

# Yet Another Platform? Motivational Factors for Using Online Communities in Business Contexts

*Ann-Kathrin Löcker, Denise Eraßme, Eva-Maria Jakobs, Anne Kathrin Schaar, André Calero Valdez, Martina Ziefle*

*Human-Computer Interaction Center  
RWTH Aachen University  
Campus-Boulevard 57, Aachen, Germany*

## ABSTRACT

As a consequence of ongoing globalization processes and demographic change, many small and medium-sized companies face the problem of knowledge loss. To counteract this, companies are adopting Web 2.0 applications to accumulate and store the knowledge of their employees. However, little is known about the circumstances under which employees are willing to invest time in social media as a part of their work routine. Thus, this paper introduces an exploratory case study focusing the motivational factors that influence the use of an online expert community in business context. The results of the performed focus groups and interviews show that particularly intrinsic motivational factors are considered to be relevant. The attitude towards extrinsic motivational factors and related tangible motivational factors is highly controversial, whereas intangible motivational factors such as social and organizational motivational factors seem to have a positive impact on the motivation to use an intra-organizational online communities (OC). Supplementary motivational factors mentioned by the interviewees refer to the platform itself. Overall, the results indicate that the implementation of Web 2.0 applications in business contexts requires a tailored incentive system that suits to the company-specific requirements and takes into account the employees' needs.

**Keywords:** Demographic Change, Knowledge Management, Knowledge Sharing, Web 2.0, Online Communities, Motivation, Incentives, Expert Communities

## 1 INTRODUCTION

Ongoing globalization processes, ever-expanding international competition, market liberalization and volatility as well as the ephemerality of information and technology lead to the fact that knowledge has become a decisive competitive factor for enterprises (Gourova & Toteva, 2012). Coincidentally, many small and medium-sized enterprises (SMEs) are confronted with the side effects of demographic change. Due to Germany's constantly aging population (Buck, Kistler & Mendius, 2002) and the prevalence of nonstandard working life models (Kalleberg, 2000), a growing number of highly skilled employees is leaving because of retirement or parental leave (DeLong, 2004). As a consequence, the younger part of the population faces the increasing burden to acquire all business critical knowledge from the baby boomers before the cohort retires. To counteract the threat of knowledge loss and

Ergonomics in Manufacturing (2020)

<https://openaccess.cms-conferences.org/#!/publications/book/978-1-4951-2103-6>

to attain sustainable expert knowledge, companies are adopting Web 2.0 applications (e.g., wiki-based documentation systems or OCs) to accumulate and store knowledge and to support the networking among employees (Calero-Valdez, Schaar & Ziefle, 2012; Hu, Wan & Zeng, 2010; McAfee 2006). Whereas numerous studies are dealing with factors for the successful implementation of social media within companies and the importance of involving employees into this process (Spath & Günther, 2010), little is known about the circumstances under which employees are willing to invest time in social media as well as the motives of using social media in everyday work.

This paper introduces a case study focusing on the motivational factors that influence the use of an online expert community in business context. The case study is part of the research project iNec: Innovation by Expert Communities in Times of Demographic Change (funded by the BMBF and the ESF, 2012-2015). The project follows an interdisciplinary approach to develop intra-organizational OC that systematically promotes innovative ideas by interlinking employees and supports the social bonds of experts to a company on a long-term basis. Accordingly, this paper discusses the motivational factors and incentives affecting the use of an intra-organizational OC to support the knowledge sharing process of experts. The study is guided by the following research questions: What motivates employees to use an intra-organizational OC (RQ1)? Do motivational factors vary depending on context factors (department) (RQ2)? The paper approaches the issue from both theoretical and empirical viewpoints. Chapter two gives a short overview on approaches concerning knowledge sharing, OCs and motivational factors for using an intra-organizational OC. Chapter 3 introduces the empirical design of the studies conducted at the industrial partner of the research project. In chapter 4 and 5, the results are presented and discussed.

## 2 RELATED WORK

### Knowledge Sharing and Knowledge Management

As knowledge has become one of the most important factors for competitiveness and growth worldwide, enterprises have to find ways for adequately managing their knowledge stock to achieve a competitive advantage (Durst & Wilhelm, 2012; Gourova & Toteva, 2012; Ipe, 2003). The successful management of knowledge is based on an organization's capability to create, share and leverage individual and collective knowledge (Harden, 2012; Ipe, 2003). While large organizations have sufficient capacities for a systematic knowledge management, small and medium-sized enterprises often lack the resources required to fully benefit from their knowledge stock (Durst & Wilhelm, 2012; Evangelista, Esposito, Lauro & Raffa, 2010). Especially in situations of staff turnover, long-term absence or the exit of long-term employees, this knowledge stock is compromised (Durst & Wilhelm, 2012; Calo, 2008).

As the proportion of older employees retiring within the next ten to fifteen years is greater than the proportion of younger employees filling the vacant positions, organizations need to identify what specific knowledge and expertise is in danger of being lost. Without implementing an adequate process to capture that knowledge and expertise, many knowledge-intensive organizations will be confronted with a continuous loss of irrecoverable knowledge (Joe, Yoong & Patel, 2013; Calo, 2008). But even if individuals stay in the organization, the full extent of their knowledge may not be gathered and utilized without the appropriate opportunities for the individual to share that knowledge with others in the organization (Ipe, 2003; Weiss, 1999).

