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Implementing Social Customer Relationship Management in Turbulent Environments: A Dynamic Capabilities Perspective

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Abstract

Purpose: Despite the crucial contribution of social media on customer relationship management (CRM) strategies, how social CRM can be transformed into customer value, and economics returns for firms remain unexplored in the hospitality industry, especially in turbulent environments. As a new approach for dealing with both gradual and disruptive changes in the market, this study develops and tests the mediating role of dynamic capabilities in the social CRM - performance relationship.

Methodology: Drawing on resource-based view and capabilities perspectives, a mixed methodology was applied. First, a survey was conducted to quantitatively test the proposed hypotheses using Structural Equation Modelling with PLS approach (PLS-SEM) on a sample consisting of 111 SEMs. Then, a qualitative fuzzy-set Comparative Analysis (fsQCA) was employed to look for the unique combinations of capabilities to achieve firms' superior performance.

Findings: The outcomes indicated a mixture of expected and unexpected findings, including: (i) the direct effect of social CRM on firm's performance; (ii) Dynamic capabilities as the missing link between social CRM capabilities and firms' performance; (iii) the unique roles of social media technology use in the combinations with other capabilities for generating the best firms' performance.

Originality: This study is among the few to consider the dynamic nature of the market when investigating how to implement Social CRM successfully. The insights and practical implications in this study can be useful for managers in SMEs whose desire is to build a dynamic system for improving customer value and firms' performance.

Keywords

Social Customer Relationship Management (Social CRM), Dynamic Capabilities, Social Media Technology, Hospitality Industry, Small and Medium Enterprises (SMEs), Vietnam.

Introduction

Social networking platforms (e.g. Twitter, Instagram, Facebook, Youtube) has dramatically transformed the way how people interact with each other. An individual now can easily capture and exercise their power of word of mouth together with millions of other users on any particular issue and organization in just a click away. These critical changes dramatically increase the power of customers so that they are playing a substantial role in firms' brand image management (Sigala, 2016), as well as put pressure on companies to bring personalized services into practices. On the bright side, firms can also deliberately cultivate the powers of social media for their good. Social media allow firms to serve their customers better, generating more sources of revenue and facilitating products and service innovations. One emerging way for achieving this objective is to merge social media technologies into Customer relationship management to develop social Customer Relationship Management (social CRM). Firms are realizing the social CRM 's potential in their business and making sizeable investments into it. According to Global Industry Analysts (2019), the global social CRM market is predicted to achieve approximately US$ 170 billion in value with a growth rate of 49.9% by the year 2025.

Nevertheless, despite the vast eagerness to adopt social CRM to harness its advantages, there is as much skepticism about its real efficacy among firms. It is true that social media applications have changed tourists' behaviors profoundly in searching, communicating, and disseminating information in the hospitality sector. However, social CRM is still a magical black box for managers in the hospitality industry (Sigala, 2016). Additionally, managers are also filled with several unanswered questions because only a handful of academic research and pays attention to the real effects of social CRM on firms' performance. Thus, there is an urgent requirement for additional insight into how managers in the hospitality industry can leverage social CRM for effectively creating desired outcomes for the firm.

As a new approach, this study would like to address whether social CRM can create firms' competitive advantage in dynamic business environments, which has been ignored in past literature. To deal with dynamic business environments, scholars in the strategic management literature find that the most desired distinctive capabilities that firms should develop are related to their ability to proactively adapt and respond to the constant and disruptive changes in the market, so-called "dynamic capabilities" (Teece, 2007; Eisenhardt & Martin, 2000). Despite its increasing popularity and potential benefits to CRM implementation in dynamic environments, surprisingly, the interrelationships between dynamic capabilities and social CRM had not been discovered yet. Moreover, we also assumed that social media technologies also have critical roles in executing, communicating and expressing the changes created from dynamic capabilities. For instance, Maklan and Knox (2009) found that dynamic capabilities can not foster the dramatic changes in firms' marketing capabilities without using more individualized consumer understanding which can be harnessed using the networking capabilities and one-to-one collaborative conversation enabling by social media technologies. In fact, one of the reasons why dynamic capabilities are usually overlooked in the field of CRM implementation is about its nature of "grounded in tacit knowledge" and hard to observe (Maklan & Knox, 2009). This study addressed this issue by operationalizing specific dynamic capabilities which help to connect the social CRM and firms' performance.

More specifically, this study is motivated by the following two research gaps. First, we argued that one of the core linkages in the black box between social CRM and firms' performance should include dynamic capabilities. Yet, the priority of published studies in the field of hospitality has myopic views on the role of dynamic capabilities to created competencies and new value propositions for customers from the inputs generated by social CRM. Therefore, mediating roles of dynamic capabilities in the social CRM - firms' performance relationships is still under developed. Second, we posited that the interactions between social media technologies, social CRM and dynamic capabilities should be the focus for exploring the role of social media technologies in the hospitality industry. Most of the research on this topic only investigated the direct effects of using social media applications on the firms' performance. However, with regard to the aim of creating firms' competitive advantages, understanding the combination of social media technologies, social CRM and dynamic capabilities are much more crucial.

The paper is structured as follows. First, theoretical background is provided. Second, the study describes the methodologies of collecting and analyzing data. Third, the main results are presented, and findings are discussed to highlight the contributions of the study. Finally, the paper is wrapped up with managerial and theoretical implications.

