Building Customers' Trust Through Mobile CRM-Related Activities: Mediating Effects of Customers' Commitment

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ABSTRACT

How can customers get trust from Internet-based companies? Among many activities to get trust, this study focuses on mobile CRM-related activities. Mobile CRM-related activities are efforts of companies to manage customer relationships using mobile technologies such as SMS (Short Message Service). This study analyzes if mobile CRM-related activities are effective to obtain customers' trust, considering moderate effect of commitment. Many CRM studies have focused on company's point of view. But, this study evaluates CRM-related activities from customers' side. The perceived evaluation of mobile CRM-related activities influences customers' commitment. The commitment explains customers' trust. Mobile CRM-related activities have three dimensions: content differentiation, contact frequency, and contents repetition. Also, commitment consists of three constructs such as affective commitment, continuance commitment, and normative commitment. In order to verify a research model, questionnaire surveys were conducted to collect data. The collected data were used to test hypotheses using structural equation modeling (SEM). The result shows that the customers' evaluation of mobile CRM-related activities contributes to build customers' trust through commitment (affective commitment, continuance commitment, and normative commitment).

Keywords: Trust, Mobile CRM, Commitment, Contact Frequency, Content Differentiation, Content repetition

INTRODUCTION

As Internet-based companies have more competition in the market, trust became a critical factor to survive in markets. Once customers trust the Internet-based company, they will visit the website more frequently and make more transactions. During the process of the transactions, the Internet-based company makes efforts to instill trust to customers' mind. For example, the Internet-based company sends s short message for the status of transactions with mobile technology, which is SMS (Short Message Service) using cellular phone. Once the customer gets the message, he/she may feel more comfortable for the transaction. This is one of methods to provide trust. However, some customers may have negative feelings of privacy intrusion when the Internet-based company contacts them using personal information, while others may feel comfortable, especially when the company provides coupon or promotion information. This kind of negative feelings could play as the barriers to build customer trust in the long term. When the company uses customer information, the company uses CRM (Customer Relationship Management). Thus, it may need to check if the mobile CRM-related activities can be helpful to build trust for the Internet-based company. If customers have negative feelings, the mobile CRM-related activities must be abandoned. Until today, many academicians and managers have stressed CRM-related activities to obtain competitive advantage and coped with changeable business environments. Since they think that using information from CRM can maintain the relationship between existing customers and companies (Kim, 2003), they have tried to expand

CRM-related activities. But, it is necessary to evaluate whether or not CRM-related activities can really contribute to build customers' trust in Internet markets.

Most of previous literature has studied effects of CRM-related activities from company's viewpoint, not on customer's viewpoint (Kim, 2003; Hwang and Park, 2004). Even though Suh and Park (2005) studied evaluation and improvement of CRM-related activities from customers' side, they did not link CRM-related activities to customers' trust. Also, they did not consider mobile environments.

This study focuses on building customers' trust through mobile CRM-related activities from customers' viewpoint. The ultimate purpose of this study is to explain how to achieve customers' trust through Mobile CRM-related activities. Thus, this study tries to answer the following research question; "Is mobile CRM-related activities effective to build customers' trust with considering commitment?" Practically, the result of this study may suggest important guidelines to build successful mobile CRM strategies to obtain customers' trust for Internet-based companies.

Next sections review previous studies of CRM-related activities and commitment and develop hypothesizes. The following section explains data collection and analyzes the collected data. Finally, this study concludes with some comments and limitations.

LITERATURE REVIEW

Many scholars have defined trust in their own ways. According to Moorman et al. (1992), trust is "a willingness to rely on an exchange partner in whom one has confidence", while Morgan and Hunt (1994) explain that trust exists when one party has confidence in an exchange partner's reliability and integrity. Dwyer and Lagace (1986) state that trust is a belief, confidence, or expectation about an exchange partner's trustworthiness evaluated the partner's expertise, reliability, or intentionality. Also, they said that trust is a behavioral intention or behavior of "willingness" that reflects partner's reliance (Moorman et al., 1992; Moorman et al., 1993; Morgan and Hunt, 1994). Reviewing literature, trust is better to understand as confidence in the relationship.

