Corporate Social Networking as an Intra-organizational Collaborative Networks Manifestation

Álvaro Albuquerque, António Lucas Soares

Corporate Social Networking as an Intra-organizational Collaborative Networks Manifestation

Álvaro Albuquerque[2], António Lucas Soares[1,2]

[1] INESC Porto, Campus da FEUP, Rua Dr. Roberto Frias, 378, 4200-465 Porto, Portugal
[2] DEI, FEUP, University of Porto, Rua Dr. Roberto Frias, sn 4200-465 Porto, Portugal
{alvaro.jorge.albuquerque@gmail.com; asoares@inescporto.pt}

Abstract. This paper describes and discusses the results of an empirical study about social-networks/microblogging adoption in a financial institution. Social networking at the workplace literature is overviewed and then presented the methodology and hypothesis of the study. Interviews, a survey and a experimental pilot were used as data collection methods. An extract of the results related with the experimental pilot are discussed and some conclusions derived from them.

Keywords: corporate social networks, collaborative networks, value creation

1   Introduction

New manifestations of intra-organization collaborative networks are being fostered by the adoption of social-networking/microblogging enterprise platforms. There are signs that the adoption of the paradigm of social networks in the workplace can create new forms of communication and collaboration [1][2]. Microblogging, a fairly new phenomenon of Social Computing, is promising in corporate environments because it facilitates informal communication, sharing knowledge and finding solutions together [3]. However the benefits of adopting social-networking/microblogging in companies is still unclear. Nor is it clear how companies should adopt it and which factors influence the adoption of microblogging. This paper describes the results of an empirical study in a portuguese financial institution. The research questions were the following: (1) The introduction of social-networking/microblogging can create value for the Bank1 (2) What are the critical success factors in the adoption of social-networking/microblogging by the Bank? As it is an exploratory study of a complex subject about which little or nothing is known, it was deemed appropriate the use of multiple methods of data collection: (a) interviews, (b) a departmental survey and (c) an experimental pilot of a corporate social-networking/microblogging tool. This paper is organized as follows: first we give an overview of past research work about this topic, then we describe the methodology adopted; and an overview of the results, and finally we discuss the results and derive conclusions applicable in the more general field of collaborative networks.

---

[1] The term "Bank" will be used as a short name to refer the financial institution.

2   Social Networking in the workplace

Social-networking and microblogging are relatively new phenomena in business therefore there is still little research to find out how its use can improve knowledge sharing and social interaction in the workplace. However there is a body of research on the use of social networks in companies, both the use of public social networks in the workplace as the use of internal social networks.

Skeels and Grudin [4] found a number of benefits arising from use of these technologies. LinkedIn was useful to create and maintain professional networks. Facebook was useful in the workplace to maintain contact with colleagues and build and strengthen working relationships. On the other hand has been found concerns in many employee about the legitimacy of the activity at these sites in the workplace. In particular there were questions about waste of time and security, particularly concerned with the disclosure of confidential information. There were also other problems, of a more practical nature for employees, about the mixing of personal and professional life, related to the management of links, the boundaries of hierarchy, status and power.

DiMicco [5] found that in a closed corporate environment, employees can use a social network platform to meet new people instead of just connecting with those who already know (different attitude from that observed in the use of Facebook). When using such a platform to maintain links with known contacts (either on their workplace or in their network of contacts) people reported: increased ties with their immediate network; a greater sense of corporate citizenship (will to serve the business asset), greater access to specialists within the company. The more intensely you use the social network (which means more frequent visits and stronger associations with the community) the most users report increased their social capital in the company: report closer ties in their network and greater propensity to contribute to the company, they feel more interested in connecting globally and also greater ability to access specialists.

According to Zhao and Rosson [6], informal exchanges in timely conversations (e.g. in "hallway conversations") among employees play an important role in the success of organizations and contain a variety of potential benefits of fostering collaboration in the workplace. The beneficial consequences arising from informal communication, are organized into two classes: Relational Benefits and Personal Benefits. *Relational Benefits* are the effects that informal communication can have in the relationship of two people and their interpersonal activities, such as collaborative work. *Personal Benefits* are related to informal communication with people in the workplace (work related or not) may lead to the acquisition of beneficial information for the purposes of personal work. For example, you can gain different perspectives on the work of both and can generate new opportunities for collaboration.