Theoretical Background

This research combined capabilities-based perspective and resource-based view (RBV) to formulate the theoretical background. Both schools of thought posit that competitive advantages can be determined by its resource endowment and its ability to effectively convert these resources into value-generating abilities (Day, 1994). Resources are defined as firms' tangible and intangible assets, know-how, business models, human power wielded by firms for implementing their business strategies. On the other hand, capabilities are viewed as the firms' ability and know-how to gather, integrate and employ resources for achieving their business objectives (Day, 1994).

Scholars in the marketing field have highlighted the mutual relation of the two perspectives (Roberts & Grover, 2012). They found that resources alone cannot always transform into significant improvements in firms' performance. Thus, resources need to be accompanied by distinctive capabilities for achieving the desired firms' competitive advantages. The same finding can also be found in IT-marketing literature. IT-marketing scholars exerted that the substantively improved performance is most likely to occur when technological resources are integrated with supplementary organizational resources (Borges, Hoppen, & Luce, 2009). Thus, technologies from social media applications might be combined with CRM practices to create firms' capabilities that enhance CRM processes' efficiency and, in turn, the firms' performance significantly.

Dynamic Capability

Taking the fast-pace changing business environment nowadays, scholars in the strategic management literature find that the most desired distinctive capabilities that firms should develop are related to their ability to proactively adapt and respond to the constant and disruptive changes in the market, so-called "dynamic capabilities" (Teece, 2007; Eisenhardt and Martin, 2000). Dynamic capability is mainly used as the business philosophy for integrating, reconfiguring existing or novel compentences for achieving firms' competitive advantages (Teece, Pisano, and Shuen, 1997).

The literature has evolved in different views to approach dynamic capabilities (Teece, 2007). For example, Teece and colleagues (1997) defined that the nature of dynamic capabilities is their ability to be embedded into the organizational routines of an organization. In another view, Eisenhart and Martin (2000) claimed that the dynamic capabilities embedded into organizational routines could make firms not flexible enough to be proactive in turbulent environments. Thus, dynamic capabilities need to be more

about flexible and discruptive innovation processes rather than increamental ones to quickly and continuously create novel knowledge (Eisenhart & Martin, 2000). In essence, dynamic capabilities can be used as the higher-order capability to flexibly governs the extent to which lower-order operational capability changes to adapt with the varying velocity of business environment movements (Makkonen, et al., 2014; Teece, 2007).

In recent years, Dynamic capabilities and CRM activities associations have been started to be noticed and investigated. For example, Maklan and Knox (2009) claimed that dynamic capability could only be used at its best with the supports of CRM programs for customers' personalized insights. In another view, Harrigan, Ramsey, and Ibbotson (2011) advocated the need for a dynamic approach to developing CRM programs in SMEs and posited that the transformation from traditional CRM activities to electronic-CRM (e-CRM) and social CRM (s-CRM) could support this trend. Therefore, this research suggests that social media technologies and CRM resources should be combined to produce the firms' dynamism characteristic or "dynamic capabilities" to effectively and efficiently adapt to changes. In other words, we argue that one of the core linkages in the black-box between social CRM and firms' performance should include dynamic capabilities. As such, market learning and knowledge about customers can be effectively obtained with the use of social CRM capabilities. Then, the value generation is achieved by using dynamic capabilities for gathering different capabilities to create new competencies and new value propositions for customers from the inputs from social CRM. The interrelationships between social media technologies, social CRM capabilities, and dynamic capabilities are depicted in this study's conceptual model presented in Figure 1.

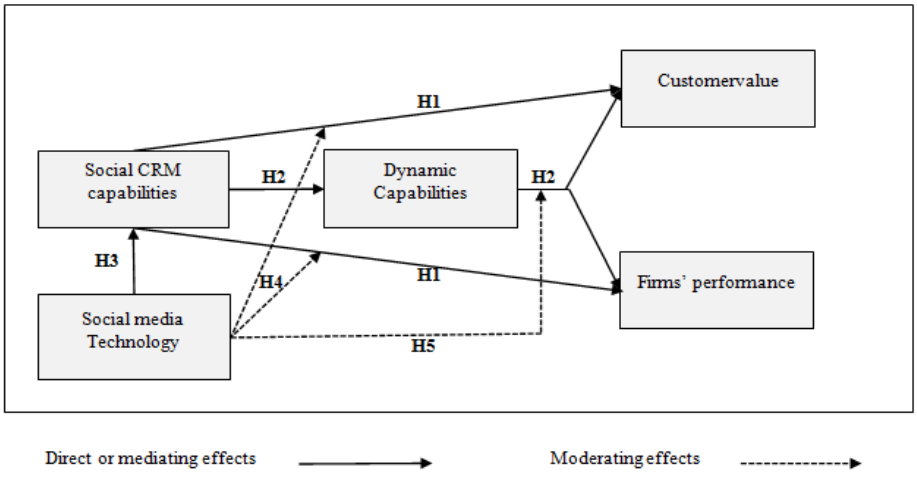

Figure 1 Conceptual model of the Social CRM- Dynamica capabilities – Firms' performance
Source: Own Research

Social CRM Capabilities

From the introduction of the social CRM concept, scholars in marketing and management have been exploring it in various approaches including (1) understanding the concept of social CRM and its components (e.g., Sigala, 2018; Greenberg, 2010); (2) investigating factors affecting the adoption of social CRM (e.g., Guha et al., 2018); and (3) operationalizing social CRM and studying its effects on firms' performance (e.g., Cheng & Shiu, 2019; Kamboj et al., 2018; Trainor et al., 2014).

