

Impact of Social CRM Technology Use on Performance

An Organizational Perspective

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1 STAGE OF THE RESEARCH

The research project “Social CRM” started at 3rd of January 2013 and focuses on Social CRM Performance and Social CRM Technology Use. The research proposal solves a practical problem of our corporate partners and is constantly being developed in close cooperation.

2 OUTLINE OF OBJECTIVES

This Thesis in a Nutshell: The research conceptualizes constructs of Social CRM Technology Use and develops Social CRM Performance constructs in order to test their interactive impact empirically.

Generally, the new paradigm Social Customer Relationship Management (Social CRM) (Askool and Nakata, 2011) is “[...] a philosophy and a business strategy, supported by a technology platform, business rules, processes and social characteristics, designed to engage the customer in a collaborative conversation in order to provide mutually beneficial value in a trusted and transparent business environment” (Greenberg, 2010). Another definition describes Social CRM as “[...] creating a two-way interaction between the customer and the firm. It is a CRM strategy that uses Web 2.0 services to encourage active customer engagement and involvement” (Faase et al., 2011). Therefore, Social CRM deals with the integration of Web 2.0 and Social Media into CRM (Lehmkuhl and Jung, 2013) and enables collaboration in order to provide mutually beneficial value.

The company’s implementation of Social CRM is facing numerous challenges namely to measure the use of Social Media and CRM Technology - (a) Social CRM Technology Use - and (b) Social CRM Performance constructs. The motivation for these challenges confirms a practical and scientific perspective: The (a) use of Social CRM Technology on an organizational perspective focuses on tools

(i.e. vendor solutions from, e.g., Lithium, Jive, etc.) with required features (e.g., real time data monitoring, analysis of individual data etc.) on a more structured approach (Alvarez 2013; Sarner and Sussin, 2012). Therefore, existing vendor solutions have to extend their CRM-tools to embrace the Social Media dimension (Alvarez, 2013). “SCRM does not replace existing CRM efforts. Instead, it adds more value by augmenting traditional systems” (Woodcock et al., 2011). There is a rising importance to develop and measure (b) Social CRM Performance constructs (Bernet PR, 2013) (e.g., new product performance (Trainor, 2012)) in order to monitor their return on investment (Sarner et al., 2011). To explain the impact of Social CRM Technology Use on the Social CRM Performance, this thesis (c) tests the interactive impact which confirms the scientific perspective: “While social CRM technologies may yield new outcomes not currently examined within the traditional CRM literature, they are expected to positively contribute to the performance outcomes” (Trainor, 2012). Particularly, to test the interactive impact enables the company to determine strengths and weaknesses of their Social CRM Technology Use. The corresponding improvements are expected to have an impact on performance.

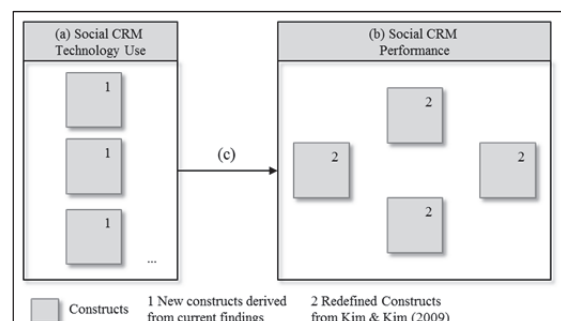


Figure 1: Overview of this thesis (details are excluded).

To conclude, this thesis conceptualizes constructs of (a) Social CRM Technology Use, (b) develop Social CRM Performance constructs, and (c) test their

interactive impact empirically (see Figure 1).

The constructs of (a) Social CRM Technology Use will be derived from literature as well as adapted and redefined from Zablah et al., (2012) to cover the new Social CRM approach. The (b) Social CRM Performance constructs derives from the “CRM performance measurement framework” of Kim & Kim (2009) and the individual (i.e. customers) and organizational (i.e. companies) perspective from Zablah et al. (2012). To test the interactive impact a prerequisite step is to evaluate a new measurement model, according to Moore and Benbasat (1991), for (a) and (b). By the quantification of all identified constructs it is possible to (c) test the empirical impact (e.g., estimation of influence coefficients) of (a) Social CRM Technology Use on (b) Social CRM Performance or more specifically, on the customer’s and company’s Social CRM Performance.

