
Limitless learning: An assessment of how a global firm leverage local knowledge through social media

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Structured Abstract

Purpose: This empirical paper assesses the ability to leverage learning within a globally dispersed project environment facilitated by the web 2.0 technology of wiki. Extant research on the knowledge transfer within multinational firms emphasise exchange between HQ and subsidiaries. In contrast, recent developments in organizational learning theory suggest that learning occur at multiple levels; organizational-, group- and individual level. In this paper we explore this tension by empirically exploring the research question: *How is social media utilized in the global organization in order to leverage local learning between dispersed individual experts?*

Design/methodology/approach: The study is based on an exploratory, in-depth single case study of the implementation of an internal wiki in an international professional service firm.

Originality/value: The paper extends earlier research and shows how an international knowledge based organization can utilize web 2.0 technologies to leverage knowledge and experiences from multiple geographically dispersed projects, and how the effects of wiki can be conceived at an organization-, practice- and content level.

Practical implications: The findings identify four determinants of the use of the wiki to leverage local learning within a globally dispersed project environment. First, the wiki must directly relate to the daily work carried out in the organizations projects by offering interactive and updated information concerning current project challenges. Second, the system must enable transparency in the daily project work so that on going activities can be searched. Third, the intention with the search is of lesser degree to identify encyclopaedic information than it is to offering visualization of individual competence and expertise, and fourth there needs to be a sort of quality assurance of the data posted at the wiki.

Keywords: Knowledge leveraging, multinational firm, organizational capabilities, social media, sustained competitiveness

Paper type: Academic Research Paper

1 Introduction

Since De Geus (1988) stated that “learning may be the only sustainable competitive advantage”, there has been an increasing acknowledgement of the fundamental importance of organizational knowledge to firms sustained prosperity (Barney, 1991; Grant, 1991; Petraf, 1993; Spender, 1996; Teece, Pisano, and Shuen, 1997). As an extension of the awareness of knowledge as critical to firms competitive advantage its capacity to effectively and efficiently developing and sharing knowledge have been addressed as determining. The nexus of leveraging knowledge is particularly important for knowledge based organizations such as Professional Service Firms (Løwendahl, 1997; Maister, 1993; von Nordenflycht, 2010). In fact, PSFs are pointed to as models for modern business, and it is assumed that increased knowledge about this type of organizations knowledge based value creation dynamics can highlight important aspects of both competitiveness and innovation based on knowledge intensity (Løwendahl, Revang, and Fosstenløyken, 2001; Pettigrew, Thomas, and Whittington, 2002). Professional service firms have traditionally been described as having a national scope and with partnership structure as the norm. However, recent empirical research on professional service firms indicate that these types of firms are more heterogeneous than originally expected (Malhotra and Morris, 2009). It is particularly evident that an increasing number of professional service firms are internationalizing and as they do they seek to reduce internal heterogeneity to maintain coherence in their international operations (Lovelock and Yip, 1996; Spar, 1997). An important element in achieving this is to professionalize the way knowledge is managed within the professional service firm, and these efforts to standardize offers particular challenges to professional service firms that often are dependent on a high degree of local responsiveness and customization in close client interaction to offer their services (Breunig, Kvålshaugen, and Hydle, 2014). Nevertheless, internationalizing professional service firms are simultaneously dependent on their ability to leverage their globally distributed resource base.

Recently technological developments have revolutionized how individuals communicate and share knowledge across boarder through social media. Social media are channels or platforms that utilize the internet to enable interaction between one or several users such as Facebook, LinkedIn, twitter, Google+, blogging, wikis, YouTube and crowd sourcing to mention a few. Over 1,5 billion people world wide are currently members of various social networks (Chui, Manyika, Bughin, Dobbs, Roxburgh, Sarrazin og Westergren, 2012). The research on social technologies as applications that enable interaction between individuals have predominantly explored how social media affect the private sphere. However, increasingly there is an awareness of the benefits to organizations from the use and integration of social technology also into the work sphere. The utilization of social technology imply improved collaboration and communication, both internally and between organizations (Kiron, Palmer, Phillips, and Kruschwitz, 2012) and is suggested as a potential source of increased productivity of knowledge workers (Chui et al., 2012).

This empirical paper explores the use of social media in the leveraging of knowledge in one global professional service firm. The question addressed is *how is social media utilized in the global organization in order to leverage local learning between dispersed individual experts?* The paper is build up as follows. First, relevant theory on leveraging knowledge within international organization is addressed in relation

to the merging body of research on social media. Second, the research method is presented along with a description of the single case of an international professional service firm. Third, the paper reveals the findings from a longitudinal study of the design and use of internal wiki system to leverage the learning between multiple local project environments. The conclusion offers a discussion of both the theoretical and practical contributions of this paper, and the perspectives it advances for future research.

