Social Media Use and Potential in Business-to-Business Companies’ Innovation

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Social Media Use and Potential in Business-to-Business Companies’ Innovation

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ABSTRACT

The use, potential and challenges of social media in innovation have received little attention in the literature, especially from the standpoint of the business-to-business sector. Therefore, this paper focuses on bridging this gap. The purpose of this paper is to study the use and potential of social media in the innovation context, especially from the perspective of business-to-business companies. The paper starts by defining of social media and Web 2.0, and then characterizes social media in business, social media in the business-to-business sector and social media in the business-to-business innovation process. The paper also studies the essential differences between business-to-consumer and business-to-business in the given respects. Finally the authors present and analyze the results of their empirical survey of 110 respondents from Finnish companies. The results suggest that there is a significant gap between the perceived extensive potential of social media and current social media use in innovation in business-to-business companies. They have also identified potentially effective ways to reduce the gap, and clarify the found differences between B2B’s and B2C’s.

Keywords: Business-to-Business, Innovation, Innovation Management, Social Media, Survey

1. INTRODUCTION

The recent innovation management literature has recognized a new increasingly important innovation paradigm, which is based on an open innovation model (Chesbrough, 2003; Gassmann, 2006; Von Hippel, 2005). This paradigm, “open innovation,” emphasizes the importance of the efficient use of all existing and available knowledge and information. Besides the knowledge available inside the company, it particularly emphasizes the knowledge located outside the company borders. In this paradigm it is recognized that valuable innovation-related knowledge is being increasingly widely distributed to different actors, organizations (e.g.,...
companies, customers, suppliers, universities etc.) and communities (Chesbrough, 2003). In addition, the significance of knowledge creation by e.g., open communities of peers is also emphasized. Various types of collaborative web tools and approaches, such as social media, can enable and significantly increase the use of the distributed knowledge both inside and outside the company (Levy, 2009; McAfee, 2006), and also support the transition to more open innovation processes.

The significance of innovation-related collaboration is reflected in the many so-called “success factor studies” that investigate the factors affecting the success and failure of innovations. According to these, successful inter-organisational and intra-organisational cooperation are major success factors in innovation (Read, 2000). Some studies even claiming cooperation to be the most important detected success factor (Muffatto & Panizzolo, 1996). Social media provides quite novel and useful ways of interacting and collaborating in the innovation process, and also for creating new information and knowledge for innovations (e.g., Barker, 2008; Bernoff & Li, 2008; Cachia, Compano, & Dacosta, 2007). These novel ways and approaches have been little investigated because of the novelty of social media concepts and approaches, and because the possibilities of social media are not fully understood in the context of innovation.

Social media utilization in enterprises is a current and popular research topic. Although there do exist studies and information about how companies currently use social media, knowledge about social media use in innovation activity is relatively scarce, both the theoretical and empirical research is quite fragmented, and the empirical research is mainly based on individual, often not too systematically and analytically reported fragmented cases. Furthermore, little is known about how companies see the potential benefits of using social media in enhancing innovation efforts and customer involvement. In addition, the use of social media in different specific contexts, such as the business-to-business sector and in different types of industries, is not well understood.

The aim of this research is to illustrate both the current state and potential of social media use in innovation as perceived by Finnish business-to-business (B2B) companies.

The purpose of our paper is to study the use and potential of social media in the innovation context, especially from the perspective of business-to-business companies. We also wanted to ascertain what kinds of important challenges there are currently in implementing social media in the innovation activities of B2B’s. On the basis of the literature available, it can be assumed that the challenges, benefits and useful approaches are at least somewhat different from those of business-to-consumer companies. It has been a relatively common assumption (Eskelinen, 2009; Lehtimäki, Salo, Hiltula, & Lankinen, 2009) that it is much more difficult to utilize social media in business-to-business innovation and customer interface, for instance, because of the many significant differences in the business-to-business products, markets and product development. In addition, it is assumed that the objectives and applications of social media differ in many significant respects between these two sectors, e.g., due to the given differences (e.g., Gillin & Schwartzman, 2011; Kho, 2008). These B2B characteristics and differences are described and analyzed later in this study in more detail.