3 RESEARCH PROBLEM

The prerequisite step to test the empirical impact (i.e. the measurement model for Social CRM) is sparsely addressed in extant literature. Authors focus on CRM measurement models (e.g., Chen et al., 2009; Reinartz et al., 2004; Sedera and Wang, 2009; Sedera et al., 2009) or illustrate single Social CRM performance artifacts without proving their applicability (i.e. empirical impact). However, only the model by Zablah et al. (2012), which focuses on a customer’s and company’s perspective, has merely been evaluated the performance implications of technology use in the context of CRM. Therefore, this thesis will answer the general research question (RQ):

RQ: Does the Use of Social CRM Technology has an Impact on Social CRM Performance?

The general research question can be decomposed in five specific research questions (RQ1 to RQ5). The corresponding methodology and expected outcomes are described and explained in the subsequent sections.

RQ1: Which constructs were measured for Social CRM Technology Use and Social CRM Performance?

RQ2: What are the constructs for Social CRM Technology Use?

RQ3: What are constructs for the Social CRM Performance and how are they interrelated?

RQ4: Does the instruments of Social CRM Performance and Social CRM Technology Use

measure the corresponding constructs?

RQ5: Which impact does Social CRM Technology Use have on the customer’s and company’s Social CRM performance?

4 STATE OF THE ART

The current literature analysis is also part of research question 1 (see above) and reveals the identification of a research gap. Their findings are documented on the 16th International Conference on Enterprise Information Systems (ICEIS 2014). A short summary of the article are as follows: the literature analysis sheds light on a number of articles relevant for the Social CRM Performance, the Social CRM Technology Use and their interactive impact in order to identify state of the art measurement approaches for Social CRM. The major finding (see Table 1) reveals the lack of extant literature except for four articles, which conceptualize single performance approaches for Social CRM. Nevertheless, an empirical approach is still missing. No article was found that either conceptualizes or empirically measures Social CRM Technology Use. Thus, no article tests the impact empirically of Social CRM Technology Use on Social CRM Performance. To conclude, the literature review shed lights a research gap for the overall research project.

Table 1: Result of the literature review.

	Objectives	Measurement	Hits
Social CRM	Social CRM Performance	Conceptual	4
		Empirical	0
	Social CRM Technology Use	Conceptual	0
		Empirical	0
Impact of Social CRM Technology Use on Social CRM Performance	Conceptual	0	
	Empirical	0	

5 METHODOLOGY

RQ1 is answered by conducting a literature review according to vom Brocke et al. (2009). Leading journals in the disciplines Information Systems and Marketing are dissected for Social CRM measurement. The representative coverage reveals a number of relevant articles by analyzing the titles, abstracts and keywords. A content analysis focuses on categorizing the different concepts within a framework (e.g., two dimensions named: “performance” and “technology management”) in

order to identify a research gap.

RQ2 follows a two-step approach according to Wang et al. (2009): firstly, a literature analysis shed light functional features for an organizational Social CRM technology. The contribution of the literature review will be validated, in a first round, with existing vendor solutions (market study). Secondly, all vendors are re-analyzed exploratory in order to identify new functional features. The contribution of the literature review is a validated classification through a sorting procedure of all identified features into different categories of Social CRM Technology, which are derived from literature.

RQ3 follows another two-step approach: first, a literature review shed lights on articles relevant to the research question. The contribution of the literature review is a preliminary conceptual model. Subsequently, multiple semi-structured interviews (Yin 2009) are carried out, followed by the adopted four-step approach by Paré (2004) in order to explore new Social CRM constructs. Different industries (e.g., insurances, sports companies, banks, etc.) are analyzed to gain a holistic view on the different needs. For each company, a key social media, communication or marketing managers is interviewed.

RQ4 addresses the measurement of all constructs in RQ2 and RQ3. The measurement is based upon the approach according to Moore and Benbasat (1991), illustrated by Walther et al. (2013) (see Figure 2). Two surveys (one for the customers and one for the companies) evaluate two independent measurement scales. The first step, item creation, generates items for each customer and company scale. The second step, scale development, validates the item generation conducting Q-sorting and calculates an inter-rater reliability (Perreault & Leigh 1989). The final step, instrument testing, includes a pre-test with independent practical experts and a field test with cooperate companies, as well as scientists in this research field. The resulting measurement is evaluated by a confirmatory factor analysis with the first step of a structural equation model (Hair et al. 2013).