Meanwhile, Gruen et al. (2000) analyzed trust building processes: calculative, prediction, capability, intentionality, and transference. *Calculative* refers that "trustor calculates the costs and/or rewards of target acting in an untrustworthy manner." *Prediction* means to develop confidence for behaviors to be predicted. *Capability* indicates to assess the target's ability to fulfill its promise. *Intentionality* is understood as evaluating the target's motivations. Finally, *transference* means that trustor draws on "proof sources," from which trust is transferred to the target. If this study applies mobile CRM-related activities to five processes to explain trust building processes, customers may calculate the costs/rewards, develop confidence, assess promise of the company, evaluate motivations, and transfer when they faced mobile CRM-related activities.

CRM (Customer Relationship Management) addresses all aspects of identifying customers, creating customer knowledge, building customer relationship, and

shaping their perceptions of the organization and products (Srivastava et al., 1999). Most existing literature focused on the effects of CRM system installment for customer performance (Kim, 2003), the relationship between CRM system and Marketing Performance (Hwang and Park, 2004), and the impact of customer partnership on CRM success (Lee et al., 2004). These studies were focused mostly on company's point of view, not on customers' point of view.

This study focuses on customer side's CRM evaluation under mobile environments. Thus, this study analyzes three mobile CRM evaluation criteria. The first criterion is *Contents Differentiation*, which means how different the contents are, compared with contents offered from other companies in the same industry. The second criterion is *Contact Frequency* defined as how frequent customers face CRM-related activities from the company. The last criterion is *Contents Repetition*. This indicates whether or not customers face repetitive contents from the company.

In order to build trust, commitment may play a mediating role between trust and mobile CRM-related activities. According to Dwyer et al. (1987), commitment is understood as a pledge of relational continuity between exchange partners. Moorman et al. (1992) explained commitment as a reflection of a positive valuation of a relationship. These definitions commonly mean an enduring desire to maintain a valued relationship. If people are committed to the product or the company, they feel that keeping relationship is valuable and do not frequently switch the product or the company. Finally, they may have trust for the company.

Some studies have taken a uni-dimensional approach to explain commitment (Dwyer et al, 1987; Morgan and Hunt, 1994). But, commitment is better to understand by multi-dimensional constructs such as affective commitment, continuance commitment, and normative commitment (Anderson and Gerbing, 1988; Gruen et al., 2000). The affective commitment is a positive emotional attachment, which means how favorable customer feels about product, service, or company. If customers psychologically feel drawn to the company, they maintain a relationship (Gruen et al., 2000). The continuance commitment is based on the sunk cost in a relationship. It indicates when customers give up the relationship they consider the cost and perceive lack of alternatives. Thereby, customers continue to have the relationship (Gruen et al., 2000). The normative commitment is a moral obligation derived from existing relationship. According to the normative commitment, customers keep the relationship because they feel a sense of belonging to the organization or the community. In brief, customers with affective commitment remain because they want to. Customers with continuance commitment remain because they need to. Customers with normative commitment remain because they feel they ought to do so (Anderson and Gerbing, 1988).

RESEARCH MODEL AND HYPOTHESES

The research model for this study is shown at the following figure 1. Three dimensions of mobile CRM-related activity evaluation positively influence to each dimension of commitment. And three commitment constructs affect customer trust.

Three commitment constructs are affective commitment, continuance commitment, and normative commitment. Trust can be accounted for by mobile CRM-related activity evaluation through commitment. Thus, according to this research model, customer can build trust by mobile CRM-related activities through customer commitment. Customer can evaluate mobile CRM-related activities by content differentiation, contact frequency, and content repetition. These criteria can work with each dimension of commitment to build trust. Finally, customer has trust through each dimension of commitment.

