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Participating in open innovation of services in social media

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Abstract

Services are becoming more information and knowledge intensive. The ability to utilize and manage customer information and knowledge effectively can create competitive advantage for companies. On the other hand, the explosive growth of social media users has created a revolutionary new trend which offers companies new unique opportunities to utilize the information and knowledge capital of social media. Companies started to realize the huge potential of social media as a source of R&D service innovations and as a long-term customer relationships generator. The objective of this research in progress paper is to focus on the factors, which explain brand community members' participation in open innovation of services in social media environments. It is important from both the research and business viewpoint to identify the factors, which motivate users to participate in open innovation activities of brand communities and in generating value for the company. According to preliminary results, the suggested constructs explain preceding factors for participation in open innovation of services.

Keywords: Social media, Open innovation, Services, Information and knowledge sharing, Brand trust.

INTRODUCTION

Traditionally, new product development has been a well-protected, secret activity which was conducted from beginning to end inside the company (Chesbrough & Appleyard, 2007). However, in the open innovation model, new innovations are developed in collaboration with instances outside the company (Chesbrough & Appleyard, 2007). Customer integration into the innovation process is about to become best practice (Enkel et al., 2005), and customer integration increases a company's potential for innovation (Urban & von Hippel, 1988). Services have been largely overlooked by the innovation researchers, and services' roles in technological change, in particular, were largely seen as so insubstantial as to be barely worth examination (Preissl et al., 2000; Chesbrough, 2011: 192-195). According to Preissl et al. (2000), research and development (R&D) and technology management activities are themselves services. In the present research we develop a model explaining costomers' participation in R&D activities, i.e. services. IT-based virtual customer integration is a way to make use of customers' ideas with help of, for example, online communities (Dahan & Hauser, 2002).

OPEN INNOVATION

Chesbrough (2003) defines open innovation as "a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology". In the open innovation business model, new innovations are created in collaboration with instances outside the company. Based on Chesbrough's (2003) definition of open innovation, companies open up new channels for ideas coming from outside scientific, professional or user-based sources instead of doing all innovation and product or service development themselves. An important aspect in the open innovation model is the distribution, sharing and integration of information and knowledge (Chesbrough et al., 2006: 1). The company's own brand communities offer creative and skillful users a chance to voluntarily participate in the company's R&D activities and in the creation of innovations, in connections to brands that are important to them. According to von Hippel (2001), successful innovation with the community requires that at least part of the participants have the motivation to innovate and to voluntarily reveal these innovations to others.

MODEL AND HYPOTHESES

Information and knowledge sharing

In the present research we study the effect of information and knowledge sharing, utility, task involvement, social identity, social cohesion and brand trust on the consumers' willingness to participate in user-led innovation and R&D activities of a Finnish sport equipment company. In addition, we investigate the consumer's willingness to participate in open R&D service innovation in a brand community by studying the indirect influence of consumer-perceived utility, task involvement, social identity and social cohesion on the consumer's willingness to share information and knowledge, and the indirect influence of functional, emotional and social value on the consumers' brand trust.

The sharing and generation of collectively created new understanding are the foundation of community-based R&D service innovation. Without the rich knowledge produced by community members, virtual communities have only limited value (Chiu et al., 2006), and

therefore the success of virtual communities completely depends on the members' participation activity and investment into the creation of new knowledge (Tedjamulia et al., 2005). The benefits received by sharing information and knowledge motivate people to participate in open innovation (Wasko & Faraj, 2000). When people believe that their experience is valuable and useful, they are more willing to share it with others (Wasko & Faraj, 2000; 2005). The member's active participation ensures that the community's information is always up to date. Members of brand communities have extensive (explicit and tacit) knowledge of the products and services of the brand, and are willing to share it with other members of the community and the company (Muniz & O'Guinn, 2001; Füller et al., 2008). In service exchange, the service provider has to try to fulfill customers' needs in a series of interactions. Therefore, it can be assumed that the energy of information sharing and the new information created through information sharing have an effect on the innovation activity of the brand community. This leads to the hypothesis:

H1: Information and knowledge sharing has a positive influence on the willingness to participate in open innovation activities.

In the present research, information and knowledge sharing are explained by four variables: utility, task involvement, social identity and social cohesion.

The experienced utility

Franke and Shah (2003) find that seeking personal benefits, e.g. receiving recognition or getting a product one wants to use, are also strong motives for sharing innovations with the community. According to Hsu et al. (2007), community members are likely to share their knowledge when positive personal outcome expectations can be realized. This leads to the hypothesis:

H2: The experienced utility has a positive influence on information and knowledge sharing.

