the exploitation of the potential of information generation of social media and the responsiveness of the firm to the users' instances affect customer relationship performance. Moreover, results show the key role played by social media responsiveness in mediating the relationship between internal information sharing and customer relationship performance.

The rest of the paper is organized as follows. The study starts with a literature review on the relationship between the use of social media by firms and customer relationship performance that identifies the theoretical framework of the study. Thereafter, the paper describes the sample, data collection process and the research methodology. Then, the empirical results deriving from structural equation modelling are presented. Subsequently, results are discussed and, in the section devoted to conclusions, theoretical and managerial implications, as well as potential areas for future research are presented.

1. Theoretical background and research hypotheses

1.1. The relationship with customers and the use of social media

Digitalization, fast-moving business environment, and severe competition lead firms to continuously look for new ways to improve their performance (Teece, 2007). In this scenario, market and customer orientation literature affirms the strategic role customers play in generating value for both firms and customers themselves (Thomke & von Hippel, 2002).

By adopting tools that contribute to a better understanding and knowledge about customers, such as customer relationship management solutions (Krasnikov, Jayachandran, & Kumar, 2009; Srinivasan & Moorman, 2005), firms have the opportunity to establish long-term relationships with customers, develop higher-order capabilities (Rapp, Trainor, & Agnihotri, 2010), and achieve better organizational performances (Peltier, Zahay, & Lehmann, 2013), particularly customer-based ones.

In this perspective, social media, promoting connections and collaborations with customers and allowing to observe their online interactions with peers (Richter & Koch, 2008), enable firms to provide customers with superior value (Sashi, 2012), engage them (Grieve, Indian, Witteveen, Anne Tolan, & Marrington, 2013), and make them become firms' advocates (Malt-house, Haenlein, Skiera, Wege, & Zhang, 2013). Through social media,

firms obtain valuable information about customers that can be deployed not only to respond to their needs and satisfy their preferences, but also to improve relationships with customers, gaining important relational outcomes (Rapp et al., 2010). In fact, by using social media, firms can enhance customer satisfaction (Day & Wensley, 1988; Morgan, Anderson, & Mittal, 2005), customer loyalty (Day & Wensley, 1988; Reinartz, Krafft, & Hoyer, 2004) and customer retention (Becker, Greve, & Albers, 2009; Reinartz et al., 2004) reinforcing those dimensions of performance that evaluate firms-customers relationships strength, namely customer relationship performance (Trainor et al., 2014).

1.2. Social media information generation

Social media information generation refers to the firm's information acquisition process. Information generation represents a key dimension of firms' CRM capabilities (Josiassen, Assaf, & Cvelbar, 2014) and has been considered strategic for firms' competitiveness (Gibbert, Leibold, & Probst, 2002; Khodakarami & Chan, 2014). Today firms are aware of the importance of capturing data about their customers and they collect information across different channels and from different sources (Ryals & Payne, 2001). Social media are one of the main sources of data for marketers (Choudhury & Harrigan, 2014) because they may be used to carry out market researches, may be useful to identify and monitor changes in customers' preferences, and store a huge amount of customers' information (Trainor, 2012; Trainor et al., 2014). Such a great amount of data sets a stimulating challenge for firms (Kaplan & Haenlein, 2010) that need not just to acquire, but also to manage all customer insights they obtain through social media.

Firms able to exploit social media to establish a relationship with customers and acquire useful insights about their preferences and needs are the ones that can gain a competitive advantage over their competitors (Wigley & Zhang, 2011). In fact, social media information generation helps firms to improve the quality of their products and services, contributes to establish long lasting relationship with customers, and, in turn, is an essential prerequisite of CRP enhancement (Rapp et al., 2010). Therefore, we propose the following hypothesis:

H1. Social media information generation has a positive effect on customer relationship performance.

1.3. Internal information sharing

Internal information sharing consists in the dissemination of information within the whole organization. Customers have the opportunity to use several channels to communicate with firms (Trainor, 2012) and they may decide to directly get in contact with several functional areas of the firm (Jayachandran et al., 2005). At the same time, data collected on customers can be useful to several organizational units that contribute to define and build the firm value proposition.