According to Ipe (2003), knowledge sharing is "the act of making knowledge available to others within the organization" (p. 341). This "process by which knowledge held by an individual is converted into a form that can be understood, absorbed, and used by other individuals" can be seen as a voluntary and conscious action resulting in joint ownership of the knowledge (Ipe, 2003, p. 341). By moving knowledge from the individual to the organization level, knowledge can be converted into a tangible economic and competitive value and lead to the dissemination of innovative ideas (Ipe, 2003). Ipe (2003) identifies five major factors influencing knowledge sharing between individuals in an organization:

- the nature of knowledge,
- the motivation to share,

Ergonomics in Manufacturing (2020)

- the opportunities to share, and
- the culture of the work environment.

He assumes that knowledge can be either tacit or explicit and that these two characteristics of the nature of knowledge as well as the attributed value influence the way of knowledge sharing within organizations (Ipe, 2003, p. 343). The motivation to share knowledge bears on the distinction between internal motivational factors (including the perceived power attached to knowledge as well as the reciprocity resulting from sharing) and external motivational factors (including the relationship with the recipient as well as rewards for sharing) (Ipe, 2003, p. 345f.). The opportunities to share knowledge within organizations can be both formal (including training programs, structured work teams, and technology-based systems facilitating knowledge sharing) and informal (including personal relationships and social networks facilitating learning and knowledge sharing) (Ipe, 2003, p. 349). All of the aforementioned factors are influenced by the culture of the work environment, i.e. the culture of the subunit and/or organization culture, which is considered to be a major barrier to effective knowledge creation, sharing, and use (Ipe, 2003, p. 350). Further, Ipe assumes that the particular factors do not exert their influence on knowledge sharing in isolation. Instead, all factors are interconnected and each factor is influencing the other in a nonlinear way (see figure 1).

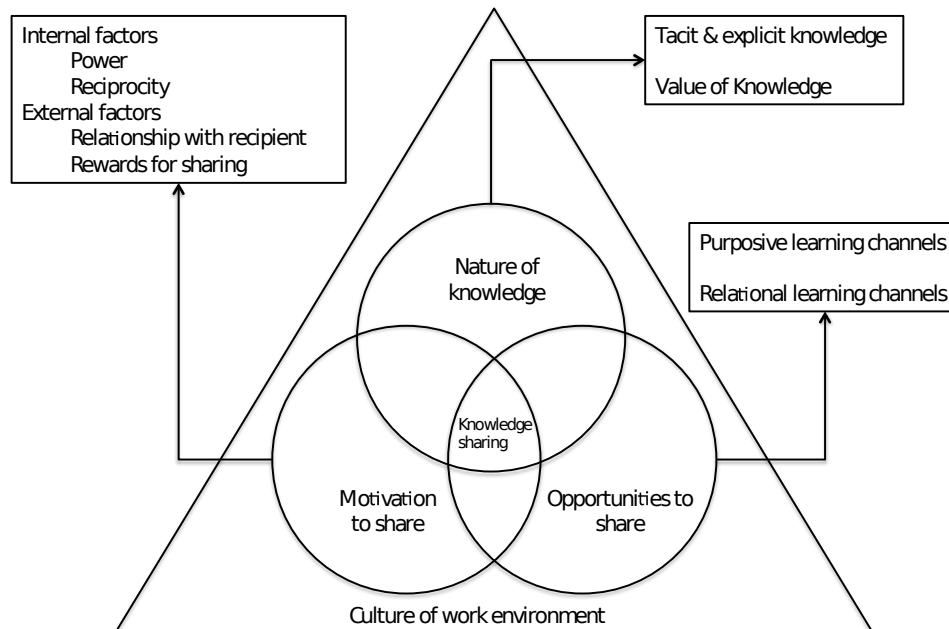


Figure 1. Factors influencing the knowledge sharing between individuals in organizations (Ipe, 2003, p. 352)

### Supporting Knowledge Sharing by Online Communities of Practice

Although knowledge is seen as an organizations most valuable resource for organizational growth and sustained competitive advantage, most organizations do not possess all required knowledge within their formal boundaries (Wasko & Faraj, 2005; Wasko & Faraj, 2000). As a result, companies are searching for new ways to accumulate and store the knowledge and to support networking of their employees. In this context, cultivating communities of practice is seen as a practical way (Wenger, McDermott & Snyder, 2002) to manage knowledge as an asset. According to Wenger et al. (2002), the term community of practice refers to “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (p. 4). Communities of practice can be characterized as informal entities that exist in the minds of their members and which are held together by their connections and their specific shared problems or area of interest (Ardichvili, Page & Wentling, 2003).

One major reason why communities of practice are efficient tools for generating and sharing knowledge is the fact that a substantial part of an organization’s competitive advantage is embedded in the intangible, tacit knowledge and

competencies of its' individuals (Ardichvili et al., 2003). Allowing people to talk about their experiences and to exchange their knowledge while working on specific problems is therefore one of the most convenient possibilities to support the sharing and internalization of tacit knowledge (Ardichvili et al., 2003). As opportunities for face-to-face interactions are rather limited due to the constantly growing number of dispersed multinational companies, organizations have realized that Web 2.0 technologies could be leveraged for business advantage (Ardichvili et al., 2003; Paroutis & Saleh, 2009). Contemporary literature on knowledge management emphasizes the importance of interactive knowledge management technologies (which are widely manifested in virtual communities) and argues that such Web 2.0 technologies (e.g., blogs, wikis, and other social media applications) can promote the passion for engaging in the knowledge sharing process (Paroutis & Saleh, 2009). In this context, McAfee (2006) promotes the term “Enterprise 2.0” for digital platforms “that companies can buy or build in to make visible the practices and outputs of their knowledge workers” (p. 23).