The literature review showed that current scientific understanding of social networking in the workplace is somehow limited. Empirical studies, and in particular case study research is needed to increase our knowledge of an, apparently, important emergent socio-technical behaviour. The following pages describe an empirical study that contributes to increase our knowledge about the value of informal communication in general in modern organizations.

3   Research hypothesis and methodology

A qualitative singular embedded case study with multiple methods of data collection was designed: an interdepartmental survey, interviews and a pilot using a microblogging enterprise tool. The units of analysis underlying the analysis of results, the analytical framework adopted in the Case Study, contains collaboration as the main concept which, according to the research questions, we want to evaluate and maximize. The first research question asks to what extent the adoption of microblogging enhances collaboration among users in order to generate value to the organization. The second research question is about the factors that influence the maximization of the collaboration. Thus, collaboration is seen in the study as a central concept. The dimensions are the viewpoints within an organization: Employee, Organization, Technology. The indicators in each perspective were the themes identified in interviews and must be considered in the analysis: Privacy, Performance, Motivations, (Emplowee); Productivity, Information Quality, Security, Governance (Organization); Maintenance, Facilitating Conditions (Technology).

Two groups of hypotheses were considered according to the research questions: *Value Hypotheses (Hypotheses related to Value): h*ypotheses regarding the Microblogging practice in the Bank and *Factors Hypotheses (Hypotheses related to Factors)*: hypotheses taken from the Microblogging evaluation model (Gunther *et al.*, 2009).

Table 1 - Units of Analysis

	Perspectives	Indicators
Value	Employee	EVH1-It contributes to bringing people together and forging stronger links. EVH2-Contributes to raising the awareness of what is going on around EVH3-There is a natural predisposition to use of social networks
	Organization	OVH1-Only makes sense in the organization if it is assumed to be informal OVH2-Represents a means to complement existing communication channels OVH3-It constitutes a useful tool for collaborative work
	Technology	TVH1-It helps to reduce email
Factors	Informal communication	FH1-Communication Benefits are positively related to Performance Expectancy
	Norms and Organizational Culture	FH2-Collaborative Norms is positively related to Intention to use microblogging
	Information Quality/Noise	FH3-Beliefs regarding the Signal-to-Noise Ratio are negatively related to Performance Expectancy
	Reputation	FH4a-Reputation is positively related to Performance Expectancy FH4b-Reputation is positively related to Intention to use microblogging
	Facilitating Conditions	FH5-Facilitating Conditions has a positive effect on intention to use Microblogging
	Privacy	FH6-Privacy Concerns have a negative effect on Intention to use Microblogging
	Codification Effort	FH7-Beliefs regarding Codification Effort are negatively related to Performance Expectancy

The data collection methods were 1) interviews, 2) a departamental survey and 3) a social networking/microblogging pilot.

1) *Interviews*: 17 interviews were conducted with people in the bank selected to

collect arguments from the perspectives of employee, organization (management and business perspective) and technology. The questions focused on potential benefits and risks. During the interviews, in order to generate discussion, a mockup of an Internal Social Networking site, with an interface inspired on Facebook, on which each employee may subscribe channels of information (institutional entities or project groups) was presented.

2) DSI *Survey*: An anonymous survey was conducted to all 442 employees of the Information Systems Department (DSI) and obtained 177 responses, a participation rate of 40%. With 17 closed questions and a research question of free opinion, it was intended to gather opinions on the perceived usefulness of social networks as collaborative practice, the internal perception of risk, and to measure the willingness to use an internal social network. Also has been questioned about the pattern of utilization of public social networks and attractiveness for the phenomenon of social networks.

3) *Yammer Pilot*: An important tool used in this investigation to collect primary data in participant observation mode was a pilot trial using the software Yammer at work. Yammer2 is an enterprise social network/microblogging platform, provided as as service, that is specifically designed for use by businesses.