2. SOCIAL MEDIA IN BUSINESS-TO-BUSINESS

2.1. Definition of Social Media and Web 2.0

Web 2.0 refers to technologies that enable users to communicate, create content and share it with each other via communities, social networks and virtual worlds, making it easier than before both to have real life experiences in virtual worlds and to organize content on the internet with content aggregators (Lehtimäki et al., 2009). Such tools and technologies emphasize the power of users to select, filter, publish and edit information, as well as to participate in the creation of content in social media (Tredinnick, 2006). According to
Constantinides and Fountain (2008), “Web 2.0 is a collection of open-source, interactive and user-controlled online applications expanding the experiences, knowledge and market power of the users as participants in business and social processes. Web 2.0 applications support the creation of informal users' networks facilitating the flow of ideas and knowledge by allowing the efficient generation, dissemination, sharing and editing/refining of informational content.”

According to Kaplan and Haenlein (2010), social media is defined as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content.” Furthering this, social media is referred to as applications that are either based entirely on user-created content, or in which user-created content or user activity have a significant role in increasing the value of the application or the service (Kangas, Toivonen, & Bäck, 2007). Lietsala and Sirkkunen (2008) suggest using social media as an umbrella term, under which various and very different types of cultural practices take place related to the online content and the people who are involved with that content. Some of the practices are relatively stable, such as participating in wikis and social networking while others are still developing, such as microblogging or virtual worlds. A large number of different generic types of social media applications can be identified (Cooke & Buckley, 2008; Dewing, 2010; Jäkälä & Pekkola, 2011; Warr, 2008), such as wikis (e.g., Wikipedia), blogs (e.g., company newrooms), microblogs (e.g., Twitter, Yammer), social networking (e.g., LinkedIn, Facebook), social content communities (e.g., YouTube, Flickr, Digg), social workspaces (e.g., SharePoint), social tagging (e.g., Delicious), virtual social worlds (e.g., Second Life), mashups and prediction markets. The functionality and rules of utilization of the applications vary (e.g., Twitter tweets/posts can be no more than 140 characters). Also, there is variation in how people use these applications (e.g., bloggers tend to post at most once per day, and their posts tend to be up to one page in length).

2.2. Social Media in Business

Social media is a relatively novel concept, and its fast wider adoption and public interest has its roots at least partly in the originally non-commercial public social media applications such as Facebook and blogs. In the white paper study by Coleman (2009), still only 15% of the general population reported using social networks (technologies) at work, while others used them only outside the work context. The adoption of and attitudes to social media in the business context seem to be affected by the phenomena: in practice, managers often seem to strongly associate social media especially with Facebook and Twitter, which are only a very minor part of the social media genre in business.

Even if some individual Web 2.0 tools, such as wikis, have been used occasionally in the business and enterprise contexts for almost a decade, the general adoption and understanding of social media in the business context is quite limited. In a Finland-based survey (Helfenstein & Penttilä, 2008) targeted mainly at CEO’s, CIOs and strategic management, 25.4% reported that Web 2.0 applications and services were in active use in their organizations, and 16.4% said they would take introduce them in the near future, while the rest had no plans or no resources to adopt them, or thought it was better to wait before making adoption decisions. The adoption may be very fast in certain business areas, and there are significant differences in the adoption depending on the business or function asked: contrary to the previous research, e.g., in the white paper by Stelzner (2009), as many as 88% of surveyed marketers were using social media in their marketing, but 72% had only been doing so for a few months or less. These fast changes emphasize the need to monitor and study the social media possibilities and adoption rates in various business contexts.

Considering the different business-related areas in companies, the white paper survey by Gordon (2009) showed (Figure 1) that social media is used to varying extents in different business functions.
Very few recent academic studies were found that studied the adoption of social media in organizations in general, or the adoption in different business functions. The academic survey-type studies found reported practically no recent studied adoption rates, especially in the innovation context or business-to-business context, not to mention their combination. This emphasizes the relevance of our study aiming precisely to study the combination empirically.