Scholars also find that the main factors affecting firms' decisions to adopt social CRM are from both internal factors (e.g., technology infrastructures, top management support, employee skill, organizational cultures) and external factors (e.g., customer pressures, competitive pressures, and government support). The perceived benefits such as information capture, online community use, social data use are also the primary encouragements for using social CRM among firms. Notably, via social media, firms can join the customer's community outside the firm's boundaries where they can produce viral content to attract potential customers or reaffirm the emotional bonds with current existing customers (Sigala, 2018).

Scholars recently start to operationalize social CRM to quantitatively investigate its effects on firms' performance. Findings in most of the past studies highlighted the significant positive associations between social CRM programe and customer relationship performance (Cheng & Shiu, 2019; Kamboj et al., 2018; Trainor et al., 2014). For instance, Cheng and Shiu (2019) highlight the complex interrelationships between customer engagement and firms' innovation using social CRM as a moderator in Chinese SMEs. Using longitudinal data, they found that SMEs with more developed social CRM capabilities have the stronger effects of customer engagements on firms' innovative capabilities. Even though most of the past studies confirmed that social CRM capabilities could have positive impacts on firms' performance, the question of how social CRM can achieve its desired effects remains unexplored. For shedding light on the "black-box" of social CRM capabilities, this study suggests that "dynamic capabilities" are the linkages which firms can use to transform their investments in social CRM into real outcomes.

H1: Social CRM capabilities have positive associations with customer value and firms' performance.
H2: Dynamic capabilities have mediating effects on the relationship between social CRM capabilities and customer value and firms' performance.

Social Media Technology Use

Social media applications have opened a brand-new channel for customers to interact with their peers (Greenberg, 2010). Because of this social shift brought by the rapid spread of social media use, it gradually becomes the mainstream customer-centric tool for firms to participate in their targeted online customers' community outside the firm boundary (Kamboj et al., 2018). Examples include web sites for user-generated content such as blogs, discussion forums, review sites, online user communities tools (e.g. TripAdvisor, Yelp, Reddit, and Igloo's Customer Community) or social networking and sharing sites. Combining these social media technologies with the big-data analytical applications (e.g., data mining tools), firms can engage customers in multitudinal ways: (1) extracting insights "from" customers' social data; (2) communicating and offering information or insights "for" customers' use; and (3) co-creating value propositions "with" customers.

Recent studies in hospitality context indicate the positive associations between social media applications and performance (e.g., Trainor,2012; Tsao et al., 2015). These studies suggest positive influences of overall rates on the web sites for customer reviews (e.g., TripAdvisor) on the intentions of booking (Tsao et al., 2015), hotels' brand loyalty and word-of-mouth, and financial performance (Neirotti et al., 2016). In this study, we argue that social media technology use is not only the enabler for the social CRM capabilities, but it can be the facilitator for the effects of social CRM on firms' performances. For instance, firms which have more presences (using and managing social media tech more intensively) on travel review sites (booking.com, TripAdvisor, Agoda.com) can boots their learning curve of market changes much faster than the one who uses social media less intensive, then it improve the quantities and qualities of inputs from social CRM capabilities that used for producing new competencies for firms (Guha et al., 2018). Thus, social media technologies are posited to plat a moderating role in the social CRM capabilities- performance relationships.

Moreover, social media technologies also have critical roles in communicating and expressing the changes created from dynamic capabilities. For instance, the changes in customer strategies from transactional approaches to personalized approaches or from one specific group of customers to another group can be clearly articulated through the use of social media by producing and communicating viral video targeting a group of customers. Thus, we also argue that social media technology also uses moderates the interrelationships between social CRM, dynamic capabilities, and firms' performance.

H3: Social media technology use has positive associations with social CRM capabilities

H4: Social media technology use moderates the effects of social CRM capabilities on firms' customer and financial performances.
H5: The mediating effect of social CRM capabilities on (a) customer value and (b) firms' performance is moderated by social media technology such that this mediation effect is stronger for companies using more social media technology.

Methodology

Samples

The data were collected from management teams of about 1000 SMEs in the hospitality industry located in the South of Vietnam. The region is the home of a large number of famous sightseeings, and cultural activities throughout the year make it a proper context for this study.

The survey is a self-administrated one in which structural questionnaires of mainly 7-point Likert items were sent via emails collected from the Department of Culture, Sports and Tourism. A follow-up phone call round was also performed to improve the response rate. As a result, there were 159 firms – or 16% - provided complete data after a two-month timeframe.

For greater accuracy and avoid bias, any survey whose respondents were not in the management team were ruled out in the final result, which left a sample of 111 surveys for the final data used in the analysis.

This procedure follows the practice that only top-management teams who frequently exposed to the firms' strategic decisions own sufficient information on required data of strategic management practices. Tests were also conducted to make sure there were no biases between early and late responses in the final data.

Firms that participated in the survey represented a wide range of businesses in the hospitality industry, including hotels (52% of the sample), resorts (23%), travel agencies (15%), transportations (5%), and others (5%). In the final sample, nine firms (8%) are micro-small sized (less than or equal to ten employees), 43 firms (39%) are small-sized (from 11 to 200 employees), and 59 firms (53%) are medium-sized (from 201 to 300 employees).

About the respondents, the majorities are in sales managers or front-office managers (67%) who are directly in charge of the CRM initiatives in SMEs. The most popular participants' tenure was from three to seven years (75%).