Yammer has not been officially adopted by the bank. The pilot was initiated by the researcher as an employee of the bank, within a team with experimental features (DSI-Innovation), and with the explicit purpose of providing a pilot experiment in this investigation. The experiment began on 27 January 2010 and the period of observation was four months. Initially only 10 invitations were sent to DSI-Innovation team members. The use of Yammer was not promoted or even mentioned in official channels of corporate communication. The network of Yammer users of the bank grew spontaneously by email invitations sent by the free initiative of the users (using a feature on Yammer). At the end of the experiment there were 94 registered users. All users were from DSI (Information Systems Dep.) with the exception of one. Throughout the observation period, were placed in total 1123 messages. Exploratory analysis on the use of the pilot is based on the following types of information: Yammer Data (registered users and messages posted); and a Survey to assess the experience of using the pilot. Although the pilot did not have a set of users representative of the universe of study that is the Information Systems Department, it contains a representative subset of an entire team adopting Yammer in the workplace, the DSI-Innovation team. Thus, we analyzed in detail the 381 posts made in Innovation private group to study the collaboration within the team. On the final phase of the pilot, a survey by questionnaire was conducted to all 94 users who registered in Yammer. We called it Pilot User Experience Evaluation (PUEE) and it was not anonymous to get a maximum number of responses. We obtained 65 responses, a participation rate of 69%. With 17 closed questions and a open question for free opinion, it was aimed to collect the following information: understanding of the tool, type of use, perceived usefulness and demographic profile.

Due to space limitations, in the next section we present the results that concern to the experiment pilot only.

---

[2] http://www.yammer.com

4. Results

The pilot was a rich experience that illustrated the potential of collaborative networks implementation based on social networking/microblogging. This experience had a positive impact in the study either by direct observation of the phenomenon in the workplace and to have contributed to a more enlightened view of the people surveyed (both in interviews and in survey). For a user to join the private network of the bank on Yammer, known as "Bank Network", she just needs to have an email address of the bank. Thus, any user of the bank who can access the Internet in the workplace could join, just on their own initiative, the private network of the bank on Yammer. At the end of May there were 94 registered users. The graph in Figure 3 shows the growth of the Bank Yammer network in terms of the number of registered users.
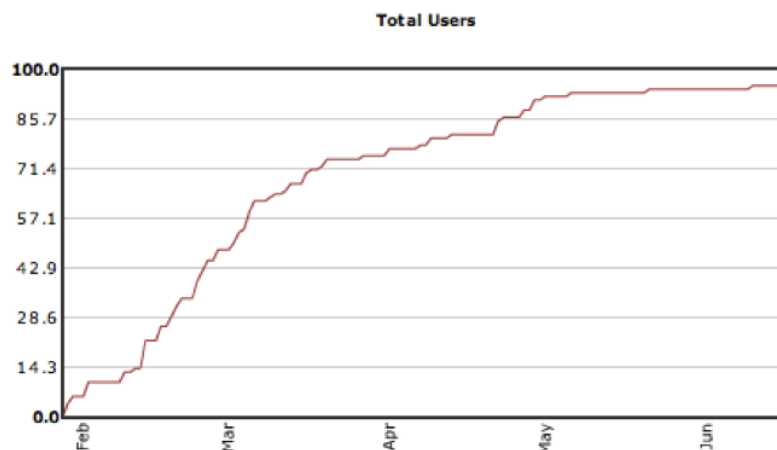

Fig. 1 - Evolution of registered users

As noted above, the use of Yammer was not promoted or even mentioned in official channels of corporate communication. The initial idea, on 27 January, was to create a pilot experiment limited for use by the team members of investigator, the DSI-Innovation team. So after creating the "Bank Network" at Yammer, the researcher made only nine invitations, which corresponds to the number of people on his team. The team leader was the first to join stating explicitly, in a first message, his collaboration in the pilot. Other team members joined during the following days and the last one joined on 8 February, 12 days later. On that day also joined the first user outside the DSI-Innovation team and from that day the "Bank Network" started to grow spontaneously from invitations sent by free initiative of users. This level of acceptance favors the EVH3 hypothesis. According to the Pilot User Experience Evaluation (PUEE), 80% of users of the pilot were non-directors, 14% were intermediate level directors and only 6% were director or higher. On the DSI-Innovation organic division, the team which is part of the researcher, all its members were registered and used the Pilot. In total 1123 messages were posted on Yammer being the first two months of most intense use. In Figure 4, where a steepening of the curve corresponds to higher intensity of messages, we see clearly a slowdown after the initial trial period. Although there have been 94 registered users yammer on, only 50 users have

posted messages. Among the registered users, 47% did not put any messages and some justifications were collected on the PUEE survey: 34% referred time constraints; 32% think there was no subjects of interest; 28% just wanted to watch and learn; and 12% did not recognize value.