### Motivations for Knowledge Sharing

As the willingness and the motivation of individuals to participate in an OC determines the quality and quantity of contributions, it can be seen as one of the most critical success factors (Janzik, 2010; Janzik & Herstatt, 2008; Lam & Lambermont-Ford, 2010). The reasons for individuals to share their knowledge with other members of a virtual online community of practice are divers and range from self-esteem boosting to altruistic and conformist considerations (Ardichvili, Page & Wentling, 2003).

A basic distinction in the literature on motivational factors is drawn between *intrinsic* and *extrinsic* motivation respectively those internal or those external to an individual (see e.g. Ryan & Deci, 2000; Deci & Ryan 1993; Gagné & Deci 2005; Vuori & Okkonen, 2012). In the context of the self-determination theory (SDT), Ryan & Deci (2000) argue that intrinsic motivation “refers to doing something because it is inherently interesting or enjoyable” whereas extrinsic motivation “refers to doing something because it leads to a separable outcome” (p. 55). According to Ryan & Deci (2000), intrinsic motivation derives from the inherent satisfaction of the work itself and therefore gives immediate need satisfaction (Lam & Lambermont-Ford, 2010). If an individual is motivated intrinsically, it acts for fun and enjoyment or the challenge regardless of external prods, pressures or rewards. Due to the nexus between individuals and activities, people are intrinsically motivated for some activities and not others, as well as not every individual is intrinsically motivated for any particular task (Ryan & Deci, 2000). In contrast, extrinsic motivation refers to activities that are stimulated by external factors such as money, promotion or other non-financial resources (Ryan & Deci, 2000; Janzik & Herstatt, 2008; Lam & Lambermont-Ford, 2010). Thus, extrinsic motivation is based on external incentives, which can be segmented in tangible and intangible incentives (Janzik & Herstatt, 2008). The transfer of explicit knowledge can be supported by extrinsic motivation but it often fails in the case of tacit knowledge due to its intangible and emergent nature (Lam & Lambermont-Ford, 2010). Due to the phenomenon that some factors are overlapping and that it depends on the interpreter whether a factor is seen as internal or external, the classification of a motivational factor as intrinsic or extrinsic is often debatable (Vuori & Okkonen, 2012). However, motives and incentives can be outlined by substantial commonalities (Janzik 2012).

Based on a literature review on the motivation of online community members to contribute, as well as on findings from motivation theories and community research in general, Janzik (2010) presents a detailed classification of motives and incentives for the contribution to innovation projects in OCs. Within the classification a basic distinction is made between intrinsic and extrinsic motivation and the corresponding incentives (see table 1). Concerning the **intrinsic motivation**, Janzik (2010) mentions motives such as enjoyment, pleasure and internal satisfaction, the internal impulse to solve a problem, the feeling of competence and autonomy, self-reward, self-determination, the sense of belonging to the community, identification, and altruism. Because individuals are motivated intrinsically if they expect no further reward except from the activity itself and (uncontrolled) feedback, no specific incentives can be identified (Janzik, 2010). Nevertheless, some extrinsic motives are able to foster intrinsic motivation (Janzik, 2010). With regard to **extrinsic motivation**, Janzik (2010) names two types of extrinsic motives – material and immaterial motives (see table 1). *Material motives* comprise direct material motives (revenue and financial benefit) and indirect material motives (personal needs, problem pressure, dissatisfaction). *Immaterial motives* include social motives (peer recognition; status, reputation; power; skill enhancement, collecting knowledge and experience; recognition by the community carrier; strengthening social ties; social exchange/reciprocity) as well as organizational motives (enhancement of duties and responsibilities; professional status enhancement, career progression, recruitment by companies). According to Janzik (2010), the aforementioned motives can be fostered by

the corresponding direct financial (monetary compensation such as payment, premiums, financial rewards, licenses, etc.) and indirect financial incentives (free products and free services; bonus points with financial value; coupons, sweepstakes, free usage of the developed product/solution; low transaction costs for participation) as well as social incentives (awards, visible member level; getting credits as a co-developer; building trust) and organizational incentives (additional rights and functions inside the community, access to extra information; career opportunities).

Extrinsic motivation				Intrinsic motivation
Material motives		Immaterial Motives		Intrinsic motives
Direct	Indirect	Social	Organizational	
<ul style="list-style-type: none"> <li>• Revenue, financial benefit</li> </ul>	<ul style="list-style-type: none"> <li>• Personal need, problem, pressure, dissatisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Peer recognition</li> <li>• Status, reputation</li> <li>• Power (e.g., to influence others)</li> <li>• Skill enhancement, collecting knowledge &amp; experience</li> <li>• Recognition by the community carrier</li> <li>• Strengthening social ties</li> <li>• Social exchange (reciprocity)</li> </ul>	<ul style="list-style-type: none"> <li>• Enhancement of duties and responsibilities</li> <li>• Professional status enhancement, career progression, recruitment by companies (self-marketing)</li> </ul>	<ul style="list-style-type: none"> <li>• Enjoyment, pleasure, internal satisfaction (flow)</li> <li>• Internal impulse to solve a problem</li> <li>• Feeling of competence &amp; autonomy (creativity)</li> <li>• Self-reward</li> <li>• Self-determination</li> <li>• Sense of belonging to the community, identification</li> <li>• Altruism</li> </ul>
Direct financial incentives	Indirect financial incentives	Social incentives	Organizational incentives	Intrinsic incentives
<ul style="list-style-type: none"> <li>• Monetary compensation (payment, premiums, financial rewards, licenses, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Free products &amp; free services (as giveaways)</li> <li>• Bonus points with financial value</li> <li>• Coupons</li> <li>• Sweepstakes</li> <li>• Free usage of the developed product/solution</li> <li>• Low transaction costs for participation</li> </ul>	<ul style="list-style-type: none"> <li>• Awards, visible member level (status symbols)</li> <li>• Getting credits as a co-developer (pride)</li> <li>• Building trust</li> </ul>	<ul style="list-style-type: none"> <li>• Additional rights &amp; functions inside the community, access to extra information</li> <li>• Career opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• From the activity itself</li> <li>• (Uncontrolled) feedback</li> </ul>