2.3. Social Media in Business-to-Business Sector

Markets, products and product development differ significantly between the business-to-business and consumer product sectors (Hanna, Ayers, Ridnour, & Gordon, 1995; Holt, Geschka, & Peterlongo, 1984; Kotler, 1996; Kärkkäinen, 2002; Urban & Hauser, 1993; Webster, 1995). For instance, generally speaking, products produced by business-to-business organizations are more complex, the development of new products takes significantly longer, and the customers are large organizations rather than single persons, which is the case in the consumer (business-to-consumer) product sector. In industrial business-to-business markets, there are normally fewer customers compared to consumer markets, and the co-operation with customers is generally more direct and more intense than in the consumer sector. Industrial products are usually purchased by professional buyers who consider a large number of different criteria when making the buying decisions. They tend to acquire plenty of information about the industrial products to be purchased, and they normally evaluate the different alternatives objectively. The demand for industrial products is derived from the demand for the company’s industrial customers’ products and finally the end-user demand (Kotler, 1996; Webster, 1995).

In industrial products, more emphasis is on physical performance and personal selling than in consumer products, where psychological attributes and advertising are critical for success (Urban & Hauser, 1993).

Taking the differences into consideration, it is fair to assume that the various types of innovation-related managerial approaches, e.g., collaborative approaches and customer needs assessment activities, such as those carried out...
by means of social media and Web 2.0, should take these differences carefully into account when planning and implementing approaches for the business-to-business sector companies. First, since the number of customers is generally much smaller in B2B’s, the use of “crowdsourcing,” which is quite commonly utilized in B2C’s, is limited. The concept “crowdsourcing” refers to outsourcing certain tasks normally performed by company’s employees to an undefined - and generally large - network of people in the form of an open call, either carried out by individuals or collaboratively (Howe, 2011). Second, in the context of innovations and B2B’s, legal contracts and IPR issues can become challenges in the free revealing of product or business ideas in inter-organizational innovation collaboration (Luoma, Paasi, & Nordlund, 2008), and may thus seriously limit the utilization of social media between B2B-companies and their customers. Third, various issues concerning information security have already been raised in individuals’ use of social media, but due to the nature of business-to-business communication, the business-to-business context includes severe information security risks potentially limiting the use of social media in ways that are not necessarily equally problematic in B2C social media applications: for instance, while most employees may be aware that it is not a good idea to respond unthinkingly to emails, such forethought is not necessarily applied to social media sites. This means that staff may inadvertently disclose sensitive corporate information without thinking (for instance concerning future product launches or violating customer confidentiality agreements), or leak information that can be aggregated to data gleaned from elsewhere to build up a useful corporate picture, not realizing that it may be stored online indefinitely and is searchable (Everett, 2010; Langheinrich & Karjoth, 2010). Fourth, the incentives that motivate individual consumers or hobbyists to participate in social media –based user-communities can also be very different from those of professional (B2B sector) customers: for instance, while the aspects of recognition and sense of community or self-esteem are undoubtedly also important for employees in business-to-business sector firms, it is to be doubted whether they are sufficiently important motivators to become drivers for them to act as a user-innovator.

The factors suggest that the usefulness and potential of social media should be empirically studied especially in the context of business-to-business companies trying to assess the significance of the expected challenges and benefits of social media in innovation from the specific standpoint of business-to-business companies. Even if clearly most of the available empirical studies have been done from the B2C standpoint or a fairly generic standpoint, some empirical social media studies have noticed and taken into consideration the specific nature of business-to-business (Cameron, 2008; Carabiner, 2009; Eskelinen, 2009; Lehtimäki et al., 2009). However, most of the empirical studies found were not academically implemented and reported, and importantly, no empirical survey-based studies with innovation standpoint were found, despite extensive literature review, in the business-to-business context.

2.4. Social Media in Business-to-Business Innovation Process

In the strategic management literature and quality management literature five main roles have been identified for customers in value creation: resource, co-producer, buyer, user and product (Finch, 1999; Kaulio, 1998; Lengnick-Hall, 1996). Of these roles three (resource, co-producer, user) are most relevant for specifically the innovation process (Nambisan, 2002).

In several studies in the innovation management literature, the authors have found it useful to divide the innovation process into three parts: the (fuzzy) front end (phases before product concept), the product development phase (phases between concept and launch), and commercialization (phases during / after launch) phase (Desouza et al., 2008; Fuller & Matzler, 2007; Nambisan, 2002). Thus, we find it relevant to study social media use in the customer interface of the innovation process in
more detail from the perspective of the different customer roles and the different innovation process phases. We have not been able to find earlier B2B-related studies that have carried out such analysis, and will take this into consideration in our own analysis.