Measures

All measurement scales were adapted from relevant studies in the literature of social CRM, dynamic capabilities and Strategic management. The descriptive statistics of variables in the model are presented in Table 1. Social CRM capabilities were measured using the approach of Trainor (2014) which was adapted from Srinivasan and Moorman (2005).

The scales include items measuring three major aspects of social CRM including the processes of acquiring customer information, disseminating, and finally responding to customers. In this approach, social CRM capabilities are second-order constructs formed by the combination of the three latent constructs mentioned above. The same approach was used to measure dynamic capabilities as a second-order latent construct (formative construct). The two subconstructs are adapted from Makkonen et al., (2014) for measuring Regenerative capabilities – REGN and Renewing capabilities – RENE.

Customer value is used as the proxy for customer performance concerning co-creating value with customers. It was measured by three items from Reimann, Schilke, and Thomas (2009).

Perceptual financial performance scale includes four times measuring the firms' financial performances comparing with their key competitors adapted from Reinartz et al. (2004). In this study, we also use two control variables for controlling the effects of distinct firms' characteristics on the results, which are sales and number of employees.

Regarding social media technology use construct, an index was developed following Jayachandran et al. (2005). Respondents were asked to mark check-box next to a social media technology if his/her firm uses it for business purposes.

In total, Jayachandran et al. (2005) suggested 15 social media technologies; however, the index was adjusted to include ten social media technologies that are popular in the Vietnam hospitality sector. The mark items were sum into a single score to capture the level of social media technology used by each firm (e.g. Trainor, 2014).

Analytical Strategy

This study took advantage of Structural Equation Modelling (SEM) technique for analyzing the structural relationships presented in the research model in Figure 2. This study employed the PLS-SEM approach for analyzing data using Smartpls 3.0 software. Generally, the SEM technique consists of two steps.

First, the reliability and validity of measurement scales were assessed using the measurement model. Second, the structural model of linear relationships between latent constructs was examined to test the proposed hypotheses using path analysis. Furthermore, post-hoc analyses of fuzzy set-Qualitative comparative analysis (fs-QCA) was constructed to look for the unique conditions under which firms' performances are optimized.

Table 1 Descriptive statistics of latent variables

		Mean	SD	Square root of AVE	1	2	3	4	5	6	7	8	9	10
1	Customer value	4.18	1.57	0.953	1									
2	Dynamic capabilities	4.65	1.89	0.922	0.918	1								
3	Financial performance	3.97	1.78	0.952	0.883	0.870	1							
4	Information dissemination	4.36	1.19	0.932	0.854	0.890	0.845	1						
5	Information responsiveness	4.95	1.26	0.924	0.82	0.834	0.803	0.858	1					
6	Renewing capabilities	4.69	1.31	0.936	0.903	0.913	0.877	0.864	0.816	1				
7	Social CRM	4.53	2.04	0.866	0.847	0.825	0.859	0.855	0.854	0.803	1			
8	Regenerative capabilities	4.51	1.36	0.943	0.900	0.907	0.825	0.886	0.822	0.924	0.914	1		
9	Social media Technology use	3.7	1.03	N.A	0.822	0.796	0.767	0.814	0.885	0.788	0.894	0.771	1	
10	Information generation	3.9	1.08	0.925	0.790	0.853	0.713	0.716	0.809	0.84	0.864	0.833	0.811	1

Source: own research

Results

Measurement Model Evaluation

Using the procedure of Confirmatory Factor Analysis (CFA), data in the sample were fit with the proposed research model in Figure 2. The overall model shows an acceptable fit with SMRM = 0.046 < 0.08 benchmark and R-square adjusted of customer value (85%), and financial performance (77%) is rather high. The bootstrapping results suggested that both factor loadings (p-value <0.01) and composite reliabilities (exceed the 0.7 benchmarks) satisfied the requirements. Moreover, the AVE of all factors are above.05 suggested that the items are adequately reliable for measuring their factors.

The average factor loadings form CFA results for each block of items is high (from 0.9) (see Figure 2), demonstrating strong convergent validity for each construct. The discriminant validity was also satisfied when square root of AVEs were greater the correlation (Fornell & Larcker, 1981). These results suggested that the measurement model has sufficient convergent and discriminant validity for further analysis.