Due to the huge amount of information that are made available by social media, it becomes crucial for firms to correctly manage data collected from customers, decide how information from social media interactions have to be used by employees and, even more important, ensure that each department shares data obtained in its interactions with customers. In fact, previous studies suggest that information sharing within the firm is an important antecedent of firm performance (Gulati, 1998) as it provides support both in identifying existing and potential critical issues (Bhatt, 2000) and in timely replying to the changes that are occurring to customers' needs and expectations (Hsu, Kannan, Tan, & Keong Leong, 2008). Simultaneously, information dissemination is crucial to ensure consistent communication both inside and outside the firm (Jayachandran et al., 2005; Trainor, 2012; Trainor et al., 2014), and, consequently, it may contribute to sustain and improve CRP (Rapp et al., 2010). Therefore, we propose the following hypothesis:

H2. Internal sharing of information collected through social media has a positive effect on customer relationship performance.

1.4. Social media responsiveness

In the digital era, customers use social media to directly communicate with both firms and peers (Baird & Parasnis, 2011). They interact with the firm to access general information about the firm itself and the products it sells, obtain real-time support, complain about a product or express their satisfaction with it. At the same time, customers dialogue and establish relationships with their peers in order to exchange opinions and experiences and provide feedbacks about a firm product or service (Sashi, 2012).

In this context, it has become vital for firms to develop strong capabilities to effectively use social media and exploit their peculiarities. Hence, firms need not only to have a profile on each of the most popular social media platforms, but they also have to actively monitor social media interactions,

and assign internal responsibility for examining the content that users create on social media (Culnan, McHugh, & Zubillaga, 2010). Thus, firms have to develop social media responsiveness, that can be defined as the firms' ability to use social media to monitor customers' behaviors, support them in their decision-making process, and provide timely response to their questions and instances (Trainor, 2012; Trainor et al., 2014). Being responsive, firms can strength their CRP, improving customer satisfaction, retention and loyalty (Rapp et al., 2010). Therefore, we propose the following hypothesis:

H3. Social media responsiveness has a positive effect on customer relationship performance.

2. Research methodology

Using LISREL 8.80, the structural equation modeling (SEM) technique was applied in order to empirically test the relationship between social media information generation, internal information sharing, responsiveness and customer relationship performance.

2.1. Sampling and data collection

Data were collected using a web-based questionnaire sent to managers involved in marketing and communication functions of firms operating in Italy. Managers were identified from LeFAC database – a database that contains a list of direct email contacts of managers of firms operating in Italy that invest in advertising. For each firm, the online questionnaire was sent to only one manager, selecting – among those listed in the database – the one whose activity is more strictly related to social media marketing and communication.

A structured questionnaire in which respondents self-reported their answers was developed to investigate firms' practices concerning social media and the evaluations of respondents regarding the impact of the use of social media on firms' performance.

From April to May 2017, 3,216 managers were invited to reply to the questionnaire and 274 questionnaires were returned in a completed form (8.52% response rate). Since the research aim is to investigate how firms' social media usage affects customer relationship performance, 6 questionnaires were eliminated because they correspond to firms that declared not to use social media. The remaining 268 firms have an active presence on social media, since they use at least one social media to communicate and interact

Does the use of social media affect customer relationship performance?

with customers. Other 88 responses were excluded due to missing data. The final sample consists of 180 respondents, which is above 150, the threshold recommended by SEM literature as “sufficient for a convergent and proper solution” (Anderson & Gerbing, 1984, pp. 170-171; Iacobucci, 2009, p. 92).

As shown in Table 1, the majority of managers interviewed operate within large and medium firms (respectively 45.0% and 36.1%) and, with reference to the sector of activity, the majority of firms operate in (commercial and other) services (60.5%), followed by manufacturing (36.7%), and primary, energy and mining sector (2.8%).

More than half of the sample mainly serves business customers (50.6%), followed by firms that distribute their products or services mainly to final customers (36.1%) and firms that have a customer base equally composed by business to consumer and business to business clients (13.3%).