In the first innovation process phase customers can be regarded as a resource, i.e., the source of ideas or need–related information, in the second phase customers can be regarded as co-creators (or co-producers), and in the final phase customers can be regarded as (end)users (Bartl, Jawecki, & Wiegandt, 2010; Chan & Lee, 2004; Fuller & Matzler, 2007; Nambsan, 2002). These roles bear a very close resemblance to the three main phases of the innovation process described, and support the division of the innovation process accordingly in the context of this study. This enables us to better analyze the different roles and benefits of social media in the creation of new customer insights, understanding and knowledge in more detail than has been achieved so far.

3. RESEARCH DESIGN

3.1. Literature Review

A literature survey on social media in business-to-business and innovation was conducted to gain an understanding of the state-of-the-art. Five databases: ABI Inform, ACM Digital Library, Emerald, ISI Web of Knowledge, and ScienceDirect, were included in the survey of articles related to social media, innovation and B2B.

A total of 1357 articles were discovered, of which 60 were chosen for further examination based on the titles. The selection criteria were that the article must address social media or Web 2.0, and relate to innovation in general, or to some or to all innovation process phases. Individual tool–related studies in the given context (wikis, blogs, etc.) also emerged but these were not included, because we were interested in getting an overall picture of social media use, possibilities and challenges instead of narrow snapshots of individual approaches.

25 of selected articles matched these criteria. In addition, we made a systematic study of both backward and forward references of the selected 25 articles that brought some more articles into our attention, the number of articles totaling 30. The articles were analyzed especially from the standpoint of social media in B2B and innovation contexts, and current empirical knowledge was synthesized.

3.2. Questionnaire

We wanted to study how B2B companies perceive the potential, opportunities and challenges in using social media in their innovation process. In addition, we wanted to gain further understanding from the technological and organizational points of view of how business-to-business organizations currently utilize social media. We utilized the research questions, the generic social media related literature, the survey-type of empirical social media studies, as well as expert interviews in the structural design of the questionnaire and the formulation of individual questions.

First of all, the respondents were given a brief definition of social media utilizing the available common definitions in the literature found. The definition was a relatively brief one: “By social media we mean applications, which are based either fully on user-created content, or in which user-created content and user activities have a significant role in increasing the value of the application or service. Social media is built on Web 2.0 technologies, content and communities.” This definition was complemented at the beginning of the questionnaire by providing the respondent with a list of Web 2.0–based application categories.

To elicit the necessary background information about the respondents which might affect their opinions, the respondents were first asked about their age, their experience in innovation in years, and the function they belonged to. To elicit the necessary background information on the companies studied, the respondents were asked to choose to which class they belonged to regarding turnover, number of employees and...
industry type from the classifications made by Statistics Finland. We ascertained the emphasis of business, the alternatives being business-to-consumer (consumer or end user as customer), business-to-business (company as customer) or other markets, by asking which alternative would best describe the respective companies’ main focus. We also elicited the competitive strategy of the companies by presenting four different generic alternatives to choose from (some important literature sources for the task being Porter (1985)) and McGrath (1995). In order to better understand the innovation activity in the companies we asked them to assess how systematic the innovation activity was in terms of identifying the development needs in their innovation activities, also their development stage in innovation on a five-point scale (ranging from very poor to very good).

To orient the respondents to think about social media holistically, as well as to give a better picture of social media, we first asked how actively they used social media-related tools in the company related to predefined application categories (instant messaging, blogs, microblogs, wikis, pod/webcasts, content aggregators, mashups, social networking tools, social bookmarks, social office tools, virtual worlds, and social workspaces) on five-point scale ranging from very little to very much. We studied the maturity level of social media adoption in the companies by asking the respondents to evaluate statements regarding this maturity on a five-point scale ranging from completely disagree to completely agree (see the results for more detail on the questions). Social media opportunities for product or service development were evaluated by asking the respondents to rate the opportunities offered by social media for cost cutting, reducing product development time, increasing customer orientation and in improving quality on a five-point scale ranging from very little to very much.