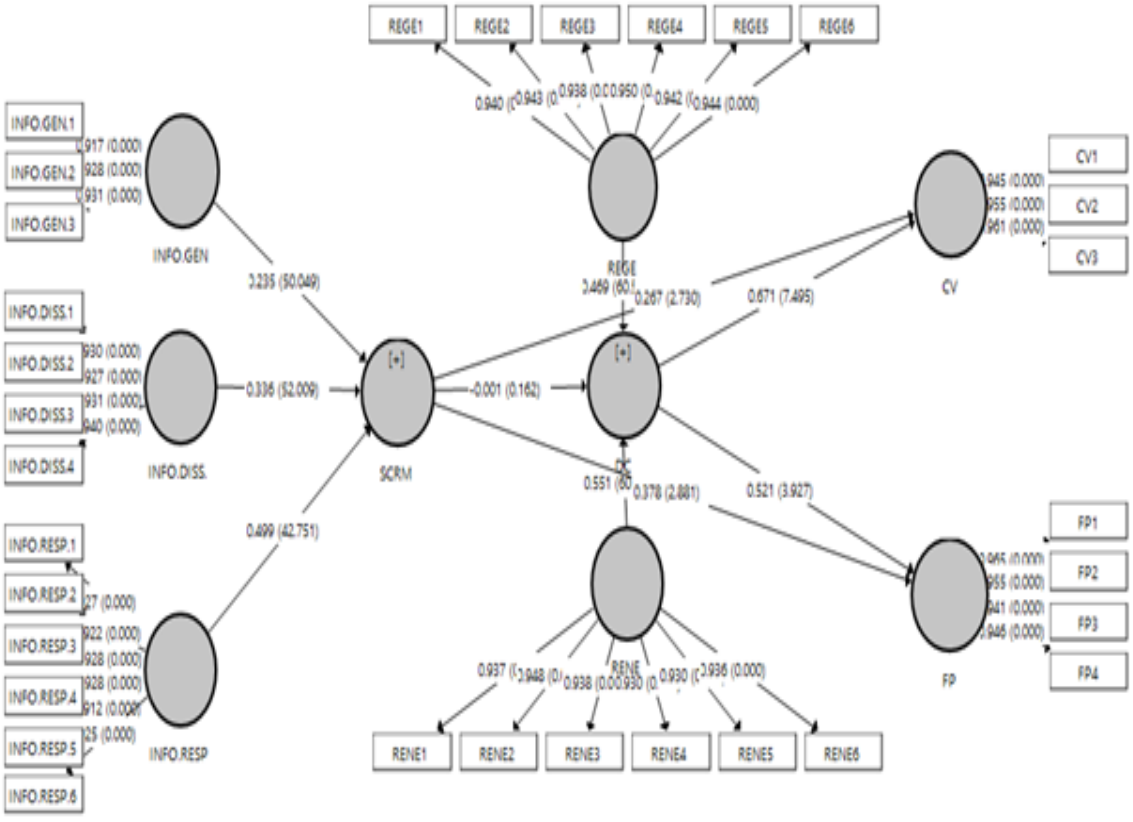

Figure 2 Measurement model of latent constructs
Source. Own research

Hypotheses Testing

Direct Effects

The structural model containing linear relationships between latent constructs, as presented in Figure 3, were examined. The model exhibited an acceptable fit with the data (SRMR = 0.043, R-square adjusted = 0.85 for both customer value and financial performance). The positive effects of a firm's social CRM capabilities on customer value (H1:$\beta = 0.311$, $p < 0.01$) and financial performance (H1:$\beta = 0.408$, $p < 0.01$) were both supported. Regarding the meditating effects of dynamic capabilities, the hypothesis is supported only if (1) dynamic capabilities have significant positive effects on customer value (H2:$\beta = 0.633$, $p < 0.01$) and financial performance (H2:$\beta = 0.538$, $p < 0.01$) and (2) social CRM have direct positive significant effects on dynamic capabilities (H2:$\beta = 0.925$, $p < 0.01$). As shown in Table 2, both criteria are satisfied; therefore, H2 is supported. Moreover, the f-square, representing the effect-size of each independent variable on respondent variables, shows that dynamic capabilities have much stronger direct effects on explaining customer value (0.387 > 0.103) and financial performance (0.281 > 0.162) than social CRM. Finally, the positive effects of a firm's social media technology use on social CRM capabilities (H3:$\beta = 0.894$, $p < 0.01$) were also supported.

Table 2 Structural Equation Modelling Results

Independent variable		Direct model: Dependent variables				Interactive model: Dependent variables	
		Dynamic capabilities	Customer Value	Financial performance	social CRM capabilities	Customer Value	Financial performance
H1	Social CRM capabilities	0.925**	0.315**	0.408**		0.061	0.171
H2	Dynamic capabilities		0.633**	0.538**		0.654**	0.536**
H3	Social media technology use				0.894**	0.287**	0.304**
H4	Social media tech x Social CRM					0.091*	0.150**

* Significant at p <0.05
** Significant at p <0.01

Source: own research

Interactive Effects

For testing the moderating effects, first, two lantent variables of social CRM capabilities and social media technology use were both standardized using the mean-centered method. Then, the interactive terms were calculated by multiplying the standardized value of the two constructs together. These interactive values were used as the proxy for the join effects of social media technology use and social CRM capabilities in the structural model presented in Figure 3. Finally, the linear effects of this term were assessed as the independent variables in the interactive model and were summarized in Table 2.