Commitment is the key mediating variable in the field of relationship marketing. Since customers maintain relationship with companies, expect long-term benefits of staying with them, and have the faith that the companies will not act opportunistically, customers can consider potentially high-risk investments with awareness (Garbarino and Johnson, 1999; Morgan and Hunt, 1994). If company's mobile CRM-related activities offer customers a magnitude and numbers of benefits, customers will maintain the relationship (Becker, 1960). Thus, this study suggests three mobile CRM-related activity evaluation criteria (Contents Differentiation, Contact Frequency, and Contents Repetition) are positively related to commitment to build trust. The flowing hypotheses are suggested.

H1a: Contents Differentiation positively explains Affective Commitment.
H1b: Contents Differentiation positively explains Continuance Commitment.
H1c: Contents Differentiation positively explains Normative Commitment.
H2a: Contact Frequency positively explains Affective Commitment.
H2b: Contact Frequency positively explains Continuance Commitment.
H2c: Contact Frequency positively explains Normative Commitment.
H3a: Contents Repetition positively explains Affective Commitment.
H3b: Contents Repetition positively explains Continuance Commitment.
H3c: Contents Repetition positively explains Normative Commitment.

Once customers have commitment, they may continue to use the web site and make transactions with the Internet-based company. Since trust generally is regarded as a critical component for successful relationship (Dwyer et al., 1987; Moorman et al., 1993; Morgan and Hunt, 1994), positive relationship of each dimension of commitment is essential to build trust. The following hypotheses are proposed regarding the relationship between commitment and trust.

H4a: Affective Commitment positively explains Customer Trust.
H4b: Continuance Commitment positively explains Customer Trust.
H4c: Normative Commitment positively explains Customer Trust.

RESEARCH METHODOLOGY AND RESULTS

This study collected the data through questionnaire survey. Before the formal survey, two rounds of pre-tests were conducted to confirm face validity and
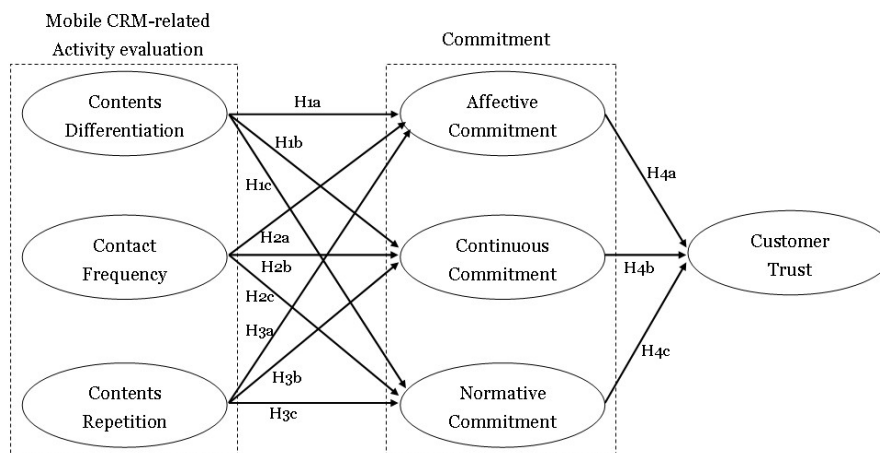
Figure 1. Research model

Table 1. Measures for each variable

Dimensions		Items
Mobile CRM-related Activity Evaluation (Suh and Park, 2005)	Contents Differentiation	• Valuable information • Useful information • Rare information • Special information • Use or not
	Contact Frequency	• Frequency satisfaction • Frequency suitableness • Future frequency
	Contents Repetition	• Known information • Information repetition • Similar information
Commitment (Allen and Meyer, 1990)	Affective Commitment	• Discussing CRM with people • CRM is good to me • Easy contact • Continuous relationship
	Continuance Commitment	• Happen inconvenience quit the relationship • More cost quit the relationship • Long term • Consider another company
	Normative Commitment	• Repeatedly change the company • Moral problems Important customer • Suggest better condition
Trust (Ribbink et al., 2004, Ball, 2004)		• Private information • Keep a promise • Reliable information • Honesty company • Trustworthy company

