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# Observing discussion forums and product innovation – A way to create consumer value? Case heart-rate monitors



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#### ABSTRACT

This paper demonstrates how discussion forums can be used in product innovation to create value with consumers. The literature shows the value of sport addicts and hobbyists as innovators in product innovation, consequently this study is also related and relevant to sports activities. It is an empirical study based on substantial qualitative data collected from 28 discussion forums, of which 20 of the longest discussions were chosen for qualitative analysis. This paper complements the academic literature by providing information about consumer value creation in discussion forums without company interaction. The discussions contain basic, performance and excitement factors, of which performance factors are the most abundant. Both product improvement ideas and consumers eager to participate in innovation can be found in the discussions. A key to success for a company is a systematic plan showing the potential use of the extensive information in the discussions. This paper introduces closed company innovative forums which are maintained or product innovation evangelists to direct the discussion and keep consumers interested in participation. This is a new means to find out and further develop promising ideas for product innovation with consumers.

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#### 1. Introduction

The purpose of this paper is to study the possibility to use discussion forums for idea creation in product innovation and create value together with consumers in them. The main competitive issue for companies relies on better understanding of consumers' needs and preferences in order to create superior value proposition for them: the best way is to create value together with consumers, deciding together what is important to improve. There are many definitions for consumer value, but this paper relies on Füller and Matzler's, 2008 definition of consumer value consisting of basic factors, performance factors and excitement factors as it has been successfully used in their studies related to online product innovation and consumer satisfaction (Füller 2010; Füller and Matzler, 2008; Füller et al. 2006, 2009; Gebauer et al. 2012).

Discussion forums, that are the interest of this study, are used today for many purposes, mainly for information search and communication. They differ with their form, most of them being open for registered members only, although there are many different variations. Discussion forums, also called online communities or online forums, can be classified by both a strong need for social commitment and a strong need for sharing information (Mustonen, 2009). It is, indeed, typical to visit the interesting forum

not only once, but regularly, but only if the discussion is of deep most interest. This is the challenge that companies face in product innovation with these forums: how to find the best participants, and, especially, have them come back over and over again.

As discussion forums are typically full of opinions, wishes and experiences of product use, this paper aims at finding out, if these comments could give valuable insight into consumers' minds and thus reveal to the company, what factors consumers value would like to see in the products. Product innovation is a process, and although this study concentrates only on the idea creation stage, it is questionable if a single consumer idea could be the beginning of a product improvement. In case such ideas exist, they need to be tested among other participants, discussed more and carefully considered. Here discussion forums can be a valuable resource, as they offer an extremely fast answer to any reasonable question asked, if the right persons participate. However, in order to gain reliable results and ensure the smooth process, chosen consumers should be integrated into the process, planned by the company in question. Discussion forums are easy to use, as no special applications or skills are needed, and the main idea is just to share thoughts in order to solve presented problems. Discussions consist of threads of comments that are usually free for everyone to see and join. Typically there are both very active participants and those who visit the forum just once.

Product innovation is interpreted here as the development of a new product (Trott, 2005) and it is seen as a result from improvements that are made to existing products (Ulwick, 2005). This study concentrates on incremental product innovation at the idea generation stage, that can rely on continuous improvements to products or to products that have minor changes in attributes in the consumers' perspective (Hoonsopon and Tuenrom, 2009; Schilling, 2008) and might not be particularly new or exceptional; it might have been previously known to the firm or industry, and involve only a minor or adjustment to the existing practices (Schilling, 2008). At the early stages of the product innovation process it is necessary to generate as many ideas at first as possible or to create very different ideas (Urban and Hauser, 1993) and here discussion forums can be an excellent source. As discussion forums typically offer large amounts of unstructured and undirected communication that contain product improvement ideas, they are a relevant source for incremental product innovation. To maintain a long discussion on one topic only is a challenge and company intervention certainly needed in some form if the aim is to get the most out of the discussions.

Certain themes in online product innovation have raised interest among researchers: consumer integration into product innovation process (Fuchs and Schreier, 2012; Lüthje et al., 2006; Dahan and Hauser, 2002), crowdsourcing (Poetz and Schreier, 2012), toolkits (Füller et al. 2006, 2009), online communities (Jawecki et al., 2009; Füller et al., 2006; Pitta and Fowler, 2005; Füller, 2010; Füller and Matzler, 2007; Gebauer et al., 2012; Mc.Alexander et al., 2002; Marchi et al., 2011), effects of virtual word of mouth in innovation (Kawakami et al., 2013), virtual design competitions (Füller et al., 2011) and virtual worlds (Kohler and Matzler, 2010; Chandra and Leenders, 2012). A link to this study was also discovered in pedagogical studies, where the content analyzing techniques in discussion forums (e.g. Dringus and Ellis, 2005) and the role of the instructor (e.g. Mazzolini and Maddison, 2005) in relation to the relevance of the discussions were studied.