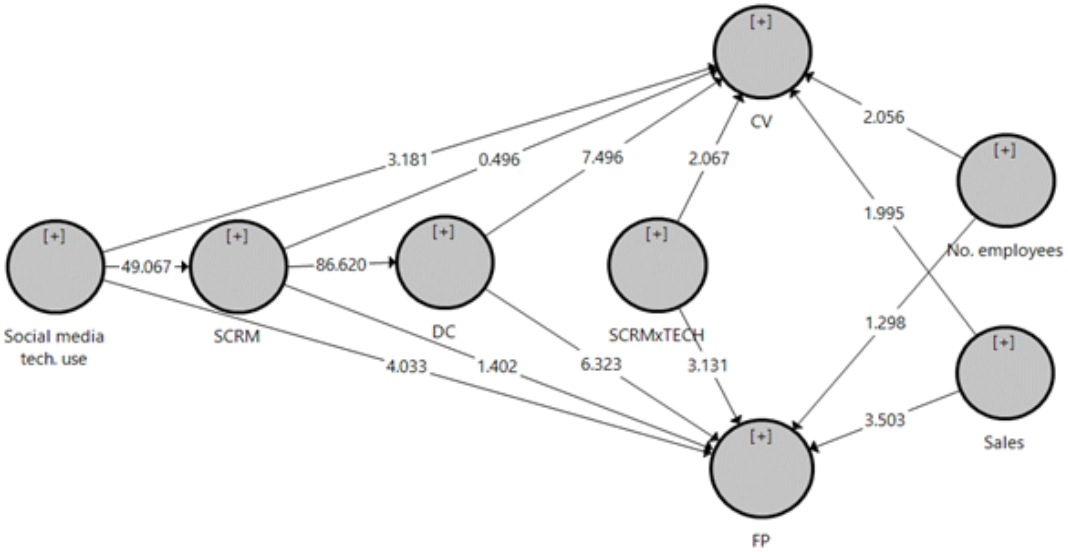

Figure 3 Structural model of latent constructs
Source. Own research

As the results in Table 2 indicated, the data supported the moderating roles of social media technology use in the social CRM capabilities – firms' performance relationships. The interactive term has significant positive effects on customer value (H4: $\beta = 0.091$, $p < 0.05$) and firms' performance (H4: $\beta = 0.150$, $p < 0.05$). These interaction effects can be plotted using the moderated regression analysis. The customer value and financial performance were plotted again the social CRM capabilities corresponding to the high (mean + 1 Standard deviation) and low (mean – 1 standard deviation) levels of social media technology use as the moderator. As plotted in Figure 4, slopes of the linear regression line associated with the higher value of social media technology use were steeper than those regarding the lower value of social media technology use. This fact indicates that social CRM practices affect firm's performance more effectively when firms uses more social media technologies.

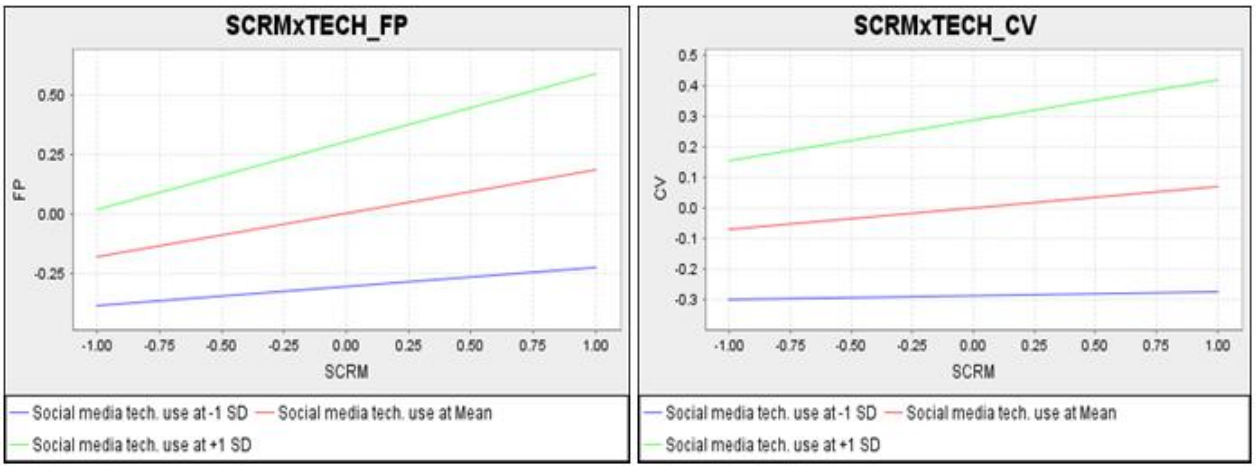

Figure 4 Moderating Effects of Social Media Technology Use
Source. Own research

Multigroup Structural Analysis

The research sample is divided into two subsamples: the higher social media technology use sample consisted of 48 firms (above mean) and the lower social media technology use sample consisted of 63 firms (below mean). Then the mediating roles of dynamic capabilities were examined in each subsample. Similar structural analyses of linear relationships between latent constructs were executed and presented in Table 3.

Table 3 Multigroup Structural Analysis Results

Independent variable		**Higher social media technology use**			**Lower social media technology use**		
		Dynamic capabilities	Customer Value	Financial performance	Dynamic capabilities	Customer Value	Financial performance
Social CRM capabilities		0.895**	0.053	0.219	0.841**	0.145	0.091
Dynamic capabilities			**0.885****	**0.666****		**0.555****	**0.785****
R-square adjusted		0.798	**0.86**	**0.85**	0.704	**0.69**	**0.58**
H5: Different in R-square adjusted		0.098	**0.185***	**0.79***			
*	Significant at p <0.05						
**	Significant at p <0.01						

Source: own research

As seen in Table 3, the mediating effects of dynamic capabilities are significant in both groups of high and low social media technology use. However, instead of the partial mediating effects, dynamic capabilities perform the full mediating effects in both groups

as social CRM capabilities were not significantly associated with both customer value and financial performance ($p > 0.1$).

More importantly, the explanatory power of dynamic capabilities on Customer Value (different in R-square adjusted = 0.185, $p< 0.05$) and financial performance (different in R-square adjusted = 0.279, $p < 0.05$) is much more significant in higher social media technology use group than in lower social media technology use group. Base on these analyses, in an environment where more social media applications are used, the mediating effect of dynamic capabilities is much more prevalent, then H5 is supported.