2 Theory

International business theory purports that multinational firms outperform local domestic competitors due to their ability to learn in multiple locations and build organizational capabilities (Kogut and Zander, 1993). While, Kostova (1999) states that internal transfers of practices are important for all types of organizations, but for the MNC it is imperative because the primary competitive advantage compared to local incumbents is its superior knowledge, which can be utilized on scale in its subsidiaries worldwide. Thus, the reason multinational corporations exist is because they utilize knowledge from different locations to compete with local actors. Anderson et. al (2002) states that the subsidiary is a source of important new knowledge and that the HQ has a specific role as coordination and distribution mechanism between subsidiaries and thus decides what and how much to transfer to the other subsidiaries. However, the assumption that the required organizational capabilities are equally distributed within one same firm does not consider knowledge boundaries (Carlile, 2002, 2004) and knowledge stickiness (Szulanski, 2003). Moreover, much theory on learning in organizations emphasize how learning often is local and individually shared in face-to-face relationships - such as in communities of practice (Brown and Duguid, 1991; Lave and Wenger, 1991). Crossan, Lane, and White (1999), integrating important insight from organizational learning theory and strategic management, suggests a multi-leveled framework where the learning process involve feed-forward and feed-backward linkages across individual intuiting, group interpretation and integration and institutionalization at the organizational level.

The framework offered by Crossan et al. (1999) thus contrast the main unit of analysis in international business theory as it emphasise the multileveled nature of international operations extended beyond the organizational level with its sub-units to also encompasses the individual and group levels. In the international business literature the multinational firm (MNC) is popularly portrayed as consisting of two major levels, the Headquarter and the subsidiary. Subsidiary units are the production units but with a varying degree of administrative and innovational responsibilities. Despite this organization level focus, Anderson et. al. (2002) also emphasize advantages through learning in individual relationships. They state that it is trough individual relationships the subsidiary absorbs new knowledge from the environment, and this will have a positive impact on its own market performance. In addition, Hansen (1999) addresses the quality of these relations within the MNC and the effect on the ability to transfer facilitated either through technology or individual interaction. Tsai and Ghoshal (1998) also emphasize that relations are important for transfer of knowledge. The HQ provides structures and a context with shared values for creation and development of social capital (Nahapiet and Ghoshal, 1998). The need for common values, shared language and familiar work practices can facilitate development of social capital, but most importantly is the ability to work together and learn for the same experiences. Hislop (2002) discuss the challenges faced when communicating and sharing knowledge via information technology and

(McDermott, 2000) emphasize that information technology only can inspire but not deliver knowledge management. However, recent developments in social media promise to provide a solution to knowledge sharing between geographically dispersed individuals in global organizations (Kaplan and Haenlein, 2010).

There are several suggestions to the various web 2.0 applications, services and technologies available. Synthesizing previous research, van Zyl (2009) suggest six main web 2.0 technologies; Web blogging, Wikis, social bookmarking, tagging, really simple syndications (RSS) and collaborative real time editor. Thus, in the MNC a fundamental prerequisite condition can be ICT transmission channels for cross-border collaboration (Gupta and Govindarajan, 2000). Recent research indicates that wikis, even more so than other social media tools, have afforded individuals the opportunity to collaborate while geographically dispersed relative to other knowledge management technologies (Levy, 2009; Papadopoulou, Stamatib, and Nopparuchc, 2013; Razmerita, Kirchner, and Sudzina, 2009; Sultan, 2013). Previous studies addressed the challenges facing knowledge management solely aiming at codification strategy due to the distributed, tacit and sticky (Szulanski, 2003) characteristics of knowledge entailing personal involvement in the development, and sharing of valuable organizational knowledge (Michailova and Gupta, 2005) were individuals volunteer their knowledge and experience as user generated content (Shao, 2009). Moreover, empirical studies reports that hybrid knowledge strategies, combining elements of both codification and personalization of knowledge, in fact are more common in i.e. the software industry (Mukherji, 2005). With web 2.0 the internet is no longer static, but is used to communicate, participate and collaborate in the mutual editing of available information. Consequently web 2.0 is referred to as social media (Paroutis and Al Saleh, 2009). An example of web 2.0 is Wikipedia where several distributed individuals cooperate to produce and update information in contrast to established encyclopaedias where information was static and predetermined by a selected experts (Paroutis and Al Saleh, 2009). In the following chapter, the main focus will be on wikis. "A wiki is a web site that allows online collaboration by allowing multiple users to add, remove or edit content and changing content. It also allows linking among any number of pages." (van Zyl, 2009, p. 908).