Table 1 – Sample characteristics

	Frequency	Percentage
Firm size		
Micro	6	3.3%
Small	28	15.6%
Medium	65	36.1%
Large	81	45.0%
Customer base		
Mainly final customers (B2C)	65	36.1%
Mainly business customers (B2B)	91	50.6%
Equally B2C and B2B	24	13.3%
Industry		
Primary, energy and mining	5	2.8%
Manufacturing	66	36.7%
Trade	28	15.6%
Services	81	45.0%

Table 2 presents data about firms’ social media usage. Firms tend to use more than one social media to communicate to their targets. In fact, only few firms declare to actively use just one social media to interact with customers (4.4%), while the large majority of the interviewees affirms to adopt four or more different social media (76.1%). The table also presents the most frequently adopted social media. Facebook ranks first (used by 96.1% of respondents), followed by content-sharing platforms such as YouTube (81.1%) and Instagram (72.2%).

Table 2 – Number and typologies of social media used

	Frequency	Percentage
Number of social media adopted		
1	8	4.4%
2-3	35	19.5%
4-5	77	42.8%
6+	60	33.3%
Social Media		
Facebook	173	96.1%
YouTube	146	81.1%
Instagram	130	72.2%
Twitter	128	71.1%
LinkedIn	112	62.2%
Google+	57	31.7%

2.2. Measures

All the constructs of the study were measured based on multi-item scales drawn from previous research. Social media information generation, internal information sharing, and social media responsiveness scales were taken and adapted from Trainor *et al.* (2014).

In particular, social media information generation is a 3-item scale that refers to the firms' ability to acquire information through social media on market, changes in customers' product preferences and shifts in industry.

Internal information sharing is a 4-item scale that refers to the firms' ability to disseminate information acquired from social media within the whole organization. In detail, the different items investigate the internal sharing of market trends identified via social media, customers' future needs, data on customer satisfaction, and information about competitors.

Social media responsiveness is a 6-item scale that measures the firms' ability to use social media to monitor customers' behaviors, support them in their decision-making process, and provide timely response to their questions and instances. The respondents declared their degree of agreement with the following statements: (1) your company uses social media to monitor customers' preferences; (2) if your major competitors launched a social media intensive campaign targeting your customers, your company would respond

immediately using social media; (3) the social media activities of your company are well coordinated; (4) your company uses social media to reply and track customer complaints; (5) your company uses social media to announce products/services' changes; (6) your company uses social media to respond to your competitors' price changes.

Finally, regarding the outcome variable, the 3-item scale used to assess how managers perceive the impact of social media on customer relationship performance was drawn and adapted from Rapp et al. (2010). In particular, this scale, namely customer relationship performance, refers to the managers' perception about the impact of the use of social media on customer satisfaction, loyalty and retention in comparison with competitors' performances. As in the original scale by Rapp et al. (2010) and in other perceptual measures of performance (e.g. Wiklund & Shepherd, 2005; Ozkaya, Droge, Hult, Calantone, & Ozkaya, 2015; Grisseman, Plank, & Brunner-Sperdin, 2013; Trainor *et al.*, 2014), respondents were asked to evaluate their own firm's performance compared to their competitors.

Appendix A presents the scale items of each construct analyzed in this research (evaluated with a 5-point Likert scale).

3. Results

3.1. Measurement model

Before testing the hypotheses, Cronbach's alphas analysis was applied to test the reliability of each construct and Confirmatory Factor Analysis (CFA) was conducted to test for both convergent and discriminant validity of the measurement model (Table 3).

Cronbach's alphas exceed the recommended threshold of 0.70 (Bagozzi & Yi, 1988; Nunnally & Bernstein, 1994), ranging from 0.788 to 0.859. Thus, each construct shows a satisfactory level of scale's reliability. All the items load properly on their scale, surpassing the required reliability threshold of 0.60 (Bagozzi & Yi, 1988). Moreover, convergent and discriminant validity were evaluated through the Composite Reliability (CR) and the Average Variance Extracted (AVE) analyses. CR values range from 0.788 to 0.860, exceeding the recommended threshold of 0.70 (Bagozzi & Yi, 1988; Nunnally & Bernstein, 1994). All AVE values exceed Fornell and Larcker (1981) recommended threshold of 0.50, except for social media responsiveness construct. Social media responsiveness AVE value is 0.419 that, according to Fornell and Larcker (1981), still corresponds to an acceptable convergent validity for the construct.

Finally, all AVE values are greater than the squared correlations of the constructs, showing discriminant validity of the measures (Fornell & Larcker, 1981).