RQ5 tests the impact of Social CRM Technology Use on the Social CRM Performance. More specifically, the contribution of RQ5 is to estimate influence coefficients of Social CRM Technology Use (e.g., usage of Social CRM analysis technology) on the customer's and company's performance (the two perspectives of the Social CRM Performance). Firstly, hypotheses of the influence coefficients are derived from conceptual Social CRM and underpinned CRM literature.

Secondly, a regression model follows, which estimates the influence coefficients. Particularly, a two-level hierarchical linear regression (or two-level nested model) will be applied with the statistical software HLM 6.06. The two-level approach is deemed appropriate to fit the two perspectives of the Social CRM Performance. The customer's data defines the first level regression and the company's data the second level regression (Raubenbush & Bryk 2002). Particularly, the Social CRM Performance constructs are the dependent variables and the constructs of Social CRM Technology Use are the independents.

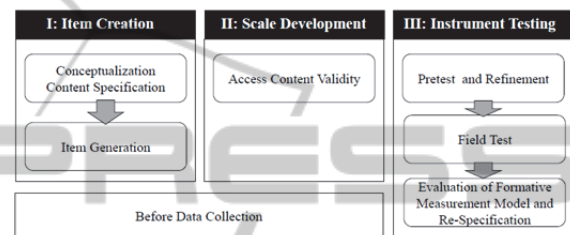


Figure 2: The three steps of a measurement model.

6 EXPECTED OUTCOME

RQ1 (published) is answered in section four, and is not discussed repeatedly.

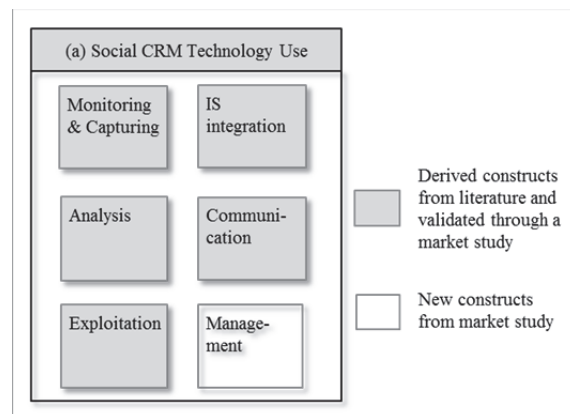


Figure 3: Constructs of Social CRM Technology Use.

RQ2 (submitted) discloses the constructs for Social CRM Technology Use. A previous literature review focuses on CRM technology use constructs (e.g., CRM prioritization tools (Zablah et al. 2012)) and Social Media technology use (e.g., Social Media analytical tools). The result of the literature review is a preliminary conceptualization (i.e. different constructs) of Social CRM Technology Use. The market study completes the conceptual approach and

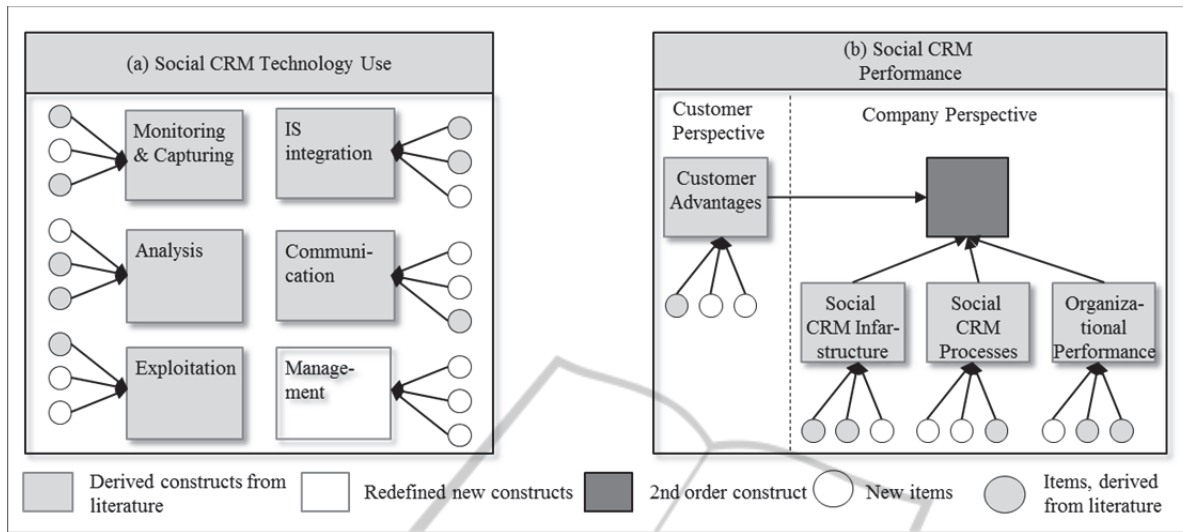


Figure 5: Possible result for the measurement model.