Individuals participate in online co-production and innovation for utilitarian and hedonic reasons (Hemetsberger, 2003; Füller et al., 2008). For utilitarian, need-driven participants, the willingness to innovate is induced by some unfulfilled need (Hemetsberger, 2003; Shah, 2006), and this need can be related to product improvements, completely new products, gaining reputation, reciprocity and the improvement of one's skills (Franke & Shah, 2003; Shah, 2006). This leads to the following hypothesis:

H3: The experienced utility has a positive influence on the willingness to participate in open innovation activities.

Task involvement

For task involvement-driven participants, the brand community represents a channel to express their know-how and creativity in a way that satisfies them. According to Shah (2006), so-called hobbyists participate in information and knowledge sharing and innovation in virtual communities because the creation of something new in collaboration with others is nice. This leads to the following hypothesis:

H4: Task involvement has a positive influence on information and knowledge sharing.

Members of brand communities are motivated by the achievement of sharing information, and persons with a high achievement motive enjoy challenging tasks and get a feeling of being competent upon completion of the task (Wu & Sukuko, 2009). In contrast to utilitarian participants, hedonic, intrinsically motivated participants get involved in the task of joint innovation because it is 'fun', a joyful experience or passion in connection with certain activities (Belk et al., 2000). Dholakia et al. (2004) found that the entertainment value factor has a direct influence on participation behavior. Task-involvement-driven members participate in innovation communities mainly because of the fun and enjoyment derived from the very act of

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creating and tinkering (Shah, 2006). This leads to the following hypothesis:

H5: Task involvement has a positive influence on the willingness to participate in open innovation activities.

Social identity

People have a tendency to hide their knowledge until they can be sure that the other person is their group mate and that the sharing of information benefits their own well-being. A strong social identity increases the members' responsibility and expresses itself in the members' wish to act in a way that supports the goals and objectives of the community (Bergami & Bagozzi, 2000; Algesheimer et al., 2005; Hemetsberger, 2003). People who have a common identity most likely have similar goals, rules and interests which motivate the community members to share and integrate information with the other members of the community (Nahapieti & Ghoshal, 1998). This leads to the following hypothesis:

H6: Social identity has a positive influence on information and knowledge sharing.

Interaction with each other is the prerequisite for information sharing and creating new knowledge. A brand represents a certain image to the consumer, and brand as a symbol reflects the individual's image of oneself (Keller, 2003). Brand identity refers to convergence of an individual's own identity and brand image (Bagozzi & Dholakia, 2006). Social identity is defined as an individual's self-awareness as a member of the virtual community (Bagozzi, 2002), the brand community in the present research. A strong social identity grows the members' responsibility and manifests itself in the members' desire to behave in a way that supports the goals and objectives of the brand community (Bergami & Bagozzi, 2000; Algesheimer et al., 2005). As Dholakia et al. (2004) show, social identity has via participants' desires and we-intentions an influence on participation behavior. We derive the following hypothesis:

H7: Social identity has a positive influence on the willingness to participate in open innovation activities.

Social cohesion

Cohesion is a process reflected in a group's orientation to stick together and be cohesive when performing a task. Social cohesion theory explains causally interrelated phenomena of individual and group level interactions describing individuals' attraction to the group (Friedkin, 2004; Hsu & Lu, 2007). According to Hsu and Lu (2007), social cohesion is linked to positive interpersonal relations, a degree of commitment, communication, interaction, and group performance. Franke and Shah (2003) identify that enjoying the process of creating something jointly is a motivator for sharing information between community members. Wasko and Faraj (2000) suggest that people participate in social communities because they want to engage in the exchange of ideas and solutions across people and globally. Further, Wasko and Faraj (2000) suggest that work units behaving as communities are more innovative. People feel that the social community enables access to knowledge and information and becomes a valuable forum to receive feedback on ideas and solutions. This leads to the following hypothesis:

H8: Social cohesion has a positive influence on information and knowledge sharing.