Table 3 – CFA – Reliability, convergent and discriminant validity examinations

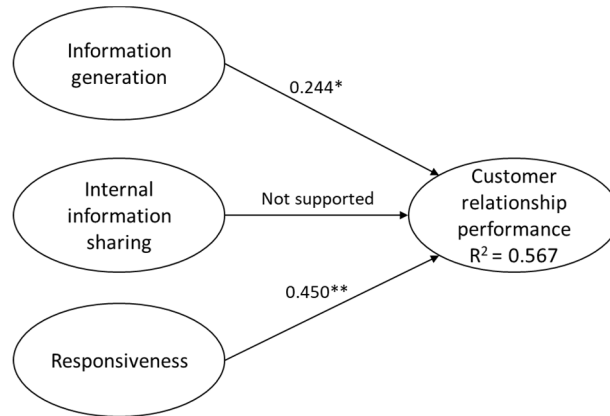
Constructs	α	CR	AVE
Social media information generation	0.788	0.788	0.556
Internal information sharing	0.854	0.859	0.605
Social media responsiveness	0.811	0.810	0.419
Customer relationship performance	0.859	0.860	0.672

3.2. Structural model

The structural model, comprising 16 items for the 4 constructs, shows acceptable fit indices (Barbaranelli & Ingoglia, 2013) with Chi-Square 213.353; Degrees of Freedom (DF) 98; Chi-Square/DF 2.177; Root Mean Square Error of Approximation (RMSEA) 0.080; Comparative Fit Index (CFI) 0.969; Standardized RMR (SMRM) 0.058. The structural model explains 56.7% of the variance in the impact of the use of social media on customer relationship performance ($R^2 = 0.567$).

T-values analysis reveals that all research hypotheses are supported, except Hypothesis 2, suggesting that internal information sharing does not directly affect customer relationship performance. Social media information generation has a significant and positive effect on customer relationship performance ($\beta = 0.244$, $t = 1.964$, $p < 0.05$), supporting Hypothesis 1. Social media responsiveness also has a positive significant effect on customer relationship performance ($\beta = 0.450$, $t = 3.462$, $p < 0.01$), supporting Hypothesis 3 (Figure 1).

Figure 1 – Structural model



* $p < 0.05$; ** $p < 0.01$

3.3. Mediating effect

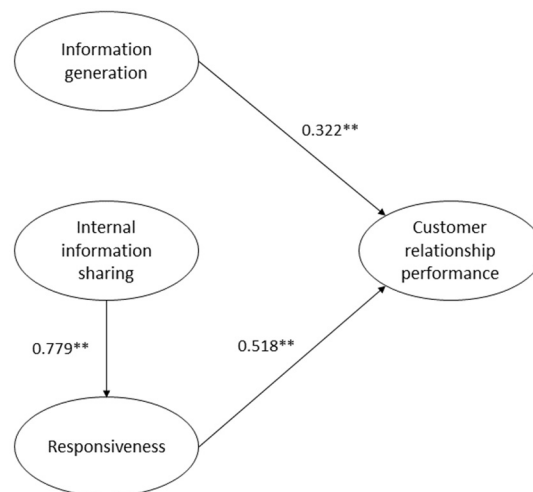
According to Daugherty *et al.* (1995), Trainor *et al.* (2014), and Josiassen *et al.* (2014), in order to support and maintain relationships with customers and to respond to both competitors and customers' changes, also providing high levels of service, firms need to internally share information concerning all situations they are facing. For this reason, having not found support for the direct relationship between internal information sharing and customer relationship performance, we also evaluated the mediating role of responsiveness in this relationship.

First of all, as suggested by previous literature (Barbaranelli & Ingoglia, 2013; Iacobucci, Saldanha, & Deng, 2007), the study tested a partial mediation model through which both direct and indirect effects were simultaneously estimated in order to evaluate the significance of the mediating effect. This overall model shows acceptable fit indices with Chi-Square 217.051; Degrees of Freedom (DF) 99; Chi-Square/DF 2.192; Root Mean Square Error of Approximation (RMSEA) 0.081; Comparative Fit Index (CFI) 0.968. While no direct effect of internal information sharing on customer relationship performance was found ($\gamma = 0.101$, $p > 0.10$), the Sobel test (3.360; $p < 0.001$) and the PRODCLIN test ($\alpha = 0.05$; 0.139, 0.521) show a significant and positive mediating effect of responsiveness in the relationship between internal information sharing and customer relationship performance.