The questionnaire was also designed to study customer knowledge-related challenges in innovation, and the possibilities of social media to support the acquisition of customer knowledge, but as these were not in the main focus of this study and its research questions, their results will be reported separately. Prior to formulating the questionnaire, a few forerunners in social media adoption and social media experts in Finland were interviewed to obtain background information of social media use in enterprises in general, as well as the challenges and possibilities of social media in business and innovation contexts. This information was utilized in the development of the preliminary questionnaire, together with the literature found. The preliminary questionnaire was pre-tested in several business-to-business companies by individuals with varied levels of expertise and knowledge in social media and innovation concerning the content, and comprehensibility of the questions, as well as the time needed to complete the questionnaire.
3.3. Sample

A sample of 1984 Finnish decision-makers from companies with more than 50 employees were surveyed (the contact info sent to the product development and innovation experts concerned was obtained from a commercial company JM Tieto). There were 1005 unique companies in the sample. The contact information was selected based on persons working in companies employing more than 50 employees in either research and development or product design role. The respondents were selected on the basis of their position regarding product development and innovation. Smaller companies, which generally can be presumed to possess less resources and thus less interest for social media specifically in the innovation context were excluded from the study scope (contrary to this, the marketing context would probably be considered a much more relevant application area for social media in the small companies, however, and marketing communication has been practiced rather commonly even by small and micro companies). 

Invitations to participate to the survey including a covering letter explaining the focus of the survey were sent to the contact addresses obtained with two weeks to complete the survey. After two weeks an email reminder was sent offering one week more time to complete the survey. To improve the response rate telephone calls were made to contacts including in the titles product and manager, developer or designer, a total of 262 people were contacted of whom 132 were reached within two weeks.

A total of 122 responses were received to the Internet-based survey. Duplicate responses from same responding companies were removed, this resulting to 110 unique responses from individual companies. The effective response rate was thus 11% (110/1005). Of the responding firms, 77% were manufacturing, 8% construction, information and communication and wholesale and retail trade each 2%, 1% were mining and quarrying, professional, scientific and technical activities, and human health and social work activities, 8% were industries classified as “other.” The majority (74%) of the respondents were oriented towards business-to-business markets and a minority (23%) towards business-to-consumer markets. The responses concerning the respondent’s position held within the firm were product development (68%), management (16%), IT (4%), sales (2%), marketing (4%), and 6% were in positions classified as “other.”

To ensure the representativeness of the sample, the authors acquired general statistics on Finnish companies employing more than 50 persons. These statistics were obtained through Statistics Finland (http://www.stat.fi), the only official authority for producing statistics in Finland. The authors compared the number of personnel and annual revenue between the sample and the Figures provided by Statistics Finland (Figure 2 and Figure 3). As can be seen in Figure 2 and Figure 3, the annual revenue and number of personnel from the sample seem to represent the general figures from the Finnish companies fairly well. Pearson’s Chi-Square testing was performed on the data, which rejected the null hypothesis of independence on both occasions at α<0.001, giving further evidence that the results from the sample could be generalized to Finnish companies.

4. RESULTS

4.1. Literature Review Results

The empirical studies found included an online survey of consumer empowerment through internet-based co-creation (Füller, Mühlbacher, Matzler, & Jawecki, 2009), survey of technology start-ups and early adopters to identify rules for creating and capturing value from innovative technologies (Porta, House, Buckley, & Blitz, 2008), interview of marketing personnel and Web 2.0 experts to compare their views regarding Web 2.0 and industrial marketing in the Finnish context (Lehtimäki et al., 2009), a survey of enterprise social collaboration (Coleman, 2009), social media business use survey (Gordon, 2009), B2B social media benchmarking study (Hanna, 2009), a web questionnaire...
about Finnish industrial leaders’ appraisal and strategy concerning Enterprise Web 2.0-related topics (Helfenstein & Penttilä, 2008), and survey on business use of Web 2.0 technologies – including wikis, blogs, social networks, and mash-ups (Bughin, Chui, & Miller, 2008).

The multiple-case based studies found were about motivating and supporting collaboration in open innovation (Antikainen, Mäkipää, & Ahonen, 2010), a case study of two companies on experience management aimed at enhancing customer involvement (Lamberti & Noci, 2009), a case study on how two innovative firms had gained competitive advantage by using the co-creative business concept to generate sustainable growth (Ramaswamy, 2010), six case studies on collaborative customer co-design in online communities (Piller, Schubert, Koch, & Möslein, 2005), and two exploratory case studies that illustrate the integrated and systemic usage of internet-based collaborative innovation mechanisms (Sawhney, Verona, & Prandelli, 2005).