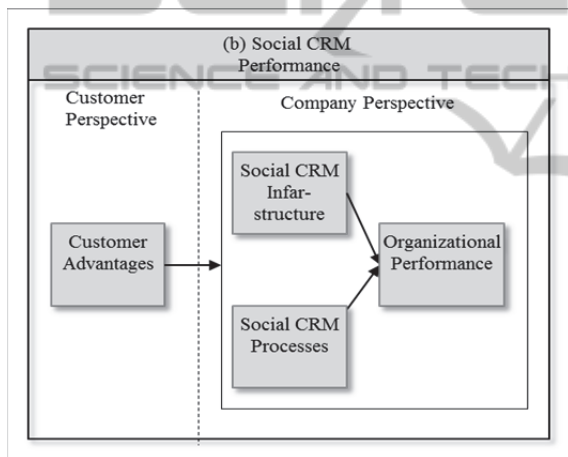


Figure 4: Result of Social CRM Performance.

the sorting procedure classifies the identified features in six derived categories (see Figure 3): monitoring & capturing, analysis, exploitation, IS integration, communication and management.

RQ3 (in progress) sheds light the Social CRM Performance. A previous literature review focuses on Social CRM and the underpinning CRM performance constructs in order to develop a preliminary model. Explorative case studies extend and complete the model. The preliminary findings are shown in Figure 4. The constructs of the customer’s perspective of the Social CRM Performance (e.g., customer advantages) can be deemed as a mediator of Social CRM Technology Use on the company’s perspective of the Social CRM Performance, which was empirical proven by Zablah et al., (2012) in a CRM context.

RQ4 addresses the measurement model. Some of the Social CRM Technology Use constructs as well as Social CRM Performance constructs related items are derived from extant literature. At first, a possible result of the new developed measurement scale could be an extension or re-specification (i.e. last step of figure 2) of the Social CRM Performance constructs, as well as the Social CRM Technology Use constructs. Due to insignificant items, as a second possible finding, a second order construct (see Figure 5) could fit the items with higher loadings.

RQ5 sheds light on the influence coefficients of Social CRM Technology Use on the customer’s and company’s Social CRM performance. Regarding the expected findings in RQ3 (customer’s Social CRM Performance constructs as mediator) the level-1 dependent variables are customer’s Social CRM Performance constructs. According to Becker et al. (2009) possible finding are moderators in the CRM context (see Figure 6). The equation in the appendix describes a possible two-level hierarchical linear regression model to estimate the influence coefficients. Due to the preliminary and expected findings, Kendall’s Tau coefficient determines the impact of the customer’s Social CRM performance constructs on company’s Social CRM performance constructs (Zablah et al., 2012). The overall result will be positive significant influence coefficients for the previously derived hypotheses.

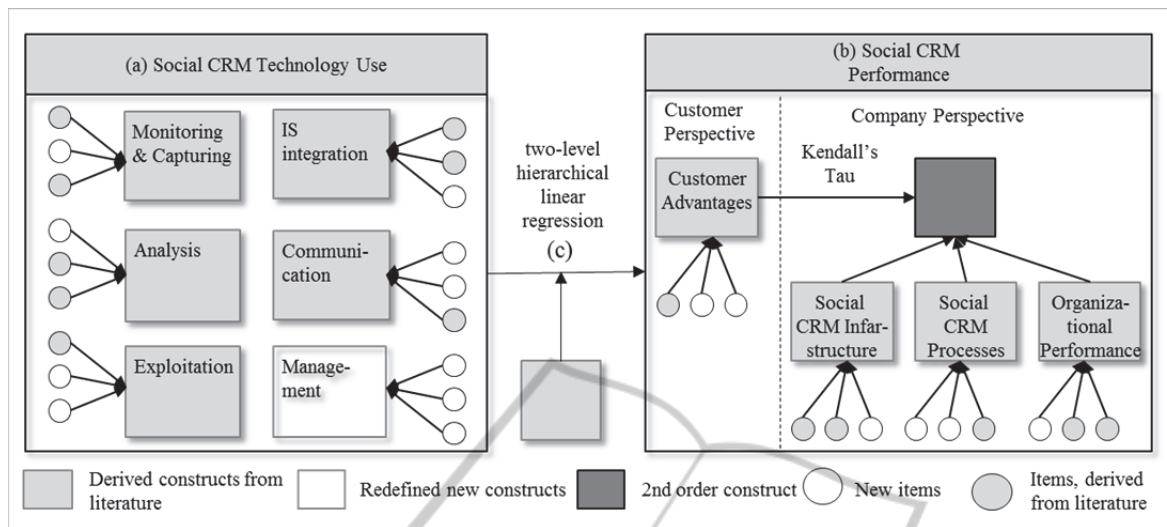


Figure 6: Detailed model overview of this thesis.