Table 2. Results of EFA and Cronbach's Alpha

Dimensions	Items	Factor loading	Cronbach's Alpha
Contents Differentiation	• Valuable information • Useful information • Rare information • Special information • Use or not	0.627 0.688 0.753 0.804 0.726	0.867
Contact Frequency	• Frequency satisfaction • Frequency suitableness • Future frequency	0.858 0.886 0.836	0.904
Contents repetition	• Known information • Information repetition • Similar information	0.832 0.862 0.793	0.790
Affective Commitment	• Discussing CRM with people • CRM is good to me	0.767 0.555	0.740
Continuance Commitment	• Happen inconvenience quit the relationship • More cost quit the relationship • Long term • Consider another company	0.739 0.730 0.740 0.651	0.740
Normative Commitment	• Repeatedly change the company • Moral problems • Important customer	0.812 0.648 0.575	0.568
Trust	• Keep a promise • Reliable information • Honesty company • Trustworthy company	0.793 0.679 0.796 0.815	0.863

content validity. First round involved sixteen undergraduate students who use cellular phones. Second round of pre-tests involved two doctoral students through face to face contacts. Based on their feedback, certain items in the questionnaire were re-worded and layout changes were made in order to improve clarity and readability. After two rounds of pre-tests, this study conducted survey.

Each item in the questionnaire was extracted from existing literature. The Table 1 summarizes items and sources. The seven point Likert type scales (1 is "extremely

little" and 7 is "extremely much") are used to measure the impact of mobile CRM-related activity evaluation, commitment, and trust.

Population for this study is cellular phone users who have experience to have received any CRM-related service. Sample was selected from four major universities located in Seoul, Korea. The questionnaire double checked whether or not they have any experience to have received mobile CRM-related services, mainly SMS (Short Message Service), when they use cellular phones. The survey was conducted at the classroom setting. The 300 students were participated and 254 responses were usable.

Figure 2. Result of CFA
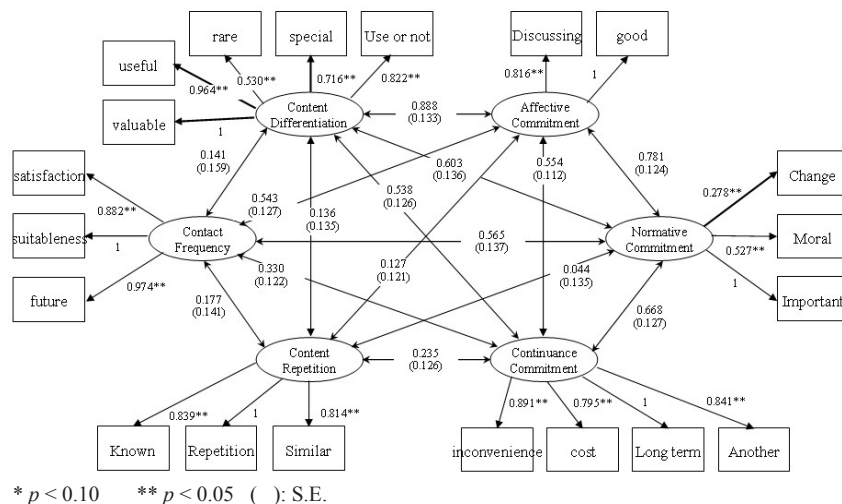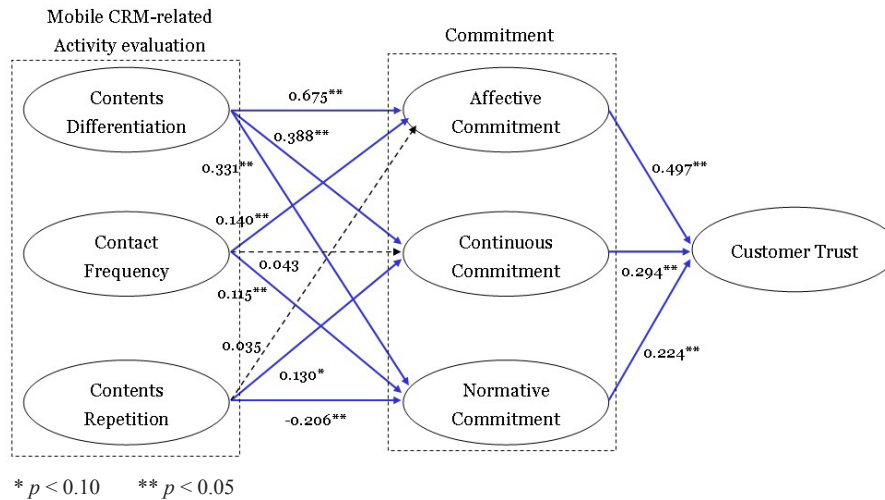

