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Engaging Customers through Social Media to Improve Industrial Product Development: The Role of Customer Co-Creation Value

Ida Hidayanti [a], Lalu Edy Herman [b], and Naili Farida [c]

[a]Faculty of Business & Economics, University of Kairun, Ternate, Indonesia; [b]Management Department, University of Mataram, West Nusa Tenggara, Indonesia; [c]Faculty of Business & Economics, Diponegoro University, Central Java, Indonesia

ABSTRACT

This study aims to investigate the effect of social media on customer loyalty with the mediation of customer co-creation value and to build a customer engagement model through co-creation value, which is supported by product improvement perceived in increasing customer loyalty. The data collection employed a survey method with structured questionnaires which were distributed to 150 respondents who were the members of social media product communities in Indonesia. The findings showed that interactions through social media are able to increase customer engagement, facilitaitng collaboration in co-creation value, allowing the company to improve and develop products based on customers' needs and desires, which will eventually increase customer loyalty.

Introduction

Competition is a fact of life for today's businesses—not only competition between companies, but also in every business sector. Companies are required to be creative and innovative in order to attain as well as maintain their market share. In this modern marketing era, the concept of value comes first, before the product, since companies are selling not only their products, but also their values to their customers. The theory of Service Dominant Logic (SDL), as suggested by Vargo and Lusch (2004), explains that the paradigm shift among market actors who initially offered Dominant Logic (DL) in the forms of products and their attributive features, now trends towards Service Dominant Logic, with an emphasis no longer simply on the products, but towards their delivery value.

The fact that deregulations have created situations in which an increasing number of products and services are similar or even identical to each other underscores why retaining a company's customer basis is highly crucial (Berry, 1993; Gronroos,

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CONTACT Ida Hidayanti ✉ hidayanti_ida@yahoo.com; idaugm04@yahoo.co.id
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1999; Gummesson, 1997; Hennig-Thurau, Gwinner, & Gremler, 2002). Retaining customers is not an easy matter; it requires a new paradigm of transactional marketing towards relationship marketing, which is widely applied today and used as a way to higlight a company's competitive excellence (Berry, 1995; Lin, Weng, & Hsieh, 2003).

Social media is a place where people who want to share information gather; it is a place to make new friends and also to interact with others online. Social media is also a forum for companies to manage their social relationships with customers via the Internet; this is known as Social Customer Relationship Management (SCRM). The distinction with the service concept proposed in SDL is in terms of how a company manages its customer contact points by hoping that customers can perceive the existence of a moment of truth; thus, superior values can be created if a company manages it well (Heinonen et al., 2010). Akaka, Vargo, and Lusch (2012) assert that these values come not from the end products, but rather from the output of marketers' interactions with customers through joint activities or co-creation value.

Literature review and hypothesis development

Customer relationship management to social customer relationship management

Establishing intimate connections with customers in order for a company to learn more about these customers is not an easy task. To build a relationship with customers certainly requires an appropriate way for the company to know the customers better in order to be able to serve them better. The best way to build this connection is by managing the customer relationship (CRM) (Berry, 1995; Gronroos, 2000). The main idea of CRM is to assist companies in utilizing technology, business processes, and human resources in gaining knowledge on customer behaviors and values (Barnes, 2003).

The rapid development of Internet technology has triggered the transition from traditional CRM towards social CRM. Social CRM is a business philosophy and strategy backed up with technology, business regulations, processes, and social characteristics which are designed to engage customers in a collaborative conversation aiming to give mutual value within a reliable and transparent business environment (Greenberg, 2010). Social media is a part of social CRM as an effort to interact with customers in a virtual community. Social CRM has changed the customer paradigm, so that involvement is no longer limited to transactions, but instead attempts to further engage customers in a long-term relationship. The transaction which occurs between companies and customers is not the instigator for the origin of interaction, but this transaction is the end result of the relationship management process between customers and companies (Grönroos, 2009). Social CRM is a novel mindset which aims to create conversations that have lead to meaningful relationships between companies, customers, partners, and employees (Askool & Nakata, 2011).

Social media interaction and customer co-creation value

A customer is a potential asset for a company, needed for it to keep growing in its industrial environment. In addition to superior products and services, a company may have a high competitive capability through its ability to engage customers. The emergence of various social media facilities has sparked increased online customer interaction (Ajmera, Ahn, Nagarajan, Verma, & Dill, 2013; Baird & Parasnis, 2011). Social media is an online platform that provides interaction facilities either among customers or between companies and customers (Valos, Habibi, Casidy, Driesener, & Maplestone, 2016). Social media interaction is transparent and open to access by the public, potentially affecting customer experiences and eventually engaging customers in the process of mutually beneficial co-created values. This interaction opens up opportunities for customers to be involved in the process of value creation. The role of customers is crucial as a resource in the value creation process by leveraging knowledge (Vargo & Lusch, 2004).