3 Method

This single case (Yin, 1994) of this study is based on an in-depth qualitative exploration across several subsidiaries within one global firm. We deploy an explorative inductive research design justified by the lack of unambiguous theory on the utilization of social media to leverage knowledge and experience within international professional service firms. Qualitative data are useful for generating theory when the existing theory contains inherent contradictions or is poorly investigated (Graebner, Martin, and Roundy, 2012). The firm was theoretically sampled (Eisenhardt and Graebner, 2007; Flyvbjerg, 2011) to enlighten issues related to the need to leverage knowledge between local learning situations to achieve globally shared organizational capabilities through the use of social media.

The research setting of this study is Servco. It provides global third part engineering services and has 18 offices in 11 different countries and across all the three globalization zones (Americas, Euro-Africa and Asia-Pacific). The chosen firm is a global engineering based professional service firm with highly educated technologically oriented individuals, accumulating experiences in projects across the globe and with a highly articulated need to leverage the experiences in globally shared organizational capabilities, and is thus deemed particularly relevant for this study. One service delivery can be

performed to one client, by different experts at different places, depending on their knowledge, experience, availability, and costs. Servco tests, inspects, and certifies electrical products, machinery, installations, and systems. In order to offer these services worldwide the products are sent to the component experts who test the product in accordance with which market the product is to enter. That is, which international or national standards agreement the product has to comply with. Standards in this industry are documented in volumes of written material that describe the procedure for tests, as well as the acceptable intervals for different measures. Such standards need to be complied with in order to ensure that the products guarantee certain safety requirements to consumers. The international market for these types of services is highly competitive with respect to price sensitivity, speed of delivery, and expertise.

The case study employed a mixed-method approach (Denzin, 1970) consisting of semi-structured interviews, document and report studies (including internal documents, financial reports, presidential decisions, observations at presidential meetings, project plans, organizational and global bi-annual surveys), as well as participant observations. The study is part of a larger research collaboration where a total of 147 semi-structured interviews, lasting from one hour to two and a half hours, following the semi-structured interviewing convention (Robson, 2002, p. 228) have been conducted between 2003 and 2009. The main objective was to examine how the individuals conduct daily work, communicate with other colleagues, document experiences and search for knowledge within the global organization – with particular emphasis on how new ICT enabled their work practices. The interviews were taped and transcribed. The data collection was also supplemented beyond the interview context with document studies (i.e. from company surveys and internal reports), observations (i.e. visits to laboratories as well as participation in company meetings). Other secondary data sources such as project management procedures, standards, and reports to the clients observed through the ICT systems were especially beneficial. Of the 147 interviews, 35 interviews, have explicitly aimed at assessing the development and use of an internally initiated wiki project. The unit of analysis was intra-firm knowledge sharing practices through the wiki system.

In order to make sense of the data, the analysis progressed in several stages and involved a blend of inductive and deductive processes (Graebner et al., 2012). First, the data was coded in light of the research question and was thoroughly discussed between the researchers and summed up in PowerPoint format. The aim was to get a broad understanding of the general knowledge sharing practices and the particular use of the wiki system. Subsequently, the initial findings were summed up and presented to selected employees and managers in a workshop to validate the data's veracity and enhance the trustworthiness of the analysis (Lincoln and Guba, 1985). Finally, the findings were compared with extant theory in order to extend knowledge on the use of social media in leveraging learning experienced in multiple local project settings.

4 Findings

This study has assessed the cross-border knowledge sharing in the international professional service firm Servco when an internal wiki was introduced.

4.1 The Wiki and the organizational level

When the Wiki was launched management communicated how the system would fit in with the existing knowledge management policy for the Servco group and made it clear what the perceived benefits of the wiki system would be: “ *the top management at HQ*

was adamant that since we have several specialisations across locations, these would benefit from knowledge sharing tools going beyond emails or one-to-one communication” and “Small areas of expertise within different local offices needs more external knowledge sharing and learning possibilities from similar experts within the global organization”. Moreover, Management also pointed out that the competitiveness of the Servco group relied on effective and efficient utilization of its globally distributed resource base: “Need more common documents so that all laboratories have the same way to do things...quality systems, work instructions, test instructions...now each lab have their documents and procedures”.