* *p* < 0.10   ** *p* < 0.05   ( ): S.E.

Figure 3. Standard estimation results for proposed model

Before testing hypotheses, this study conducted exploratory factor analysis (EFA) to cull out items that did not load on appropriate high-level constructs (Churchill Jr., 1979). EFA used principal component analysis and VARIMAX rotation method. After EFA, this study dropped four items because two items estimated under 0.4 factor loadings and other two items stretched over two constructs (Table 2). Cronbach's alpha values in Table 2 indicate that measures are reliable, even though Normative Commitment is relatively low. Thus, the result of EFA confirms that measures have construct validity after dropping four items.

In order to check convergent and discriminant validity, this study conducted confirmatory factor analyses (CFA) using Structural Equation Modeling (SEM) method (Figure 2). Convergent validity is the extent to which measures for a variable act as if they are measuring underlying theoretical constructs because they share variance (Schwab, 1980). Discriminant validity means the degree to which measures of two or more constructs are empirically distinct (Bagozzi et al., 1991). Most of model fit measures are acceptable (GFI=0.919, AGFI=0.883, NFI=0.904, RMSEA=0.048, CFI=0.962). For convergent validity, all factor loadings are significant, while for discriminant validity all the correlations pass the criteria that estimated correlation between any constructs±2S.E. should not include unity (Anderson and Gerbing, 1988). Thus, the result indicates that constructs are valid measurements.

The result of path analysis is at the figure 3. Most fit measure values are acceptable (GFI=0.911, AGFI=0.879, NFI=0.899, RMSEA=0.038, CFI=0.971). Thus, this study could check twelve hypotheses. The solid lines in the Figure 3 indicate significant coefficients, while dotted lines do insignificant coefficients. The data revealed that most hypotheses are significant except H2b and H3a.

The first hypothesis (H1) is regarding the relationship between contents differentiation and commitment. The results show that Contents Differentiation is positively related to three dimensions of commitment, respectively (H1a: 0.675, *p*=0.000; H1b: 0.388, *p*=0.007; H1c: 0.331, *p*=0.018). The second hypothesis (H2) involves the relationship between Contact Frequency and Commitment. H2a (the relationship between Contact Frequency and Affective Commitment) is supported at the 5% significance level, while H2c (the relationship between Contact Frequency and Normative Commitment) is supported at the 10 % significance level (H2a: 0.140, *p*=0.016; H2c: 0.115, *p*=0.056). But H2b (the relationship between Contact Frequency and Continuous Commitment) is not supported even at the 10% significance level (H2b: 0.043, *p*=0.463). The result of the third hypothesis (H3) testing shows that Contents Repetition affects Continuous Commitment positively (H3b: 0.130, *p*=0.040) and Normative Commitment negatively (H3c: -0.206, p=0.009). However, it is difficult to say that Contents Repetition can explain affective commitment (H3a: 0.035, *p*=0.559). At first, in the case of H3c, this study expected to have positive relationship between Contents Repetition