The possible existence of basic-, excitement- and performance factors and their content will be studied in this paper through 28 selected discussion forums, of which 20 longest discussions (threads) have been chosen for further analysis. Is it possible to find out relevant unmet consumer needs for product innovation ideas simply by observing the discussions? Are there any crucial differences when using general discussion forums in which all possible themes are discussed or should a company maintain a discussion forum of its own?

### 2. Creating consumer value in discussion forums

A crucial competitive factor for companies is the ability to create consumer value by understanding consumer' needs and preferences. This is a challenge for companies, as they first need to develop a clear understanding of what aspects the consumer value (Moon et al., 2013). Consumer value has many definitions and dimensions: e.g. physical features, quality and durability, service and convenience, experience and trust, emotional appeal and cost (Carlson and Wilmot, 2006). These factors can indeed be found in discussion forums and as innovations emerge from a combination of new ideas and an understanding of important unmet consumer and market needs, the dialog in forums can give a company valuable insight into consumer preferences and unmet market needs.

Carlson and Wilmot (2006) define the elements of consumer value as consumer value being the benefits reduced by the costs. On the other hand consumer value can be defined as a value factor being the benefits divided by costs if the question lies in the comparative value of the worth with the costs caused (Carlson and Wilmot, 2006). More concretely, Cagan and Vogel (2002) describe seven opportunities to create value, these are; emotion, esthetics, identity, ergonomics, impact, core technology and quality,

emphasizing that each of these opportunities contributes to the overall experience of the product and relate to the value characteristics of useful, usable and desirable. This is differentiating the product from the competition in the way that the consumer wants. If these elements can be found in the forums, the company benefits are inarguable: Discussion forums are undeniable cheap as the cost of establishing and maintaining them are low, and observing general discussion forums itself totally free of charge.

Of the value characteristics, usability is important, but it is not enough on its own to guarantee a product's success with consumers as Battarbee and Koskinen (2005) indicate, it is consumer expectations that matter as well. It needs to be remembered. however, that consumer expectations and preferences may change over time, when product experience and learning increase, as an innovative product tends to have uncertain benefits and requires consumers to learn new behaviors (Bohlman et al., 2013). Consumer expectations can be grouped into three categories: basic factors, performance factors and excitement factors (Füller and Matzler, 2008). Basic factors are the minimum requirements that the consumers do not usually remember to voice and that are noticed only, when not fulfilled. Basic factors are often regarded as a "must" (e.g. cleanliness, friendly service) and thus do not lead to consumer satisfaction in any case. Excitement factors are unexpected and surprisingly pleasant to consumers, and will be appreciated, but as unexpected not missed. Excitement factors are often related to high product novelty or exceptional entertainment. Performance factors are related to those product or service attributes that increase overall satisfaction when performance improves, such as functions in heart rate monitors that enable more efficient training. Out of these factors, performance factors lead to satisfaction if performance is high and to dissatisfaction if performance if low. (Füller and Matzler, 2008). In this paper consumer value is understood in a similar way to that of Füller and Matzler's definition: basic factors, performance factors and excitement factors, as it has been inarguably successfully used in several successful studies concentrating on product innovation and consumer participation in online forums (Füller, 2010; Füller and Matzler, 2008; Füller et al. 2006, 2009; Gebauer et al. 2012).

In addition to the consumer experiences related to a product, it is crucial to remember that the experience of participation and creating together is the very basis of the consumer value (Prahalad and Ramaswamy, 2004), and its role has definitely grown due to the new social media era: Today, the Internet allows companies to easily involve consumers into the whole innovation process (Prandelli et al., 2008), meaning that the consumers are increasingly engaged in the process of both creating and defining value (Prahalad and Ramaswamy, 2004), including value deriving from gaining acceptance and approval from other participants and company representatives (Sicilia and Ruiz, 2010). If consumers become active participants in creating value for companies, they will demand more information about potential risks of goods and services (Prahalad and Ramaswamy, 2004) and want to see their contribution valued. In result they will give their expertise and time freely to improve the product in question. Compared to traditional methods of finding product innovation ideas, the discussion forums definitely offer an extensive source to find out unmet customer and market needs, as well as new technical and business ideas. However, it is challenging to develop an engagement and contribution culture with the consumers (Tickle et al., 2011). This study shows that technical ideas with abundance to performance factors are especially easy to recognize in discussions. The literature shows that the performance factors are the ones causing the most satisfaction or dissatisfaction, and this was noticed as well in these discussions. To proceed from ideas to successful new products, time and company participation in some form is however required.

Thus, the ultimate goal of the consumer integration process is to create consumer value. The challenge lies in establishing

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