The general impression is that there exist a positive attitude towards helping each other and sharing knowledge and that the organization would further benefit from increased knowledge sharing and collaboration between its subsidiaries: “Feel that the sharing of knowledge is very important and we need to improve that inside the Servco group, will work more efficient if knowledge sharing is effective”, and “Most people get something from something...each location have their specialisation...lets all participate..I will share something because I would learn something back as well...”. However, prior to the wiki launch there existed limited knowledge about the potential expertise offered at other subsidiaries within the group: “In my local office I know what everyone does..outside our office, I only know a couple of persons”, and “[Without transparency] you are missing the richness of the company...look at the experience.....we have about everyone having about 10 years experience...and some are not asked for sharing experience at all just doing their everyday work”.

There is also a general positive attitude towards the Wiki and most informants have visited the system. The wiki is well communicated; everyone knows about the initiative and applauds it. An illustrative quote concerning the attitude towards the implementation of the wiki system can be: “Prior to the wiki we did not have anything in common[...]we all worked independently from each other...minimal contact.” In addition, several informants also express that there only exist a limited barrier to use the wiki system: “Exist a low technical barrier to use, but barriers to use are linked to post questions/answers “, and “The wiki system is easy to use, just 5 minutes introduction, then just to use the system”. Consequently, there is consensus regarding the need for an integrating knowledge and collaboration tool across the distributed project environments in Servco: “Servco has really done a good job spreading the resource base around, for instance, in San Diego the expertise is medical and in Dallas it is Telecommunication”.

One of the results from implementing the Wiki system is a sense of increased membership in a truly global organization as a consequence of the wiki system implementation, and the cherished benefits are improved presentations of local subsidiaries and people: “Prior to the wiki we all worked independently from each other...we did not work together...minimal contact...did not deal with other offices...we did not have anything in common...not an annual event or something” and “Wiki – a common group thing...it would bring up our technical ability”, and “Presentations of people through the wiki increase could be extended with a global map, click China, get into China approval and find persons that I can contact – that would be useful”.

4.2 The Wiki and the practice level

In general there is an awareness of the system and how critical it is that user driven content is generated from the start to ensure the success and utility of the system: “One of those things...unless you use it, you want see the benefits of it”. Prior to the implementation of the wiki email was the main tool for knowledge sharing: “My email

box is my database....have access many years back, remember and can look through and refer to that if there are questions". The use of wiki is motivated by the need of additional knowledge when conducting project tasks locally: "When we cannot find answers locally, then we search wiki". Moreover, it is acknowledged that it is beneficial to use the wiki to respond to questions and answers across the different subsidiaries as it offers a greater transparency of the cross-unit knowledge and experience exchange than one-to-one interaction over mail, phone or Skype: "I use wiki, it is new..., but it is good for technical issues to ask questions and everybody can see the question", and "If someone post something I can see any changes made...kind of nice because there is one place to go to instead of emails".

The main use of the wiki is related to knowledge and experience exchange needs that originate in the daily conduct of project work, and is predominantly related to sharing technical information and experiences with different standards or client segments: *"Not in an active way, but I take a lot of information from wiki: directives, technical questions related to new rules, discussions etc".* Originally, search for project related knowledge and experience starts locally and is extended to other subsidiaries if necessary. The contact with other subsidiaries have often been based on individual social networks where contact have been made face-to-face or trough email: *"I used to receive about 10-15 emails a week which I need to check for a clear or correct answer...I need to use an hour for each to be able to answer" and "Start by email...because of time differences ...very few cases over the phone".* Locally, there are also formal arenas to share knowledge and experiences. There are local technical meetings on a weekly basis. However, most knowledge and experience exchange is conducted informally as part of small talk, part of mentoring/junior-senior learning or being part of daily work: *"Technically, we share more there and then when we are working on a project".*

Thus, the knowledge and experience sharing is by-and-large linked to ongoing project activities and is mainly local. If there are exchanges across different subsidiaries it is because the project task requires coordination or clarification. The search for answers will always start locally before other international colleagues are involved: *"We use all the ways: First we try to answer our selves, then we ask local colleagues, then international colleagues" and "Ask the first and the best. Then call someone that might know."* However, many informants reveal how they do not necessarily search the wiki for ready-made answers but use the system to identify individual experts whom they then can contact directly, and if the interaction prove beneficial a short post at the wiki can explain the issues addressed: *"Many of the challenges we face in the projects are so complex and context specific that I will not find a ready made answer at the wiki or in any other internally available data base. What I use the company ICT systems for is to identify people in other offices with experience that might be beneficial to the challenge I face in my project. I then contact the directly, mostly over Skype. If the interaction provides a solution to my project I post what we did at the wiki for others reference later".* However, finding and identifying people with relevant competence at other locations is not necessarily straight forward: *"There are many people involved in finding the right person/expertise" and "Questions are not necessarily targeted to the person in charge".*