5   Discussion

The following is an analysis of the risks and benefits of adopting social-networks/microblogging from three perspectives which are the units of analysis of the Case Study.

Employee perspective: benefits

According to Zhao and Rosson [6] the benefits of informal communication have two dimensions: relational benefits and personal benefits. It is in the relational benefits class that fits the feeling of closeness among geographically dispersed teams that observed in the pilot Yammer. The proximity, which has positive impact on cooperation, is obtained from the increased awareness of what is going on around. At the survey held 77% of participants agreed that the social network makes it possible to get to know the activity shared by the colleagues. The personal benefits that result from informal communication in the workplace, work related or not, may lead to the acquisition of beneficial information for the purposes of personal work. For example, to be aware of different perspectives on the work of others, can lead to new opportunities for collaboration. Still on personal benefits, 64% consider social networking in the workplace, an opportunity to give their opinion and show their value in the organization. For these reasons, both personal benefits and the benefits that come out of informal relational promote productivity. In an interview to pilot users of Yammer, microblogging has been viewed as a productivity factor because it replaces informal contacts through other channels, telephone, email or "hallway conversation" and thus minimize interruptions to work. One director noted that there was an user satisfaction. Another advantage pointed out in the interviews by the employees is the equal opportunities in participation. DiMicco *et al.* [5] also identify the advantages of social networks the possibility to access to specialists, increased ties with their immediate network of people and an interest to interconnect with each other. A benefit for the employee who observed the pilot Yammer, is its potential to reduce email. This possibility was perceived by the community that used the pilot transmitted on interviews and confirmed by the survey user experience of the pilot.

Employee perspective: risks

The issue of privacy has been widely referred throughout all the interviews as a potential disadvantage of social networking. A view taken from a blog of a community of interest in Enterprise 2.0, argues that it makes no sense to speak of privacy in a business context. According to some authors opinions, "the strength in these tools lies in the transparency and the openness in communication, not in creating additional little silos next to your IM history, personal Emails and others technologies that may be available. If you want or need privacy, you can create 1-on-1 conversations in other places. After all this is a tool that is inside of a controlled user group (all employees, R&D department, Marketing, etc.)".

Organization Perspective: *benefits*

The benefits that come from the perspective of employees are reflected in benefits to the organization by increasing individual and collective productivity. The pilot demonstrated that microblogging practice promotes communication in a team. This idea is confirmed in the survey DSI where 77% of participants agree that the creation of an internal social networking can improve collaboration among work teams. The pilot Yammer has also demonstrated the usefulness of the practice of microblogging in the creation of thematic forums for example Harvest group established under the pilot, but that according to its creator, is already a common practice. In the interviews, there were suggested some themes to create groups based on the logic of thematic forums freely subscribed by anyone: Workers Committee, the Sports Group, DSI-Quality. There were identified two cases in the bank's real needs that potentially configure social networks use cases. The Asset Management area and also the Stocks Department. Both want a communication software in the restricted environment that allows them to share short pieces of information, without much formalism, and the possibility of retaining comments.

Organization Perspective: *risks*

Concerns about the quality of information within a social network in the working environment was shown by all the directors interviewed. The content featuring an informal channel microblogging may entail excessive noise or, as stated in the literature, a low value of signal to noise ratio [7]. This concern has two motivations. On the one hand the fear that employees may waste time communicating and the consequent dispersion of attention with a negative impact on productivity; Moreover fears of poor quality of the information posted on the channel. According to a director in an interview, there is a risk of malicious use.