In brief, the literature survey revealed that the knowledge about social media use in innovation activity is currently fragmented.
into studies of individual tools and technologies with little focus on the big picture, and it is mainly based on individual cases. The very few studies combining social media and B2B standpoint have been approached primarily from a marketing perspective, and little attention is paid to innovation. Moreover, research is virtually nonexistent in the area where social media, B2B and innovation intersect. Empirical academic studies at the intersection, especially survey-based ones, are practically non-existent.

4.2. Survey Results

Regarding social media use in the B2B companies studied, 12.3% of B2B companies agreed (either completely agreed or agreed) that social media was used in their companies, while 71.6% disagreed (completely disagreed or disagreed) that it was used. There were descriptive level differences on how social media was used in B2B and B2C companies. The respective percentages of B2C companies agreeing on the use were 20.9% agreeing on the use (4.2% completely agreed, 16.7% agreed) against 41.0% (23.5% completely disagreed and 17.5% disagreed). Therefore on the descriptive level, B2C companies used social media slightly more. These results also have implications for how social media was or was not used in innovation (Figure 4).

Concerning the important prerequisites affecting the adoption of social media in companies, in the order of growing “adoption maturity” and challenge, in the B2B companies studied almost half, 45.7%, reported that the use of social media was allowed in their companies, while around one third (32.1%) stated that the use was not allowed. Only 2.6% of the respondents stated that training was provided for social media use, and 6.8% stated that guidelines for the use were provided. 15.0% stated that the company had skilled staff to support social media use. 3.8% claimed that the use of social media was encouraged in the company. Compared to B2C companies, all the aspects of social media prerequisites were rated descriptively lower (there were no statistically significant differences), except that

Figure 4. Social media use in B2B companies
social media use was allowed more often in B2B companies than B2C companies, where 41.7% of the studied companies allowed the use of social media (Figure 5).

The most used (rather much or very much used) social media-related application categories in B2Bs were wikis (8.8%), instant messaging (8.1%), social office tools (7.6%) and social workspaces (6.4%). None of the B2B companies reported using microblogs or social bookmarking rather much or very much. Concerning the application categories most often associated with social media, rather surprisingly, on the descriptive level, social media tools were used more actively in B2B companies than in B2C companies in almost all the application categories studied. Only blogs, microblogs, social office tools and virtual worlds were used more actively in studied B2C companies. Social workspaces were used statistically significantly (sig. 0.041) more in B2B companies (6.4% rather much or very much) than in B2C companies, where 0% used social workspaces rather much or very much and only 4.2% used somewhat.

In the B2B companies studied, social media use in innovation was most active in collaboration with innovation partners (6.4%) and customers (5.1%). In internal innovation the use was least active with (2.5%). We found no statistically significant differences in the use between the B2Bs and B2Cs studied, but at the descriptive level, there were slight non-statistical differences: 5.6% used social media much or very much in B2B companies compared to 8.0% in B2C companies. Social media was used actively in collaboration with product development or innovation partners in 6.4% of B2B companies compared to 4.2% of B2C companies. It is peculiar, however, that social media was less actively used in B2B companies’ internal innovation (2.5%) than in collaboration with other outside organizations (5.1%), as well as customers and partners, when literature mainly suggests that organizations should first adopt social media in the internal use, e.g., due to risks in opening up innovation processes and not being able to control the innovation activities and knowledge sharing in the open innovation environments.

The greatest potential (the respondents selecting rather much or very much) for social media use in B2B companies’ innovation process was seen in the launch/commercialization phase (18.5%) and closely following this in importance the front-end phase (17.3%).

Figure 5. Prerequisites of social media use in B2B companies
smaller part of B2B companies recognized the potential of social media in the actual product development phase (11.0%). There were statistically significant differences in how well B2B and B2C companies perceived the potential of social media in the innovation process, in the front-end of the innovation process (sig. 0.020) 34.7% of B2C companies recognized rather much or very much potential, and in product development (sig. 0.036) 34.7% of B2Cs also recognized rather much or very much potential, whereas in the launch/commercialization phase there was no statistically significant difference (sig. 0.138, below sig. 0.05 being statistically different). However, at descriptive level clear differences were found, as 30.4% of B2C companies perceived a clear potential (rather much or very much) in the use of social media in the launch/commercialization phase (Figure 6).