Informants express that the benefit of using the wiki is related to quality and available knowledge to ongoing project: *"The efficiency increases since we share knowledge. No one is holding back knowledge. That is bullshit. We all share. Always someone who shares" and "Knowledge sharing improves everyone".* Furthermore, and in addition to direct search for project related knowledge and experiences, some informants also have pointed out that the system offers opportunities to increase individual learning: *"Others use it for knowledge sharing. I would use Wiki for learning something new about*

a new topic". Some informants also addressed more altruistic motives for engaging and spending time on knowledge and experience exchange over the wiki: "...only the good feeling you get from helping people". However, most of the informants addressed the importance of maintaining an reputation of individual expertise within their area: "It is important to have recognition" and "It is linked to own reputation".

The informants also express that the true utility of the wiki system is that the prior need for an internal social network diminish with the wiki, as there is a possibility to post questions and see if some one answers or refer any particular expert: "I gain network through asking colleagues if they know someone...now it is possible to post a question and see if a relevant resource offers its help or refers me to someone relevant". However, many informants still acknowledge the benefit of knowing people in person before they interact and exchange knowledge and experience over social media: "To know people, having met them...having made up an understanding of their competence when having met them physically". Some informants address the issue of incentives to generate content at the wiki: "A symbolic gesture from the organisation for knowledge sharing. To give a gift certificate (electronic shop etc)" for the knowledge sharer at each location" and "There are credits for inter office sales, but no compensation or incentive for talking an hour with someone from another office". However, several informants also point out that: "The main motivation for spending time posting stuff at the wiki is that my expertise gets recognized in other offices. This increases my possibilities and eligibility of participation in interesting projects within my area of expertise".

4.3 The Wiki and user driven content

Several informants address the essence of the wiki system as its ability to enable user driven content from local project experiences but in a way that is interactive and makes these experiences more transparent between the geographically dispersed experts of the Servco group. However, there is expressed concerns about the quality assurance of the information available at wiki system: "Need to be sure that the information is right and useful...should not lead to uncertainty...therefore items should be verified...", and "We would need someone responsible...going though (the content). Somebody could monitor the wiki...have some way to give approval stamp..". In spite of this worry some informants also point out that this worry was also present before the wiki system: "We were sharing knowledge on wiki about IT...but the project responsible was worried about posting these questions...fear for misinterpretation...therefore preferring to answer this on email", yet it is not the same to post a wiki post as response to a question than to address the complexities of a project problem verbally over the phone: "feel that it need to be Quality Assured, perfect before post on the web, not the same as a phone call."

5 Discussion and Conclusion

This study has revealed the experiences with implementing an internal wiki in Servco, and addressed the research question: *how is social media utilized in the global organization in order to leverage local learning between dispersed individual experts?* The findings from the Servco case reveals how an international knowledge based organization can utilize web 2.0 technologies to leverage knowledge and experiences from multiple geographically dispersed projects. In the case of Servco the implementation of a company specific wiki enabled increased user driven content generation. The nature of the highly specialised projects offered by Servco entail that ready made and codified knowledge repositories are less useful to on going projects. However, the interactive

format of the wiki enables increased transparency and visualisation of the expertise of different professionals at the globally dispersed locations. The Wiki system is used mainly to document who knows what and as a source to identify people that can be approached directly for advice. The study thus reveals how web 2.0 technologies, such as wiki, can have a positive effect on the leveraging of learning between highly specialised and globally distributed knowledge workers within one firm.

The findings of the study show how the effects of wiki can be conceived at an organization-, practice- and content level. In particular the findings of the study identify four determinants of the use of the wiki to leverage local learning within a globally dispersed project environment. First, the wiki must directly relate to the daily work carried out in the organizations projects by offering interactive and updated information concerning current project challenges. Second, the system must enable transparency in the daily project work so that on going activities can be searched. Third, the intention with the search is of lesser degree to identify encyclopaedic information than it is to offering visualization of individual competence and expertise, and fourth there needs to be a sort of quality assurance of the data posted at the wiki.

Thus, the wiki should not be just another source of internal information but address questions and answers related to ongoing challenges faced when conducting projects. The benefit of the system is increased productivity despite employees investing time on publishing articles on the wiki. The main motivation is related to performing better in local projects by enabling the leveraging of knowledge and experience from other locations into the project. This is more important than incentives to create content on the wiki. If content and interaction through the wiki support the ongoing business this incentivize the publication, and quality assurance of, the user driven content.

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