Subsequently, a complete mediation model including only the indirect relationship between internal information sharing and customer relationship

performance was carried out. This model shows acceptable fit indices with Chi-Square 217.429; Degrees of Freedom (DF) 100; Chi-Square/DF 2.174; Root Mean Square Error of Approximation (RMSEA) 0.081; Comparative Fit Index (CFI) 0.968. In this model, the effect of internal information sharing on responsiveness, and the effect of responsiveness on customer relationship performance appear to be greater in absolute value compared to the partial mediation model in which the direct effect of internal information sharing is considered. Hence, the results of the complete mediation model support the significant role played by social media responsiveness in mediating the relationship between internal information sharing and customer relationship performance (Figure 2). In fact, findings reveal that 78% of the total effect of internal information sharing on customer relationship performance is mediated by social media responsiveness.

Figure 2 – Complete mediation model



* $p < 0.05$; ** $p < 0.01$

4. Discussion

The study presented was aimed at better understanding how firms can use social media in order to improve their relationship with customers. Even if there is a large use of social media by firms, there is limited knowledge on the efficacy of this tool and of conditions that lead to better results in terms of impact on firm performance. In this study, we have investigated how the way of using social media affects the customer relationship performance,

Does the use of social media affect customer relationship performance?

which is a dimension of firm performance that, on the one hand, appears to be more directly influenced by the firm activity on social media and, on the other hand, is crucial for firm competitiveness. We assumed that the efficacy of the use of social media is influenced by the capability of the firm to exploit the potentialities of these media, by using them not simply as a channel for disseminating information, but also as an important source of information and a tool for actually interacting with current and potential customers.

Overall, the results suggest that the impact of the use of social media on customer relationship performance (evaluated by managers) is affected by the mode of using them. In particular, we observe a direct positive impact of two aspects of social media management: the exploitation of the potential of information generation of these media and the responsiveness of the firm to the users' instances (finding support, respectively, for our first and third hypothesis).

Based on our sample, the results show that firms that are more active in collecting information through social media register a better impact of the use of social media on customer relationship performance. Social media offer the opportunity to collect a large amount of information on firm customers, potential new customers and competitors. They allow to access up-to-date data and information on individuals, including user-generated content. According to our results, exploiting this potential of information generation of social media is a way for improving firm customer relationship performance. Collecting this information allows to identify market trends, as well as to improve the knowledge of single customers and their needs, preferences and perceptions. This is a fundamental information basis, which helps firms in improving their products and services and in establishing and fostering their relationship with customers. This result has a significant implication for practitioners since it suggests the importance of using social media not only as another channel to provide information to the market, but as an additional source of information on existing and potential customers.

The impact of social media on customer relationship performance turns out to be influenced also by firm responsiveness, that is the use of social media to support customers in their decision-making process, and provide a prompt response to their questions and instances. This result suggests that the relationship with customers can be enhanced if the firm has the capability to adequately exploit the potentialities that social media offer in terms of dialogue with and support to customers. The efficacy of the use of social media appears to be higher in the case of firms that use this channel to provide timely answers to questions and issues raised by users, as well as to communicate to their customers the changes and actions that they have

adopted in response to identified trends and preferences' changes. In the perspective of managers, this result highlights the importance of using social media as a two-way communication tool and creating a real interaction with customers through these media.

Another aspect examined in our study is the internal sharing of information collected through social media, that is the dissemination of this information to other organizational units. When studying the direct effect of internal sharing of information on the impact that social media are perceived to have on the firm's customer relationship performance, the results obtained show the absence of a significant relationship. This seems to suggest that disseminating information collected to the rest of the organization, by itself, is not sufficient to improve the relationship with customers. This result has an interesting managerial implication since it suggests that, while collecting information through social media is useful, the effort to disseminate them to other organizational units might be avoided, given that it appears not to provide direct benefits in terms of improvement of customer relationship performance. This may be due to the fact that, in several cases, the organizational unit that collect information on customers through social media is the same that exploits the additional information obtained.