Social media potential in customer interaction in B2B companies followed a marketing oriented pattern: most frequently the companies studied perceived potential (rather much or very much) in merely passing product or service marketing-related information to customers (one-way interaction). Concerning the other modes of customer interaction studied, the frequency of the companies studied perceiving (rather much or very much) potential from social media decreased somewhat in every further interaction mode that required more intense customer involvement in product or service development. The pattern was similar in this respect for B2C companies, although B2C companies recognized more potential in every mode of customer interaction. Social media was considered to offer rather much or very much potential in passing product or service marketing related information to customers in 32.1% of the B2B companies studied and 52.1% in B2C companies, while about 25.6% of B2B companies and 34.7% of B2C companies perceived that social media provided rather much or very much potential in offering products and services (e.g., toolkits) for customers to develop products.

Concerning the perceived generic opportunities of social media, the majority of B2B

![Figure 6. Potential of social media in innovation process phases in B2B companies](image-url)
companies reported that social media provided important opportunities (rather much or very much) in discovering customer demands (48.1%), which was descriptively slightly less than considered in B2C companies (56.5%). Opportunities in the development of innovation activity were found to be much or very much by 29.7% of B2B companies and 30.4% of B2C companies. Furthermore, opportunities to develop organizations in general were recognized much or very much by 18.8% of the B2B companies studied and 21.7% of B2C companies.

Regarding the perceived impact of social media on innovation activity, half (50.0%) of B2B companies claimed that social media could increase customer orientation rather much or very much. 24.7% of B2B companies reported that social media provided important opportunities (rather much or very much) in shortening product development time and 21.5% in saving costs. Social media opportunities in improving quality were rated rather much or very much by 20.5% of B2B companies. In B2C companies significantly (sig. 0.026) more opportunities were perceived in increasing customer orientation (clear majority, 66.6% of B2C companies perceived rather much or very much opportunities). While not statistically significant, B2C companies perceived more opportunities in other categories as well (33.4% reported that social media can achieve quite large or very large cost savings, and 29.2% considered that social media can shorten product development time and improve quality rather much or very much).

The top five major challenges in adopting social media in innovation, which were rated important or very important by more than 40% of the B2B companies studied (Figure 7), were lack of understanding the possibilities of social media in innovation (73.3%), difficulties in assessing the financial gains from social media (58.0%), difficulties in adopting new mental models and practices needed for the adoption (48.1%), lack of evidence of similar cases using social media in innovation (46.9%), and security issues in social media use (44.4%). Inadequate personnel resources were also considered tough challenges by a little over 40% of B2B companies.

5. DISCUSSION AND CONCLUSION

In general, on the basis of the results, the B2Bs studied seemed to see a perhaps even surprisingly large potential in the use of social media in innovation and in clarifying the customer needs in particular: about half of the B2B companies studied perceived important new possibilities for customer needs. This was surprising, especially with regard to the doubts often expressed by managers of B2Bs as well as in the literature, about utilizing social media in B2B’s, as well as with regard to B2B’s general characteristics, e.g., the relatively small number of customers compared to B2C markets, which affect the uses and usefulness of social media. Concerning the various types of results for improving the innovation, increasing customer orientation was by far the most common (according to 50% of companies) important innovation-related benefit, shortening the product development time being the next. However, when comparing the potential to actual use, there seems to be a significant gap, because only 12.3% of B2Bs reported that social media was used in general in their companies, and in the context of innovation, as few as 5.6% of B2Bs, according to the respondents, used social media significantly with their customers or innovation partners, and even less in other innovation collaboration types.