and Normative Commitment. But, on the contrary, the result shows negative relationship even though the coefficient is statistically significant. At the next section, this study discusses this result in detail. The result of last hypothesis (H4) is confirmed positive relationship between Commitment and Trust. All of three hypotheses are supported at the 5% significance level (H4a: 0.497, *P*=0.000; H4b: 0.294, *P*=0.001; H4c: 0.224, *P*=0.040).

DISCUSSION

The purpose of this study is to analyze trust building processes as the effect of mobile CRM-related activities. In order to explain the processes, this study adopted the concept of commitment. Commitment plays a role of mediator between trust building processes and mobile CRM-related activities. Customers who have experienced mobile CRM-related activities from Internet-based companies become to have commitment with the companies and finally have trust for the companies.

Scrutinizing the results, this study raises several issues to be discussed. First, Contents Differentiation is the critical component for customers to have trust through commitment. As shown at the figure 3, Contents Differentiation positively influences three dimensions of commitment. Considering the coefficients, the values are much higher than other relationship with 0.675, 0.388, and 0.331, respectively. This indicates Contents Differentiation is the most important factor to make customers feel commitment to the company. Generally, customers prefer various and useful information. If Internet-based companies provide valuable information for customers, customers cannot help using the service from the Internet-based company.

Second, the hypothesis regarding Contact Frequency and Continuous Commitment (H2b) is not supported. It may imply that customers do not like too frequent contacts from Internet-based companies. Thus, the Internet-based company needs to realize the fact that if the company contacts customers so frequently the company may lose the customers because customers do not like too frequent contacts. However, frequent contact makes customers feel that the company is making efforts to have good relationship with them (H2a) and that customers feel belonging to the kind of community that the company made (H2c). Despite the result of H2a, customers do not like repeated contents (H3a), which may make customers lose affirmative feelings for the company.

Third, Contents Repetition and Normative Commitment (H3c) show statistically significant result, even though it shows negative relationship. This study initially expected to have positive relationship between two dimensions, but the results proved to be negative relationship. These results indicate the customers harbor ill feeling against excessive frequency and repetition. Subsequently, customers do not have feelings that they belong to the part of community for the company.

Finally, three dimensions of commitment affect positively customers' trust. In particular, Affective Commitment has larger effect on Trust compared with other commitment. Considering the result, the best way to build trust is making commitment through content differentiation. In other words, content differentiation as one of the mobile CRM-related activities can trigger to have commitment (affective, continuous, and normative), which influences to build trust. Therefore, Internet-based companies need to focus more on Contents Differentiation, along with Contact Frequency and Content Repetition.

CONCLUSION

This study highlights trust building processes through evaluating mobile CRM-related activities in the perspectives of customers. Despite the wide adaptation of cellular phone technology in the communication between the company and customers, the nature of information exchange in mobile technology is yet little known. In order to build trust, Internet-based companies have to make efforts for customers to have commitment to the company. When the company uses mobile CRM-related activities as a tool to provide commitment, the company needs to emphasize content differentiation, along with mobile contact frequency and contents repetition.

This study suggests two essential implications for managers. First, this study confirms contents differentiation is a very important factor for Internet-based company's mobile CRM-related activities rather than the other two factors. And customers have negative affection about frequency of mobile CRM-related activities. In addition, repetitive information makes customer distrustful to the company. Second, all of three commitments are positively related to trust. Most of all, affective commitment is the most powerful factor to build customer's trust.

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