Co-creation value is a series of activities that can be exchanged between customers and companies (Bharti, Agrawal, & Sharma, 2014), a series of dynamic and interactive experiences and activities conducted together with customers, sometimes regularly planned and conducted (Payne, Storbacka, & Frow, 2008; Prahalad & Ramaswamy, 2004). Companies provide access to interactive social media with attractive, educational, and entertaining content as a forum for customers to share in an online community. The ongoing interactions between or among customers and companies engages customers to participate in co-creation value for already existing products and services or those that will be created by companies. A social media platform is provided in order to encourage and capture customers' expectations for the products and services according to their needs and desires.

H1: The greater the social media interaction, the greater the customer co-creation value.

Customer co-creation value and perceived product improvement

Based on the traditional concept, the value of a product is the output of a company's creation that then is sent to the customers in the form of products in the market. The occurrence of a shift in customer behavior happens when a customer is dissatisfied with the company's values and products as a result of several mismatches between the values provided and customer expectations. Customers today wish to be directly engaged in the value creation process, a process known as the co-creation value concept; i.e., a concept which declares that value can be created jointly between a company and customers. It is worth noting that the value is not purely created by the company alone, but is the result of interaction between the company and its customers (Vargo & Lusch, 2012).

The prime value is actually derived from a process of interactions and is created between a company and its customers. Collaborative competence is the primary determinant for a company to gain customers' knowledge which supports innovation orientation through a co-creation process (Bharti et al., 2014). The process of

new product development will always present new issues, new stages in the process, and high risk. Bharadwaj, Varadarajan, and Fahy (1993) state that a company's ability to continuously innovate products will ensure that products remain in accordance with the customers' needs and wishes; thus, the consequences of product development will have direct impact on a company's competitiveness.

> H2: The greater the customer co-creation value, the greater the perceived product improvement.

Perceived product improvement and customer loyalty

Customers offer a competitive strength through their bargaining power. Customers' bargaining power becomes pivotal, since the customers are those who have needs and wishes to be fulfilled. Customers always wish to get products and services, as well as satisfactory tools, in order to fulfill their basic needs (Homburg, Müller, & Klarmann, 2011; Reinartz & Kumar, 2003). Purchasing decisions on products or services are the process in which a customer decides which products or services to use. The challenge for companies, according to Gittomer (2007), is no longer to generate satisfied customers, since some competitors are also able to do this; instead, it is to generate happy and loyal customers.

The era of knowledge and technology development has encouraged companies to produce products and services which are not just based on customer expectations alone, but to produce better products and services compared to their competitors. To fulfill customers' needs based on their wishes is not easy at all. The new product development process is full of challenges and high risks; hence, integrated cooperation with all components in a company, including the customers, is required (Ernst, Hoyer, Krafft, & Krieger, 2010; Nosheen, Masood, & Muhammad, 2011). Co-creation is a form of collaboration with customers to solve problems and develop issues through an integrated perspective and approach (Grönroos, 2009). Having loyal customers is the ultimate purpose of social CRM, because loyal customers will not only be beneficial financially, but will also help in building a positive image for products and services being offered.

> H3: The greater the perceived product improvement, the greater the customer loyalty.

Customer co-creation value and customer loyalty

The growing pressure of increasing competition has forced companies to prepare unique and low-cost marketing strategies which must obviously be tailored to their target market (Jayachandran, Sharma, Kaufman, & Raman, 2005). A company's efforts to maintain its market share should involve creating new breakthroughs in marketing strategies; the old-fashioned marketing paradigms that tend to concentrate on product or company must be changed. Companies must be sensitive to their customers by always being attentive to the customers' needs and desires.

Social media as a form of customer management is expected to become a tool to engage customers in the process of creating superior values in order to be able
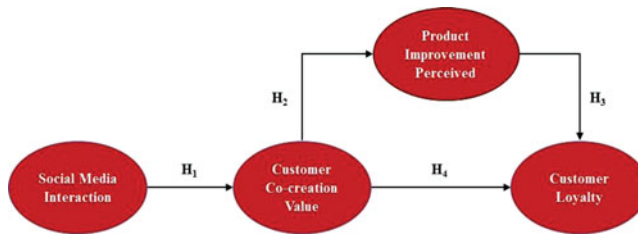
Figure 1. Model of customer engagement through social media.

to provide satisfaction through the company's products and services (Piller, Vossen, & Ihl, 2012). Social media marketing activities are centered on the efforts to create attractive and informative content that encourages readers to interact and share in their social network. The value creation process commences with the customers— i.e., the user's needs and situations—and ends with the customers as well—i.e., their rate of satisfaction. The distribution of value for customers is the focus and ultimate goal in retaining customers. Customers who receive satisfaction and superior value from a company's products and services based on their expectations will bring bonding loyalty (Lorenzo-Romero, Constantinides, & Brünink, 2014). Satisfied customers are willing to conduct repeated purchasing, invite others to buy the product, and inform others about the good quality of the product bought.