Table 1. Classification of incentives and motives for contribution to innovation projects in Online Communities (Janzik, 2010, 257)

Considering the factors that positively influence the knowledge sharing through an intra-organizational social media platform, Vuori and Okkonen (2012) found that the top two motivational factors were intrinsic (helping the organization to reach its goals, enjoy helping colleagues by sharing knowledge) whereas the bottom two motivational factors were extrinsic (financial rewards, showing off to others). But although financial rewards were rated as one of the least motivating factors, supplementary comments expose that nonetheless some kind of rewarding is seen to be a good possibility for motivating employees to change their current work routine towards using a social media platform (Vuori & Okkonen, 2012). However, Vuori and Okkonen (2012) argue that the most effective way to motivate employees is to make clear that the use of a social media platform will facilitate the employees and ease the work instead of increasing the workload.

### 3 METHODOLOGICAL DESIGN

In the case study, an exploratory (qualitative) approach was chosen to ascertain incentives and motivational factors influencing the use of an intra-organizational OC. The case study combines two methods: focus groups and interviews (with card sorting). Both methods have been applied under two conditions: they were conducted at the industrial partner of the project, a medium-sized company from the manufacturing sector facing the aforementioned challenges, as well as with control groups outside the company (see figure 2).

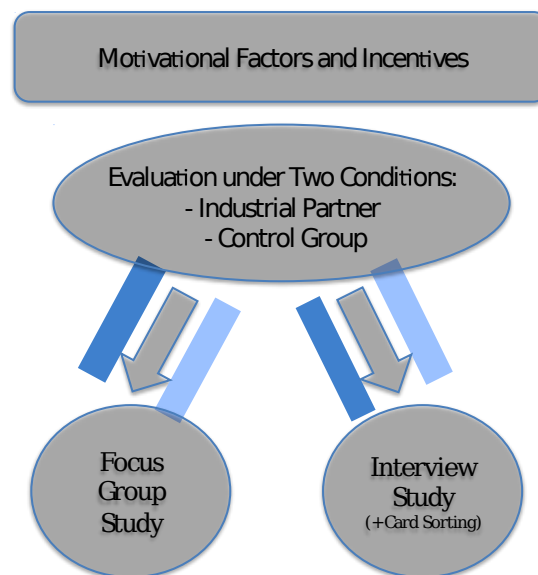


Figure 2. Research design

In a first study, three focus groups with thirteen employees (11 male and 2 female participants, age: 24-59) from three different departments were executed on two consecutive days in December 2012 (focus group 1: product management, n=4; focus group 2: technical service, n=5; focus group 3: sales, n=4). In the focus groups, a persona based on earlier ascertainments served as a stimulus to initiate and encourage the group discussion (Früh, 2000). The discussion was guided by a semi-structured guideline consisting of four parts. The first set of questions referred to the stimulus (how exact does the persona mirror the participants). The second set of questions regarded incentives and motivational factors. The third set of questions related to functions, content, and the structure of a future intra-organizational OC as well as to problems that could occur by implementing an OC in business context. The final set of questions referred to the weighting of the aspects addressed in the discussion.

The results of the focus groups served as an input for the second study. Altogether, four semi-structured face-to-face expert interviews with employees from sales and product management (2 male and 2 female interviewees; age: 28-61) were conducted in May 2013 to reveal relevant motivational factors and incentives in different life phases and how they are weighted. Before the interview, the participants were asked to fill in a questionnaire to draw influences from demographic data, department, and core tasks. The interview was guided by a questionnaire consisting of three parts: The first set of questions addressed issues of social media usage, the second set referred to age-related incentives and motivational factors. In the third part of the interview, the participants were asked to rank given motives and incentives by card sorting (possibility to network, improvement of communication, joy to share

Ergonomics in Manufacturing (2020)

knowledge, capacity of the system, performance of the system, game-based incentives, monetary compensation, premiums and free products, acknowledgement, allegiance) and to comment on their results. The range of given items is based on frequent referrals in the evaluated literature as well as on positive and divergent comments of the participants in the focus group study.

All focus group discussions and interviews were recorded audio-visually with the consent of the participants and transcribed in GAT 2 (Selting et al., 2009). As part of the qualitative content analysis (Mayring, 2010), the data of both studies was classified and evaluated according to an overall system of categories by using the software MAXQDA.

To reinforce and complement the results of the focus group and interview studies, a control group study was conducted. The study comprises three semi-structured interviews (2 male and 1 female interviewee; age: 49-61) as well as one focus group (3 male participants; age: 51-59) with older employees and one contrasting focus group with students (1 male and 2 female participant; age: 22-24). With permission of the participants, all data was also recorded, transcribed and evaluated using qualitative content analysis. The results of the control group study were compared to the results of the target group studies.