Post-hoc Analysis – fs QCA

Besides analyzing the proposed hypotheses, this study attempted to add more insights to the interrelationships in the research model by using the fsQCA approach. Qualitative Comparative Analysis (QCA) is usually referred to as the tool for bridging quantitative analysis and qualitative analysis by examining cross-case patterns concerning the diversity of the cases and their heterogeneity (Ragin, 2008). The QCA is used to explore the causal complexity of a set of conditions under which the desired outcome can happen. Integrating with the fuzzy-set theory, the fsQCA can be better applied in the social context. With the fsQCA, researchers can calibrate memberships in sets between 0 (non-membership) and 1 (full membership) (Ragin, 2008). The two-stage procedure of fsQCA was executed following Ragin (2008). First, the latent score data for each construct extracted from PLS-SEM were used to calibrate a fuzzy dataset containing membership scores varying from 0 to 1. Then, the truth table was created to present the causal - condition combinations for the expected outcome across cases in the sample. In the second stage, the intermediate solutions were extracted by comparing condition-sets in the truth table for obtaining the specific conditions under which the expected outcomes can happen. The analyses of fsQCA were executed using "QCA" packages in R software version 3.6.

As seen in Table 4, the truth table revealed that in a large number of SMEs (32 cases) in the sample, the financial performance was achieved when all the social CRM capabilities (Information Generation Information Dissemination, Information Responsiveness), dynamic capabilities (Renewing capabilities, Regeneration capabilities), social media technology use are all needed. Interestingly, there are about 14 SMEs that do not need the appearances of Information generation or social media technology use to be in the top financial performance. Comparing the condition-sets in the truth table, the intermediary solution of causal conditions is presented in Table 5.

Table 4 Truth tables of condition sets

OUT: Financial performance									
n: number of cases in configuration									
incl: sufficiency inclusion score									
PRI: proportional reduction in inconsistency									
INFO_RESP	INFO_GEN	INFO_DISS	TECH	REN	REG	OUT	n	incl	PRI
1	1	1	1	1	1	1	32	0.949	0.919
1	0	1	1	1	1	1	6	0.918	0.805
1	1	0	1	1	1	1	1	0.887	0.588
1	1	0	0	1	1	1	8	0.859	0.469
0	0	1	1	0	0	0	1	0.691	0.156
0	0	1	0	0	0	0	4	0.653	0.14
0	0	0	1	0	0	0	6	0.64	0.117
0	0	0	0	0	0	0	27	0.466	0.076

Source: own research

Note: INFO_RESP: Information Responsiveness, INFO_GEN: Information Generation, INFO_DISS: Information Dissemination, REN: Renewing capabilities, REG: Regeneration capabilities, TECH: Social media technology use

As a result, there are two solutions with the suggested cut-off threshold of 0.85 for the consistent sufficiency (Ragin, 2008). In the first solution, the Insufficient but Necessary part of a condition that is itself Unnecessary but Sufficient (INUS) condition consisted of Information Responsiveness, Information Generation, Renewing capabilities, and Regeneration capabilities (Consistent sufficiency = 0.921, Coverage sufficiency = 0.721).

In the second one, the INUS condition consisted of Information Responsiveness, Information Dissemination, Renewing capabilities, Regeneration capabilities, and Social media technology use (Consistent sufficiency = 0.954, Coverage sufficiency = 0.745).

As suggested from the results, both dynamic capabilities and the Information Responsiveness are necessary components of the causal conditions leading to top financial performance.

However, they are not sufficient conditions because they need to be combined with the Information generation processes or Information dissemination processes and social media technology use to achieve the outcome. As such, Information generation processes,

Information dissemination processes, and social media technologies are not both necessary or sufficient conditions for the top financial performance in SMEs.

Table 5 Intermediary solution of fsQCA
Source: own research

n OUT = 1/0/C: 47/38/0
Total: 85
incl: sufficiency inclusion score PRI: proportional reduction in inconsistency covS: total coverage rate of the solution covU: unique coverage rate of the solution
M1: INFO_RESP*INFO_GEN*REN*REG + INFO_RESP*INFO_DISS*TECH*REN*REG => OUT
incl PRI covScovU
----
1 INFO_RESP*INFO_GEN*REN*REG 0.921 0.878 0.721 0.045
2 INFO_RESP*INFO_DISS*TECH*REN*REG 0.954 0.930 0.745 0.069

M1 0.927 0.893 0.790

Discussion

Theoretical Implication

This study addresses the gap in social CRM literature by testing dynamic capabilities as the missing link between social CRM and firms' customer and financial performance. The findings support the mediating role of dynamic capabilities. This is consistent with findings from Marketing and Strategic management literature positing that dynamic capabilities should be considered as the missing link between firms' specific capabilities and firms' customer and financial performance (Makkonen et al., 2014; Maklan and Knox, 2008; Teece, 2007). Notably, from the result of fsQCA, both Renewing capabilities and Regenerative capabilities of dynamic capabilities are strictly demanded to achieve firms' top financial results. This finding highlighted that in hospitality sectors, both approaches of dynamic capabilities of "learned organizational skill" (Teece et al. 1997) and "simple, experimental, unstable processes" (Eisenhardt & Martin, 2000) have its critical roles in generating value for customers and firms.