H4: The greater the customer co-creation value, the greater the customer loyalty.

Proposed model

Based on the previously elaborated literature review and hypothesis development, the research model proposed and tested for this study is demonstrated in Figure 1.

Research method

Population and sample

This study used primary data gathered from the field through the distribution of structured questionnaires. The research population included individuals who were social media account owners gathered in a product community in Indonesia. The sampling method was conducted with non-probability sampling by employing a convenience sampling technique. The instrument of analysis used was Structural Equation Modeling (SEM); the criteria used in determining the number of minimum samples to be fulfilled are 100. Thus, the samples used in this study were 200 respondents. The questionnaires were designed by applying a 10-point Likert scale with the weight of scoring from 1 = Strongly Disagree until 10 = Strongly Agree.

Research instruments and measurements

The validity testing in this study employed construct validity with Confirmatory Factor Analysis (CFA) assisted with SPSS 16.0 software. Before conducting factor

analysis, we used Kaiser Meyer Olkin (KMO) and Bartlett assessments to test the existence of relationships among the variables. The required acceptance for a KMO-MSA score must be above 0.5 with significance level <0.05 so that the variables can be further predicated and analyzed (Hair, Black, Babin, & Anderson, 2010). The result of our validity test showed that the score of KMO-MSA was 0.874 with significance level 0.000, meaning that all of the research variables can be analyzed further. The validity of research instruments is also determined by the loading factor value with the acceptance requirement of a score ≥0.40 (Hair et al., 2010). The validity test showed that all of the research instruments had above 0.40 of loading factor.

A reliability test was used to calculate the dependability and consistency of the research instrument. The reliability of this research was measured with a Cronbach's alpha coefficient with the score limitations between 0.6 to 0.8 (Sekaran, 2003). Based on the testing results, all of the instruments of this study demonstrated that the score of Cronbach's alpha was above the threshold of 0.6.

Data analysis results with SEM

The data collected in this study were then analyzed with a structural equation model (SEM) assisted with AMOS 22.0 software. The analysis results of the full structural equation model are illustrated in Figure 2. Based on the observation results, the model has met the fit criteria as marked by the score of calculation output which meets the adequacy criteria of the full model. The results of calculation for several goodness indices to evaluate the overall model goodness used are GFI index (GFI) = 0.875; the adjusted GFI index (AGFI) = 0.830; Tucker-Lewis Index (TLI) = 0.963; and root mean square of approximation (RMSEA) = 0.080. The results show that the overall model meets the criteria of fit model.

The results of the process indicate that each indicator or dimension which measures every latent variable shows good results where the score of critical ratio (CR)
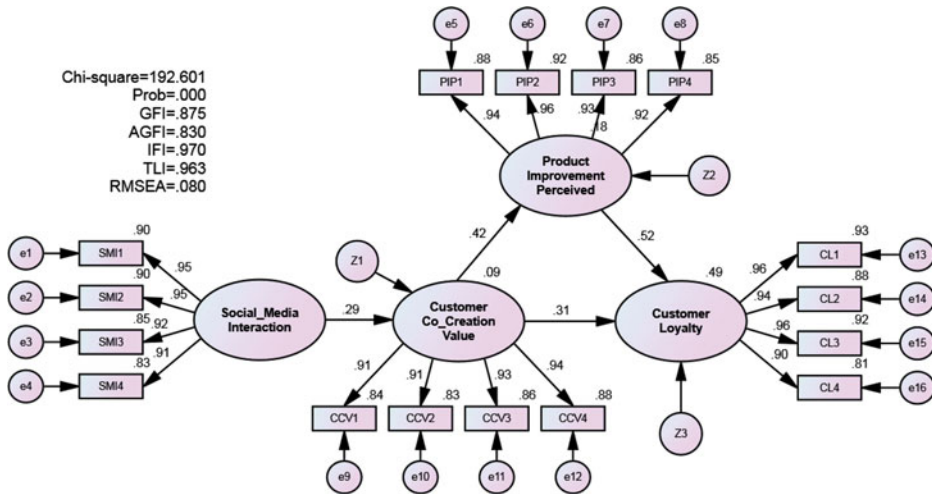

Figure 2. Full structural model.

is above 2.58. The results of hypotheses testing are presented in Table 1, where all hypotheses are supported. Table 1 shows the complete results of hypotheses testing in this study.