## 4 RESULTS

### Motivational factors to use an intra-organizational OC

With regard to RQ1 (What motivates employees to use an intra-organizational OC?), it can be noted that the results of the target group studies widely agree with assumptions and research findings from the literature, but in addition, participants also name motivational factors that are barely mentioned in the given literature.

Concerning the motivation to use an intra-organizational OC, the participants name both extrinsic and intrinsic motivational factors, which is also a common distinction in the literature (see chapter 2). Both categories subsume further categories that will be presented below.

Based on Ryan and Deci's (2000) definition of intrinsic motivation (see chapter 2), the interviewees name six motives that can be attributed to the intrinsic motivational factors: a clearly *discernible benefit* for the daily work routine by using an intra-organizational OC (47%), the *self-determined use* of an OC (i.e. purpose and extend of use) during employment (18%) as well as during retirement (35%), the *quality of content* (41%), the *joy to share knowledge* with colleagues and support them to perform their tasks (29%), the general *willingness to cooperate* with (former) colleagues and the (former) employer (24%) as well as *commitment* and a sense of belonging to the organization (18%).

Following Gangé and Deci (2005, p. 334), extrinsic motivational factors refer to those, which are external to the person. As opposed to the intrinsic motivational factors, they show a higher diversity owing to the amount of identified subcategories. Analogue to Janzik (2010; Janzik & Herstatt, 2008), extrinsic motivational factors addressed by the employees can be further differentiated into tangible (material) and intangible (immaterial) motivational factors (see figure 3).

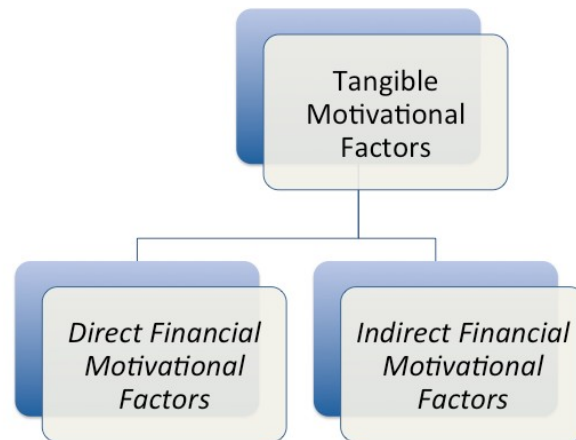


Figure 3. Tangible motivational factors

Concerning the influence of *tangible (material) motivational factors* on the willingness to use an intra-organizational OC, the participants react controversially: *Direct financial motivational factors* (e.g., monetary compensation) and *indirect financial motivational factors* (e.g., premiums in the form of free products and compensatory time off, bonus points with financial value) are both discussed positively and negatively: some participants appreciate material incentives (47%) while others rate them as inappropriate (53%).

The named *intangible (immaterial) motivational factors* can be categorized as followed: social, organizational, knowledge- and skill-related, as well as tool-related motivational factors (see figure 4).

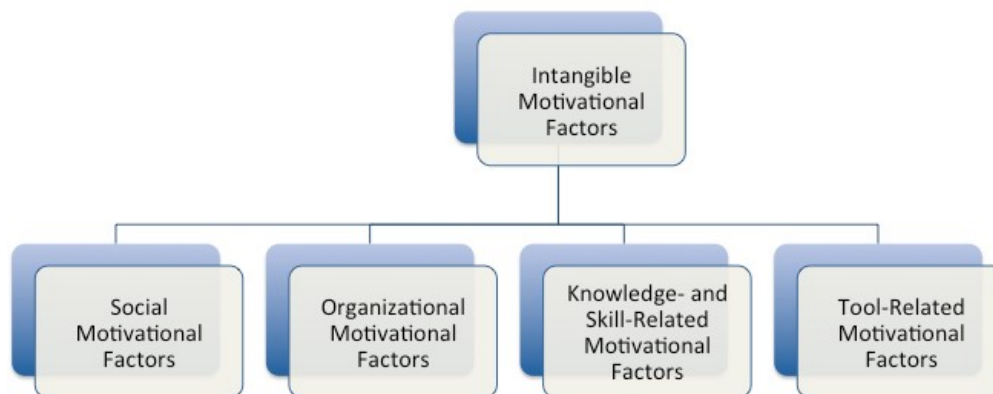


Figure 4. Intangible motivational factors

Referring to Far (2010), *social motivational factors* arise from the need to coordinate the variety of particular activities as well as form the formal and informal contacts within groups and departments. They include the possibility to network and maintain contacts, acknowledgement and appreciation, group dynamics as well as the communication culture and are addressed by 65% of the participants. With regard to this, the *possibility to network and maintain contacts* is assumed to be enhancing for the motivation to use an intra-organizational OC for 47% of the participants. The fact that *acknowledgement and appreciation* by (former) colleagues can positively affect the motivation is expressed by 29% of the participants. Only 6% classify this aspect to be less important as the need for acknowledgement varies individually. As compared to this, *group dynamics* (18%) and the *communication culture* (6%) within an organization are considered to be less motivating.