Our study discovered several potential factors at least partly explaining the limited use, which were deemed very often, by about half or more of the respondents, important reasons for not utilizing social media in innovation: the lack of understanding the possibilities of social media in innovation, difficulties in assessing the financial gains from social media, difficulties in adopting new mental models and practices needed for adoption, as well as the lack of evidence of similar cases using social media in innovation. No innovation or B2B-related barriers for social media adoption were reported in earlier studies covered in our social media-related literature review. The results concerning the most common important barriers are somewhat in line with an earlier
generic higher management-oriented social media survey by Helfenstein (Helfenstein & Penttilä, 2008), which found lack of know-how to be clearly the most important barrier (48.8% of respondents) to the adoption of Enterprise 2.0. For comparison, the four most common barriers in the found generic management or marketing–oriented survey–based studies (BtoB Magazine, 2011; Growth Lab Consulting, 2010; Helfenstein & Penttilä, 2008; Ramsey, 2010) were lack of knowledge or understanding, measurement of ROI or performance, and lack of generic resources or time. In our own study in general, it seemed that the lack of knowledge was the most important factor impeding the adoption of social media in innovation, whereas inadequate resources (personnel, time, or financial) were not so important, and neither was the integration of social media in the current innovation process and information systems. Failed experiments or bad experiences were not deemed very important challenges impeding the adoption of social media, which can be explained, of course, at least partly by the generally rare use and related experiments.

To increase social media use in B2B innovation, at least the mentioned most important social media adoption barriers should be addressed in companies, and academic research should be carried out to produce a more systematically organized, more holistic and less fragmented picture of the issues.

Concerning the use of social media in B2Bs, it was surprising, for instance, that social media was less actively used in B2B companies’ internal innovation (2.5%) than in collaboration with other outside organizations (5.1%), as well as customers and partners, when the literature mainly suggests that organizations should first adopt social media in internal use, e.g., due to risks with opening up innovation processes and not being able to control the innovation activities and knowledge sharing in the open innovation environments.

As anticipated, we found clear differences between the B2Bs and B2Cs studied on the basis of our results. Some of the differences were not statistically significant, and should
be studied for further confirmation, but there were also differences that were statistically significant. In general, B2C companies used social media slightly more. This is in line with the few studies that compare the use, such as the marketing oriented study of CMO (Moor-man, 2011). However, social media use was, according to our study, allowed more often in B2B companies than in B2C companies, which contrasts interestingly with the above, as well as the general expectations about social media use.

We found no statistically significant differences in the actual usage patterns of social media between studied B2Bs and B2Cs, except that concerning social media-related tools, social workspaces were used statistically significantly more in B2B companies than in B2C companies. This does not, however, mean that no differences exist, but with the study sample, questions and measures, no statistically significant differences were found. However, while not statistically significant, many differences did indeed emerge, e.g., that B2Bs used social media more often with innovation partners than did B2Cs. Also, rather surprisingly, even if not statistically confirmed, social media tools were used more actively in B2B companies than in B2C companies in almost all the application categories studied, except for blogs, microblogs, social office tools and virtual worlds. However, the usage was generally so low that the results do not provide very conclusive evidence about the differences, and this area should be further investigated.

There were statistically significant differences in how well B2B and B2C companies perceived the potential of social media in the innovation process, in the front-end of the innovation process and in product development phases B2C’s recognized significant potential significantly more often, whereas in the launch/commercialization phase there was no significant difference. Concerning the challenges of social media adoption, no clear differences were discovered.

Academically, we have achieved new understanding about the usage, perceived potential and challenges of social media in innovation especially in B2Bs, which to the best of our knowledge has not so far been studied academically with survey approaches. We have discovered that there is a significant gap between the perceived social media potential and actual use in B2B’s. We have also created new understanding of the differences between B2Bs and B2Cs.

Managerially, the results can be used, for instance, to better understand the special challenges and features of B2B-related social media, and especially the various types of possibilities of social media to support and facilitate innovation in B2Bs. However, the main focus of this study was not on the managerial implications, but on the facilitation of social media research. Also, due to the low current usage of social media implied by the results, the companies that first experiment with and develop social media-based ways to support B2B innovation might benefit greatly from these investments. In addition, consultants might benefit from these results by developing ways to avoid the important social media adoption challenges and facilitate the adoption.

This study opens up several areas for further research. First of all, in order to facilitate the adoption of social media and to fill the gap between perceived social media potential and actual use in B2Bs discovered in this study, it seems apparent that academic as well as pragmatic research should be carried out. Having discovered B2B companies’ emphases, special characteristics and patterns of social media use, this research provides important starting points for such further research. Most importantly, the academic research should focus on gathering and organizing the fragmented empirical research to provide a systematic and holistic picture of the possibilities of social media in B2B innovation, developing ways to present a better analyzed picture of the financial benefits of social media, as well as to gather more organized and varied types of case studies, examples and case evidence into a good overall picture of how social media may facilitate B2B innovation.
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