7 PRACTICAL IMPLICATION

Social CRM Technology Use: The different conceptual categorizations will help companies to define requirements for their Social CRM Technology (e.g., Social CRM software needs an analysis tool to process unstructured data). The measurement of the Social CRM Technology Use constructs reveals best practices of competitors and therefore discloses improvements for the company.

Social CRM Performance: The customer's Social CRM performance constructs help the company to acquire knowledge, which answers the following question: how successful are the Social CRM efforts for our customers' performance. A good practical implication is given by a high degree of customers' Social CRM performance, which indicates (indirectly or directly) a long-term relationship with the company. For the company's Social CRM Performance constructs, this thesis enables companies to compare their Social CRM Performance with competitors and to monitor their performance over time.

The **significant impact** coefficients support the company and the customer by enhancing the Social CRM performance. The value of the influence coefficients prioritizes the usage of company's Social CRM Technology resources (e.g., analysis tools) in order to increase customers' or company's Social CRM performance. The significance forces the company to improve single Social CRM Technology Use constructs and therefore influences management decisions (e.g., distribution of the Social CRM Technology resources).

8 CONTRIBUTION TO SCIENCE

This thesis will deliver three major contributions to the scientific community:

Extension of CRM Technology Use: The empirical investigation for CRM Technology Use will be redefined with the new Social CRM constructs. Current CRM Technology Use constructs (e.g., "CRM interaction support tools" and "CRM prioritization tools" (Zablah et al., 2012)) will be re-specified within the Social CRM context (e.g., monitoring & capturing, analysis, etc.) and therefore complete the research of Social CRM Technology Use.

Adoption of the CRM Performance Measurement Framework: With regard to the motivation in the introduction the performance dimension is investigated and will be adapted for the Social CRM context. Particularly, the investigation of the customer's and company's perspective according to Zablah et al. (2012) will show new contributions to the scientific community.

Performance Implications for Social CRM Technology Use: The impact of Social CRM Technology Use on Social CRM Performance is tested with a statistical model (here: two-level hierarchical linear regression) and adds first theoretical and empirical insights, on two perspectives, into the new paradigm Social CRM. Particularly, the results help to understand the underlying relationships (i.e. when X increased, then it will have (no) significant impact on Y).

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APPENDIX

Level-1 approach:

$$Y_{\alpha ij} = \beta_{0j} + \underbrace{\sum_{q=1}^Q \beta_{qj} X_{qij}}_{\text{Customer influence factors}} + r_{ij} \quad \text{for } \alpha = 1, \dots, A$$

Level-2 approach:

$$\beta_{0j} = \gamma_{00} + \underbrace{\sum_{s=1}^S \gamma_{0s} W_{sj}}_{\text{Company influence factors}} + \epsilon_{0j} \quad \text{for } q = 0$$

$$\beta_{qj} = \gamma_{q0} + \underbrace{\gamma_{q0} W_{0j}}_{\text{Company influence factors as moderators}} + \epsilon_{qj} \quad \text{for } \begin{cases} s = 0 \\ q = 1, \dots, Q \end{cases}$$

Explanations:

- α = Numbers of customer's success factors
- i = Cases of customers
- j = Units of companies
- $Y_{\alpha ij}$ = Level-1 customer's success factor (α) for case i and unit j
- β_{qj} = Level-1 customer's q coefficient (β) for unit j and $q = 1, \dots, Q$
- X_{qij} = Level-1 customer's q influence factor (X) for case i , unit j for $q = 1, \dots, Q$
- r_{ij} = Level-1 random effect
- γ_{qs} = Level-2 companies s coefficient (γ) for $s = 0, 1, \dots, S$
- W_{sj} = Level-2 companies s influence factor (W) for unit j and $s = 0, 1, \dots, S$
- ϵ_{ij} = Level-2 random effect

Figure 7: Possible two-level hierarchical linear regression.