*Organizational motivational factors* relate both to the characteristics of an organization (e.g., size, the prevailing corporate culture) as well as on personnel characteristics (e.g., working time system, career incentives, human resource development measures) (Far, 2010, p. 130) and comprise the provision of hardware, flexible working times, scheduled periods of use, a systematic introduction, and the integration of competitions for ideas and innovation. Overall, 35% of the participants comment on organizational motivational factors. With respect to this,

Ergonomics in Manufacturing (2020)



the *provision of hardware* (e.g., in the form of a notebook) is considered to be motivating by two former employees from sales force and one employee from the field of product management. Particularly with regard to the use of an intra-organizational OC during parental leave, 18% of the participants would find it motivating if there were *flexible working times*. Following up on the possibility of flexible working times, 12% express that clearly *scheduled periods of use* would have a positive effect on the motivation to use an OC, particularly with regard to the use during parental-leave. Comparatively less important seems to be a *systematic introduction* to usage patterns and functions of the OC (6%). The *integration of competitions for ideas or innovation* to increase the usage motivation is even evaluated negatively because of an already existing employee suggestion system (6%).

While the social and organizational motivation factors largely correspond to the classification of Janzik (2010), the *tool-related motivational factors* are a newly introduced category named by 65% of all participants. They refer to the features of the OC, which also affect the employees' motivation to integrate an intra-organizational OC in their work routine. They can be further assigned to the subcategories capacity, performance and usability of the system. Statements concerning the storage and transmission of large amounts of data and the system's compatibility with various file formats have been condensed to the subcategory *capacity of the system*. The ability to transmit large amounts of data would positively affect the usage motivation (29% of the participants). Related to this, the ability to store large amounts of data is seen as an incentive factor by 6% of the participants (product management). Further, it would motivate 12% of the participants (product management) if a future intra-organizational OC would be compatible with various file formats. For 41% of the participants, the *performance of the system* in processing data increases the usage motivation. Similar to the transmission of large amounts of data to submit, only employees from the fields of product management (five out of seven participants) and sales force (two out of seven participants) comment on this aspect. Thus, the speed of the system seems to be a relevant motivational factor for these particular areas. Finally, just over a third of all participants (35%) consider the *usability of the system* (i.e. the user-friendliness) to be a relevant motivational factor. Using an intra-organizational OC should be simple and self-explanatory. Apple products such as the iPhone are cited here as a positive example for intuitive handling.

In addition to the social, organizational and tool-related motivational factors, the *knowledge- and skill-related motivational factors* are also a newly introduced category addressed by 47% of all participants. They refer to the employee's opportunity to expand their knowledge and skills by the provided content on the one hand; on the other hand they refer to trainings and help features supporting the use of an intra-organizational OC. They embrace the possibility to evaluate the provided content, usage-oriented incentives and the integration of trainings. The *possibility to evaluate the provided content* (e.g., by awarding stars for high-quality content or the implementation of a "helped me"-button) is considered to increase the usage motivation by 12% of the participants. However, another 12% rated this aspect as not to be motivating so that no clear trend can be deduced from this. The *usage-oriented incentives* such as instructions and help features provided by the system is classified as important by 12% of the participants (technical service), especially with regard to older (former) employees who have little experience with Web 2.0 applications. Concerning the *integration of trainings*, the participants' opinions differ: 12% consider integration training (e.g., in the form of game-based learning) to be motivating whereas 6% of the participants represent a contrary view.

The results of the card sorting to weight given motivational factors emphasize that especially the possibility to network and the improvement of communication are seen to be important for the participants with regard to the use of an intra-organizational OC. Further, the *joy to share knowledge*, the *capacity of the system* as well as the *performance of the system* are rated as relevant by the participants. However, game-based incentives and monetary compensation were evaluated as less relevant. With regard to premiums and free products, acknowledgment as well as allegiance, a clear tendency is not identifiable due to the widely differing weighting of these factors by the participants.

### **Context factors influencing motivational factors to use an intra-organizational OC**

As related to RQ2 (Do motivational factors vary depending on context factors (department)?), the analysis of the data only reveals slight tendencies. Participants of almost all investigated departments address and consider factors such as the *usability of the system* (technical service: 50%, product management: 33%, sales force: 17%), the *joy to share knowledge* (product management: 40%, sales: 40%, technical service: 20%) as well as *acknowledgement and appreciation* (product management 60%, sales force: 20%, technical service: 20%) to be motivating. However, factors such as a *discernible benefit* (product management: 63%, sales: 37%), the *possibility to network and*

*maintain contacts* (product management: 75%, sales force: 25%), the *quality of content* (product management: 57%, sales/sales force: 43%), the *performance of the system* (product management: 71%, sales force: 29%) as well as the *ability to transmit large amounts of data* (product management: 60%, sales force: 40%) are only broached by participants from the fields of product management and sales/sales force.

## 5 DISCUSSION AND CONCLUSIONS

Concerning the motivation to use an intra-organizational OC, the results show that particularly intrinsic motivational factors (e.g., discernable benefit, joy to share) are considered to be relevant: only if the quality of the provided content is high, employees perceive a benefit for their daily work routine. The joy to share knowledge with colleagues is also central to ensure that a future intra-organizational OC is used actively. Therefore, it is important to involve those employees who are willing to support others by sharing their knowledge in the initial phase of building up the community. From the employees' perspective, it is further important that they can determine the purpose and extend of using the OC. This applies both for the use of an OC during employment as well as retirement. The general willingness to cooperate with (former) colleagues and the (former) employer to provide knowledge as well as the commitment and a sense of belonging to the employer positively affects the usage motivation. Although the participants mention these aspects less frequently, they should still be taken into account when introducing an intra-organizational OC. Only if employees can identify with their employer, they are also willing to share their knowledge with others with the help of an OC. Similar findings were obtained in Vuori and Okkonen's (2012) study on motivational factors and barriers regarding knowledge sharing through an intra-organizational social media platform (the top two motivational factors were intrinsic) and in Paroutis and Saleh's (2009) study on determinants of knowledge sharing using Web 2.0 technologies (e.g. effective communication and satisfaction in helping others as motivational factors).