On the other hand, sharing information collected with other organizational units might help the firm better defining and organizing the response to needs and requests emerged through social media, because this response may need the collaboration of different areas of the organization. It may, thus, be hypothesized that the internal dissemination of information is not irrelevant, but it might provide benefits only when it helps the firm better responding to customers. For this reason, besides the direct relationship, we tested also (partial and complete) mediation models. More precisely, we tested and found support for the mediating effect of responsiveness in the relationship between internal information sharing and customer relationship performance. This result suggests that internal information sharing can contribute to enhance customer relationship performance in the measure in which it favors responsiveness. Information exchange is an important basis for collaboration and, in several cases, the management of the relationship with customers and the creation of value for customers require the collaboration of different organizational units. Sharing the information collected through social media affects indirectly customer relationship performance, since it may help defining and implementing adequate and timely responses. Moreover, information internal dissemination may be important for obtaining consistency of corporate communication and, more generally, of firm actions aimed at providing a response to customers' exigencies and requests. Managers should thus understand which are the organizational units that can

collaborate in managing customer relationship, and focus on them in the internal sharing of information collected through social media, trying to answer to their specific information needs.

Conclusions

This paper contributes to the literature on social media by investigating the conditions that can improve the efficacy of the use of these media in the relationship with customers. In particular, the paper provides insights on how the exploitation of different potentialities of social media are related to the impact of their use on customer relationship performance. Findings show that better results are obtained when firms exploit the potential of information generation and interactivity of the social media, by using them to collect information on customers and market trends and by providing a prompt response to questions and exigencies of (current and potential) customers and to trends observed.

The findings of this study have practical implications, since they show managers that, in order to boost the customer relationship performance, social media should be used to analyze preferences' changes and market trends and to be responsive both in terms of interaction on social media and as regards the adoption and communication of changes aimed at responding to customers' exigencies. Moreover, for managers it is useful to recognize the mediating effect of responsiveness in the relationship between internal information sharing and customer relationship performance, since it suggests that disseminating information collected on social media within the organization may be a precondition of the capability to be responsive and, hence, to enhance the relationship with customers. Firms can thus try to improve the efficacy of their use of social media by disseminating the information obtained through these media to all those that, in the organization, play a role in generating value for customers and in interacting with them.

This study has also some limitations that suggest possible directions for future research. It uses a subjective measure of the impact of the use of social media on customer relationship performance and, more generally, it is based on the answers of firms' managers to a questionnaire on the use of social media in their firms and the impact on different dimensions of performance. In future studies, it would be interesting to replicate the present research using more objective measures of the variables included in the model. In particular, future research might try to introduce different ways of measuring the impact on customer relationship performance.

Results highlight the presence of relationships between the different constructs analyzed but do not allow a full understanding of the mechanisms at the basis of these relationships. Qualitative studies might investigate in more detail these mechanisms. Moreover, it would be interesting to investigate whether the relationships observed differ in firms with different characteristics in terms of organization of customer relationship management and/or role assigned to social media in the communication mix and in customer relationship management processes. Finally, future studies might analyze the impact of different approaches to social media interaction in terms of frequency of posting, response time, and customer engagement.

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Appendix A. Scale items

Social media information generation (adapted from Trainor *et al.*, 2014)

- Your company uses social media to conduct market research
 - Your company uses social media to detect changes in your customers' product preferences
 - Your company uses social media to detect fundamental shifts in your industry (e.g., competition)
-

Internal information sharing (adapted from Trainor *et al.*, 2014)

- Your company internally shares market trends identified via social media
 - Your marketing department shares customers' future needs identified on social media with other departments
 - Data on customer satisfaction collected using social media are disseminated within the whole organization on a regular basis
 - Your company shares important information about competitors identified via social media
-

Social media responsiveness (adapted from Trainor *et al.*, 2014)

- Your company uses social media to monitor customers' preferences
 - If your major competitors launched a social media intensive campaign targeting your customers, your company would respond immediately using social media
 - The social media activities of your company are well coordinated
 - Your company uses social media to reply and track customer complaints
 - Your company uses social media to announce products/services' changes
 - Your company uses social media to respond to your competitor's price changes
-

Customer relationship performance (adapted from Rapp *et al.*, 2010)

Relative to your competitors...

- Once you get new customers, they tend to stay with your company for a longer time
 - Your company has achieved higher level of customer satisfaction
 - On average, your customers are very loyal to your company
-

Note: Respondents evaluated all the measurement items on 5-point scales ranging from 1 = Strongly disagree to 5 = Strongly agree.