Discussion

The main focus of this study is to investigate the effect of company and customer interactions with social customer management through promotional activities in social media on customer loyalty. In general, this study has empirically assessed four research hypotheses and found several interesting results. First, the finding confirms that social media marketing which contains postings, writings, pictures, or attractive and entertaining videos can become the motor for customers or prospective customers to interact and continue to share the contents through their social media. This finding supports the previous research in that the interactive nature of social media is able to build communication among individuals and between individuals and companies in a community, triggering a more active customer participation (Sashi, 2012), increasing frequency of visits and duration of use (Piller et al., 2012), creating an interactive dialogue, and providing a long and memorable personal experience (Fang, Palmatier, & Evans, 2008).

Second, this study asserts that social media interaction is an effective way to engage customers in conducting co-creation value. Customer engagement is crucial in the production process as part of a company's effort to develop customer-based products and services. Co-creation activities provide benefits for both customers and companies. The benefit for customers in that they can interact with a community, sharing knowledge of a product and company, while the company is able to educate its customers with new information about products. This study underlines the previous research in which a company must learn and collaborate with customers to create value and meet customer needs (Prahalad & Ramaswamy, 2004); customer engagement is crucial in the process of superior value creation (Hollebeek, 2013).

Third, this study found that the role of customer co-creation value will build the rate of trust in a company, encouraging customers to enjoy products and services developed by the company. This result is in line with the previous research where, if a company has already run a good co-creation process, the value of the resulting products will be much better (Prahalad & Ramaswamy, 2004), supporting the thesis of no longer focusing simply on the product but also on the delivery of product value (Vargo & Lusch, 2004).

Fourth, the findings of this study show the role of customer co-creation value as a mediating variable between social media and customer loyalty. Currently, customers are not only willing to limit their role to that of product users; rather, they wish to establish a relational connection with a company and participate in the product creation process. This finding is consistent with that of Akaka et al. (2012), who argue that value comes not from the product produced, but from the interactions between marketers and customers through joint activities or co-creation value. Soon

Table 1. Hyphotesis test results.

	Constructs			Estimate	S.E.	C.R.	Hypothesis Test
H1:	Customer_Co_Creation_Value	<—	Social_Media_Interaction	.351	.101	3.459	Supported
H2:	Product_Improvement_Perceived	<—	Customer_Co_Creation_Value	.396	.077	5.171	Supported
H4:	Customer_Loyalty	<—	Customer_Co_Creation_Value	.265	.061	4.324	Supported
H3:	Customer_Loyalty	<—	Product_Improvement_Perceived	.473	.066	7.201	Supported

after the creation of customer engagement in the process of a company, customers will be emotionally engaged and will continue using the company's products and services (Algesheimer, Dholakia, & Herrmann, 2005; Bagozzi & Dholakia, 2006).

Conclusion

The presence of social media bridges the need for customer self-actualization and socialization by establishing a virtual community centered around a product or company as a means of interaction. Customers today are involved not only in product transactions, but they also wish to be involved in the company's processes in creating products and services that fit customers' needs and desires. Interactions through social media are transparent and open to access, facilitating the customers' engagement in the process of value creation. The role of customers is crucial as a resource in the process of value creation by leveraging knowledge as a source of competitive excellence, as noted by Vargo and Lusch (2004), who state that the paradigm shift is currently occurring in the marketing actors who initially offered Dominant Logic (DL) in the forms of products and the attributive features, and are now moving towards Service Dominant Logic, with its emphasis on delivery of product value rather than simply the product itself. Brands can be a means of interactions in meeting others, building relationships, and finding people with similar interests. Interaction and communication processes in the community will establish a much better quality of relationship between the company and its customers, which eventually will foster customer loyalty.

Implication

Based on the results of this study, there are several business implications which will allow a company to continue to grow and exist within its industrial environment. Hence, its business philosophy must emphasize customer orientation so that it becomes very important for the company to manage relationships with the customers efficiently. A company may implement social CRM, which is an Internet-based customer management application to build good relationships and involve customers in the company's processes. The development of social media must be wisely used by the company in building its competitiveness capabilities by putting forward the knowledge and technology to broadly manage the market. The company can build mutual value creation with customers through dynamic, interactive, and multichannel co-creation product development to create market-based products and services. Once this is achieved, satisfied and loyal customers can be obtained. High customer loyalty provides support for the company to gain competitive excellence and ultimately improves its business performance. Companies must learn from and collaborate with customers to create value creation in order to fully meet customers' needs.

Limitation and future research

This study has several limitations; i.e., the sample used is only from one country, which limits generalization of the findings of this study. For further research, it is suggested to broaden the respondent data to include respondents from other countries, especially from other developing countries, to explore the use of social media as a means of effective promotion and customer management.

ORCID

Ida Hidayanti ⓘ http://orcid.org/0000-0003-2141-7713
Lalu Edy Herman ⓘ http://orcid.org/0000-0002-3517-8680
Naili Farida ⓘ http://orcid.org/0000-0001-8532-4984

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