Regarding the extrinsic motives and related incentives, statements of the interviewees considering material incentives are highly controversial. Both direct and indirect financial incentives are greeted as an incentive by some of the participants but strictly rejected by others. These results also confirm findings from Vuori and Okkonen (2012) who also found that participants were less motivated by extrinsic motivational factors such as promotion opportunities or financial rewards. Associated with the use of an intra-organizational OC during retirement, participants commented positively on monetary compensation. In this context, it could be worth considering a tailored incentive system that particularly motivates former employees who have already retired to be available for enquiries of the organization via OC to a limited extent. With respect to the allocation of premiums to increase the usage motivation, it has to be distinguished between premiums in the form of free products or bonus points with financial value and the opportunity to receive a compensatory time off for actively participating in the OC. While merchandise awards are mostly rejected, no trends can be identified in terms of compensatory time off. Therefore, it could be considered to limit the opportunity to take compensatory time off to those employees who answer the requests from colleagues via OC during parental leave.

In addition to the intrinsic motives, amongst the intangible incentives especially the social incentives are reported to be important for the usage motivation. As the possibility to network and maintain contacts is addressed by almost 50% of the participants, this factor seems to particularly influence the usage motivation (similar results are achieved by Paroutis and Saleh, 2009). It is striking that 75% of the respondents are product managers, indicating that this aspect has a particularly high priority for employees from the field of product management. This may result from the fact that product managers mostly have to interact inter-divisional in their daily working routine. Further, receiving acknowledgement and appreciation for sharing knowledge via an intra-organizational OC is regarded to be particularly motivating whereas group dynamics and the communication culture play a minor role.

Compared to the social motivational factors, significantly fewer statements can be identified for organizational motivational factors, which suggests that they have a lower impact on the usage motivation from the perspective of the participants. In this context, the provision of hardware and flexible working time models are emphasized. Participants coming from the fields of product management and sales force particularly mention them as motivational factors. It is likely that the provision of hardware is relevant only for those employees who do not predominantly work at the company's headquarter (e.g. employees from sales or sales force). A systematic introduction as well as the integration of competitions for ideas or innovation seems to be less important for the

usage motivation.

The tool-related motivational factors are an aspect that only finds little attention in the literature, but was addressed several times by the participants. Especially participants from the field of product management emphasize the capacity and the performance of the system to have a positive influence on the motivation to integrate an OC in the daily work routine. The fact that only (former) employees from product management and sales force commented on the capacity of the system suggests that the transmission of large amounts of data plays a larger role in the departments mentioned than in sales and technical service. So far, the analyses performed within the project allow no assumption about possible reasons for this phenomenon. The usability of the OC also affects the usage motivation of the participants. A user-friendly and target group-oriented design of the user interface should therefore be ensured to positively influence the usage motivation of employees.

With respect to the knowledge- and skills-related motivational factors it can be noted that the participants also have different opinions. Whereas instructions and help features are considered to positively influence the usage motivation, the possibility to evaluate the provided content as well as is the integration of trainings is discussed controversially. According to the small number of utterances, the knowledge- and skills-related motivational factors seem to be less important for the motivation of participants to use an intra-organizational OC. Further investigations are required to elicit for which specific target group and to what extent the rating systems for the provided content and the integration trainings is an appropriate motivational factor to increase the usage motivation.

In conclusion, department-specific differences concerning the motivation to use an intra-organizational OC can only be identified with regard to particular factors and any strong correlations between the presented factors and department affiliation cannot be made. In addition, it must be considered that the collected motivational factors are self-reported and only apply to the case study. Also, from the small number of comments on a particular aspect it cannot be inferred that the other participants basically have no attitude towards on the aspect discussed. Especially in the focus groups, some aspects have been discussed more than others or even not addressed at all. Since the sample size for each survey is rather small, the results remain descriptive and explorative. Therefore, larger-scale studies are needed to raise generic usage motives and develop appropriate incentive systems. However, the results of the data analysis across the conducted focus groups and interviews show that the successful implementation of an intra-organizational OC in business contexts requires a tailored incentive system that suits to the company-specific requirements and takes into account the employees' needs