This study also explored the roles of social media technology use in two ways. First, findings in this study support the theory framework suggested by IT-Marketing and Strategic management scholars that for achieving distinct competitive advantages, possessing valuable resources are not sufficient but these resources must be combined or transformed into specific capabilities for value-generating purposes (Day & Wensley, 1988; Roberts & Grover, 2012; Trainor, 2014). Second, social media technology use was the moderator affecting the way how social CRM capabilities and dynamic capabilities relate to firms' performance. As seen in the results, increasing the interaction between social technologies and CRM processes can significantly elevate the positive influences of social CRM capabilities on firms' customer and financial performances. In addition, comparing the research model in two samples of the high and low level of social media technology use, the explanatory power of dynamic capabilities and social CRM capabilities as independent variables improved significantly with respect to the predicted variance of customer value (69% comparing to 86%) and financial performance (58% comparing to 85%). The results are consistent with the recent research in IT-marketing literature about the specific roles of social media technologies (Kim and Wang, 2019).

One exciting and somehow unexpected finding is about the causal condition sets under which an SME can be in the top financial performer group presented in fsQCA analysis. The results showed that the high level of social media technology use is not a sufficient and necessary condition for achieving financial performance. In fact, keeping other conditions unchanged, if the Information generation capabilities are somewhat good, it can replace intensive social media technology use in creating necessary effects on the firm's performance. This can be achieved by exploiting intensively the analytical power of other types of technologies such as data mining or machine learning techniques on Big data for exploring customer social behavior patterns, then, generating useful information for customers in the process of co-creating value. In this case, the intensive use of social media technology is not necessary to deliver value to customers. On the other hand, if SMEs cannot perform sophisticated information and insights generation, they can compensate this drawback by using social media technology intensively for keeping updated with customers' tastes and preferences. In this approach, SMEs are dependent on their collaborative and frequent conversations with customers as the tools for extracting valuable insights.

Managerial Implications

This study also delivers some implications for managers in SMEs in the hospitality sector. First, findings in the study provide evidence that investments in social media technologies

can be transformed into distinct social CRM capabilities for better engaging with customers on social media channels. This practice of using social media applications has gradually become the norms in service businesses as firms need to catch up with new "social customers" who prefer to be engaged with their peers and to some similar extent with their business partners using online social networking services (e.g., Facebook, Twitters, Instagram, Pinterest, Youtube, Snapchat, Whatapps, etc.). Customers rationally choose these new applications of socializing and communicating because of their advantages over the traditional ways regarding their cost and utility advantages. As such, adapting to the new social channel is not only a challenge to catch up with customer demands but also an opportunity for SMEs to be more productive in their business processes.

Second, this study highlights the need for managers in SMEs to develop their internal capabilities to flexibly adapt with rapid changes in their internal or external environment. Specifically, for successfully implementing the new social CRM capabilities, SMEs need to implement many changes in several areas such as business processes, human resources, and business structures. Therefore, with the already established dynamic capabilities, SMEs are more likely to smoothly overcome these critical changes with minimized costs and more results. According to the results from both SEM and fsQCA, both stable and unstable process of dynamic capabilities are crucial for directing internal changes and adapting to external new challenges in business environments.

Lastly, the post-hoc results using fsQCA shows that managers in SMEs can use different types of technologies for successfully exploiting the advantages of social CRM capabilities. SMEs in hospitality can consider to intensively invest in social media technologies by using more social media applications, thus, they can respond and disseminate targeted marketing messages to targeted customers on their preferred channels. On the other hand, SMEs can also choose to focus on a few most popular social media applications but intensively using sophisticated technologies (Data mining, Machine learning, The Internet of things) for analyzing Big data collected from social media channels. Both strategies are expected to yield similar desired financial results in SMEs in hospitality. Thus, based on their available resources and strategies, SMEs can decide the specific path concerning social CRM implementation.

Conclusion

This study is among the few ones to explore the indirect associations between social CRM and firms' performance, especially in SMEs. Multiple contributions are expected from the

research. First, the research is the first one which investigate the integration of social CRM and dynamic capabilities. The outcomes aimed to explore the way how social CRM can simultaneously create value for customers and firms' competitive advantage in the dynamic business environment. Second, this paper also clarified the roles of social media technologies in social CRM implementation. We regain its essential roles in enhancing firms' advantages.

Limitations and Future Research

This study contained number of limitations which can be addressed in future research. First, the sample is quite small and characterized only by SEMs in the hospitality sector. Though the findings are generally true for SMEs in hospitality sectors, it is possible that the proposed interrelationships between social CRM, dynamic capabilities and firms' performance may be less applicable to other specific industries where customers requirement for social media is not so demanding. Future research might want to explore if the findings in this study can hold true across industry and other contexts.

Another limitation of this study lies in its measurement of social media technology use. The index only captures the number of social media applications which are used for business purpose in organizations. While it has been used in past researches, it is not without limitation. Though this index can measure the width dimension of social media technology use, it ignores the depth dimension which describes how intensively a few social media applications used by SMEs. Therefore, it is worthwhile to develop a more comprehensive measure of social media technology use in future research. A different measure of social media technology use can also be developed for testing the robustness of its effectiveness.

Using cross-sectional data, this study failed in describing the longitudinal causal relationship between social CRM and firms' performance. For instance, recent investment in social media technology use and social CRM processes have not produced the expected results in the current time. However, because of the lag effects in investment, future performances are more appropriate measures for the current investment return. Cheng and Shiu (2019) is one of the first studies to address this longitudinal dataset problem in social CRM topic. More scholars are encouraged to follow this longitudinal design in future research for better aligning social CRM and their real benefits in firms' performance.

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