The experiment conducted in the pilot, particularly in respect of use in a team, revealed a reduced risk of problems of information quality and noise. A detailed analysis of the messages exchanged in the team revealed that 87% of the messages were about work and only 9% of the messages were considered "hallway conversation". The typical solution of microblogging tools for the noise problem is the possibility that each person must choose the content they are interested in receiving. So has the option to "follow" people, or to subscribe to your posts, and subscribe to group participation. That is, the organization of communication in public or private groups helps to minimize the noise problem of information.

A consensual solution to the problem of information quality, widely discussed in the interviews, is to promote an organizational culture through the publication of explicit rules on the use of the channel. In the DSI survey, 91% of respondents agree with the creation of a code of conduct and rules of practice as a way to mitigate security risks, information quality and productivity loss.

The issue of security is a crosscutting concern among the various perspectives involved, employees, organization and technology. The solution to security problems also involves the organizational culture, the adoption of rules and norms of use. A question was asked on the Survey about possible ways to mitigate extreme scenarios for the use of risk by employees. 75% agree that there should be some control mechanism in the bank about the information their employees post in the Internal Social Network. If necessary, the bank must have ways to delete messages that may threaten the organization.

The informal nature of a microblogging communication channel seems to be a disadvantage to its use as a channel of communication between the company and its employees. However, DSI Survey put the question about the possibility of a an internal social networking channel to be used a means of communication between the bank and its employees. 61% said they agree. But when the question is aked again and there is a focus on the institutional character of the messages, 53% agree.

6   Conclusion

Social networking in corporate environments is, to say the least, raising curiosity mainly as a tool for improving communication and social interaction for work purposes. If this leads to better collaboration or to the enhancement of the intra-organizational collaborative networks is something that needs to be studied. The case study presented in this paper is a contribution to our knowledge about these phenomena. Although current corporate social networking platforms can convey value creation through communication and interaction, this is likely to be not enough for a significant adoption of this paradigm by most organizations. Our current research is looking at ways of how to combine advanced information organization, classification and retrieval with social networking. The goal is to leverage the potential value of these two important dimensions of an organization. We are extending this research to collaborative networks of organizations (inter-organizations).

References

1. Parameswaran, M., Whinston, AB. (2007). Social Computing: An Overview, Communications of the Association for Information Systems (vol.19,2007),762-780, http://crec.mccombs.utexas.edu/attachments/105_Social_Computing_An_Overview.pdf
2. Bente, Stefan and Karlay, Juergen (2009). Enterprise Social Network Platforms as a Managment Tool in Complex Technical Systems, AMCIS 2009 Proceeding, paper 545, Americas Conference on Information Systems, http://aisel.aisnet.org/amcis2009/545
3. Passant, A., Hastrup, T., Bojars, U., Breslin, J.(2008). Microblogging: A semantic web and distributed approach, In: 4th Workshop Scripting For the Semantic Web (SFSW2008) co-located with ESWC2008, http://www.semanticscripting.org/SFSW2008/papers/11.pdf
4. Skeels, M., Grudin, J., (2009). When Social Networks Cross Boundaries: A Case Study on Workplace Use of Facebook and LinkedIn, Proceedings of the 2009 International conference on Supporting Group Work, Sanibel Island, FL, USA: ACM Press, 2009, http://portal.acm.org/citation.cfm?id=1531674.1531689
5. DiMicco, J.M., Millen, D.R., Geyer, W., Casey Dugan, (2008). Research on the Use of Social Software in the Workplace. In Proc CSCW'08 workshop Social Networking in Organizations, San Diego, California, 8-12 Nov 2008, http://www.joandimicco.com/pubs/dimicco-millen-geyer-dugan_cscw08_workshop.pdf
6. Zhao, D; Rosson, M B (2009). How and Why People Twitter: The Role that Micro-blogging Plays in Informal Communication at Work, in Proceeedings of the ACM Group '09, Florida, USA, May 2009, 243-252, http://portal.acm.org/citation.cfm?id=1531710
7. Gunther, O; Krasnova, H; Riehle, D; Schondienst, V; (2009). Modeling Microblogging Adoption in the Enterprise, Proceeding of 15th Americas Conference on Information Systems (ACIS), San Francisco, USA, 2009, http://warhol.wiwi.hu-berlin.de/aigaion2/index.php/attachments/single/1