## REFERENCES

- Ardichvili, A., Page, V., Wentling, T. (2003), "Motivation and barriers to participation in virtual knowledge sharing communities of practice", *Journal of Knowledge Management* Volume 7 No 1, pp. 64-77.
- Buck, H., Kistler, E., Mendius, H.G. (2002), "Demographic change in the world of work. Opportunities for an innovative approach to work – a german point of view". Stuttgart: Fraunhofer Verlag.
- Calero-Valdez, A., Schaar, A., Ziefle, M. (2012), "State of the (Net)work Address. Developing criteria for applying social networking." *WORK: A Journal of Prevention, Assessment and Rehabilitation* Volume 41.
- Calo, T. J. (2008), "Talent Management in the Era of the Aging Workforce: The Critical Role of Knowledge Transfer", *Public Personnel Management* Volume 37 No 4, pp. 403-416.
- Deci, E. L., Ryan, R. M. (1993), "Die Selbstbestimmungstheorie der Motivation und ihre Bedeutung für die Pädagogik", *Zeitschrift für Pädagogik* Volume 39 No 2, pp. 223-238.
- DeLong, David W. (2004), "Lost Knowledge. Confronting the Threat of an aging Workforce". Oxford: Oxford University Press.
- Durst, S., Wilhelm, S. (2012), "Knowledge management and the succession of planning in SMEs", *Journal of Knowledge Management* Volume 16 No 4, pp. 637-649.
- Evangelista, P., Esposito, E., Lauro, V., Raffa, M. (2010), "The Adoption of Knowledge Management Systems in Small Firms", *Electronic Journal of Knowledge Management* Volume 8 No 1, pp. 33-42.
- Far, S. M. (2010), "Social Software in Unternehmen. Nutzenpotenziale und Adoption in der innerbetrieblichen Zusammenarbeit". Lohmar/Köln: Josef Eul Verlag.
- Früh, D. (2000), "Online-Forschung im Zeichen des qualitativen Paradigmas. Methodologische Reflexi-on und empirische Erfahrungen", *Forum Qualitative Sozialforschung* Volume 1 No 3: <http://www.qualitative-research.net/index.php/fqs/article/view/1052/2280> [20.08.2013].
- Gagné, M., Deci, E. L. (2005), "Self-determination theory and work motivation", *Journal of Organizational Behavior* Volume 26 No 4, pp. 331-362.
- Ergonomics in Manufacturing (2020)

- Gourova, E., Toteva, K. (2012), "Enhancing knowledge creation and innovation in SMEs", in: Proceedings of the Mediterranean Conference on Embedded Computing (MECO), IEEE. pp. 292-297.
- Harden, G. (2012), "Knowledge Sharing in the Workplace: A Social Networking Site Assessment", in: Proceedings of the 45th Hawaii International Conference on System Science (HICSS), IEEE. pp. 3888-3897.
- Hu, S., Wan, L., Zeng, R. (2010), "Web2.0-based Enterprise Knowledge Management Model", in: Proceedings of the International Conference on Information Management, Innovation Management and Industrial Engineering (ICIII), IEEE. pp. 476-480.
- Ipe, M. (2003), "Knowledge Sharing in Organizations: A Conceptual Framework", Human Resource Development Review Volume 2 No 4. pp. 337-359.
- Janzik, L., Herstatt, C. (2008), "Innovation Communities: Motivation and Incentives for Community Members to Contribute", in: Proceedings of the 4<sup>th</sup> IEEE International Conference on Management of Innovation and Technology (ICMIT), IEEE. pp. 350-355.
- Janzik, L. (2010), "Contribution and participation in innovation communities: a classification of incentives and motives", International Journal of Innovation and Technology Management, Volume 7 No 3. pp. 247-262.
- Janzik, L. (2012), "Motivanalyse zu Anwenderinnovationen in Online-Communitites". Wiesbaden: Gabler.
- Joe, C., Yoong, P., Patel, K. (2013), "Knowledge loss when older experts leave knowledge-intensive organisations", Journal of Knowledge Management Volume 17 No 6. pp. 913-927.
- Kalleberg, A. L. (2000), "Nonstandard Employment Relations: Part-Time, Temporary and Contract Work", Annual Review of Sociology Volume 26 No 1. pp. 341-365.
- Lam, A., Lambermont-Ford, J.-P. (2010), "Knowledge-sharing in organizational contexts: a motivation-based perspective", Journal of Knowledge Management Volume 14 No 1. pp. 51-66.
- Mayring, P. (2010), "Qualitative Inhaltsanalyse: Grundlagen und Techniken". Weinheim/Basel: Beltz.
- McAfee, A. P. (2006), "Enterprise 2.0: The Dawn of Emergent Collaboration", MIT Sloan Management Review Volume 47 No 3. pp. 21-28.
- Paroutis, S., Saleh, A. A., (2009), "Determinants of knowledge sharing using Web 2.0 technologies", Journal of Knowledge Management Volume 13 No 4. pp. 52-63.
- Ryan, R.M., Deci, E.L. (2000), "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions", Contemporary Educational Psychology Volume 25 No 1. pp. 54-67.
- Selting, M. et al. (2009), "Gesprächsanalytisches Transkriptionssystem 2 (GAT 2)", Gesprächsforschung Volume 10 No 1. pp. 353-402.
- Spath, D., Günther, J. (2010), "Wissensmanagement 2.0. Erfolgsfaktoren für das Wissensmanagement mit Social Software". Stuttgart: Fraunhofer Verlag.
- Vuori, V., Okkonen, J. (2012), "Knowledge sharing motivational factors of using an intra-organizational social media platform", Journal of Knowledge Management Volume 16 No 4. pp. 592-603.
- Wasko, M., Faraj, S. (2000), "'It is what one does': why people participate and help others in electronic communities of practice", Journal of Strategic Information Systems Volume 9 No 2. pp. 155-173.
- Wasko, M., Faraj, S. (2005), "Why Should I Share Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice", MIS Quarterly Volume 20 No 1. pp. 35-57.
- Weiss, L. (1999), "Collection and connection: The anatomy of knowledge sharing in professional service", Organization Development Journal, Volume 17 No 4. pp. 61-72.
- Wenger, E., McDermott, R., Snyder, W. S. (2002), "Cultivating Communities of Practice: A Guide to Managing Knowledge". Boston, MA: Harvard Business School Publishing.