According to Carron et al. (2003), cohesion refers to a dynamic process, which describes the tendency of group members to stick together and remain together in trying to achieve the group's instrumental goals and/or the enjoyment which results from the satisfaction of the members' affective needs. Social cohesion affects the level of commitment and motives for the members' actions. In a brand community, the passionate attitude towards the brand's products and services, and the mutual feeling of solidarity are the reasons for a feeling of cohesion

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between the members of the community. In addition, active interaction creates the feeling of togetherness (Preece, 2001). According to Hsu and Lu (2007), the experienced cohesion has a positive effect on relationship, greater commitment to the group task, good communication and an improved group performance. Active participation in the brand community improves group cohesion (Casalo et al., 2008). Thus, we hypothesize:

H9: Social cohesion has a positive influence on the willingness to participate in open innovation activities.

Brand trust

A brand helps the customer to distinguish and identify a company and its offerings from other offers on the market. Often, a brand stands for a good and trustworthy product and/or service. **Brand trust** does not arise within one moment, its development demands time, and its basis are the customer's previous good experiences with the brand (Anderson & Narus, 1990). Active participation in the activities of the brand community requires that the individual trusts the community and its members, and trust increases the member's commitment to the community (Morgan & Hunt, 1994) and participation in the activities of the brand community (Casalo et al., 2008). According to Porter and Donthu (2008), a trust-based relationship to the company increases the consumer's willingness to participate in the development of a new product together with the company. Thus, we hypothesize:

H10: Brand trust has a positive influence on the willingness to participate in open innovation activities.

Satisfaction is defined as pleasurable fulfillment, which means that the consumer senses that consumption fulfils some need, desire, goal, etc. and that this fulfillment is pleasurable (Oliver, 1999). Deng et al. (2010) notice that consumer perceived value increases consumer satisfaction: if the consumer feels that his expectations concerning his purchase decisions are fulfilled, he is satisfied and develops positive feelings towards the brand. According to Oliver (1999), the consumer's satisfaction with previous purchases manifests itself in a continuous tendency to purchase products of a certain brand. Consumer perceived value does not only depend on the value-for-money, but is multi-dimensional and is based on the difference between the consumers' expectations and experiences (Sweeney & Soutar, 2001). The influence of these dimensions on the consumer's purchasing decision varies depending on the decision circumstances. The following values influence either in isolation or in different combinations the purchase decision of the consumer: functional, social, and/or emotional value. **Functional value** refers to the utility derived from the product due to the reduction of its perceived short term and longer term costs, as well as due to the utility derived from the perceived quality and expected performance of the product. Functional value has been traditionally seen as the most important factor influencing on a consumer's purchase decision. **Emotional value** refers to the utility derived from the feelings or affective states that a product generates, which can be connected to certain situations, memories or aesthetics. **Social value** refers to the utility derived from the product's ability to enhance social self-concept. By choosing a certain product or service, the consumer signals that he/she belongs to a certain group. The social value connected to a product or service can surpass the functional value when making a purchase decision. Thus, we hypothesize:

H11: *The experienced functional value has a positive influence on brand trust.*

H12: *The experienced emotional value has a positive influence on brand trust.*

H13: *The experienced social value has a positive influence on brand trust.*
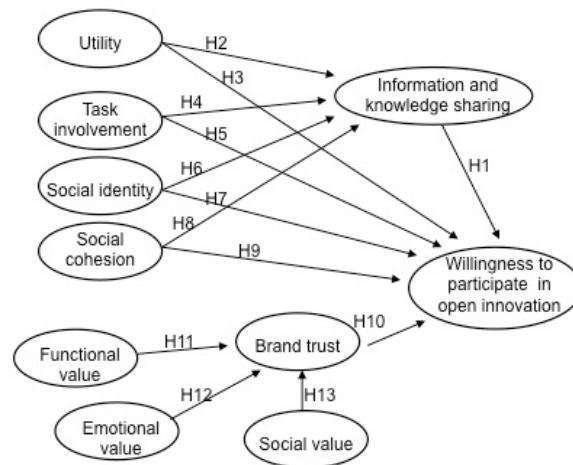
Figure 1 shows our research model and hypotheses.

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Figure 1. Research model

CONCLUSION

Nowadays, services comprise a major part of economic activity in most developed countries. On the other hand, services are becoming more information and knowledge intensive. Therefore, new insights and understanding how to utilize customers' information and knowledge and involve customers in open service innovation process are needed. This research-in-progress has attempted to identify factors, which explain users' motivation to participate in open innovation of R&D services in the social media environment of a brand community. We have already collected the data in form of a web-based questionnaire from a social media environment both in USA (N=235) and in Finland (N=206) resulting in 439 reliable responses. According to preliminary results, the presented model fits well with the data.

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