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Can knowledge be retained in organisational networks?

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Abstract

Taking a constructivist view of knowledge where knowledge is viewed as a process of knowing, the literature on knowledge sharing assumes that knowledge can be retained through being embedded in institutional routines, structures, and systems. However, this concept is challenged in the context of informal organisational networks where membership is voluntary, temporary and organisationally unsanctioned. Such challenges have predominately focused around: 1) behavioural aspects including organisational and individual defence mechanisms to protect knowledge and opportunistic behaviours such as free-riding; or 2) social aspects including lack of mutual trust and asymmetric power relations.

This paper investigates the challenges to knowledge retention in knowledge-sharing networks, reporting on data collected from case studies of four organisational networks in the UK. There is a significant amount of literature addressing such challenges on organisational level, however, less research has been done on the network level. In particular, the challenge of knowledge retention within networks. The research adopts Social Exchange Theory in order to develop the theoretical underpinning and data interpretation. The paper also presents an explanatory model to inform theorists and practitioners on how to improve knowledge retention in networks. The case study consisted of four knowledge-sharing networks, two photography networks; women entrepreneurship network; and a construction network in the North West of England. A qualitative approach was used through an ethnographic lens consisting of 18 months participant observation study that produced 28 semi-structured interviews. The study also utilised data from network archive network spanning two years from 2012-2014.

This paper argues that knowledge shared in the networks analysed largely remained inside the network and that less knowledge was shared with networked organisations making the network knowledge "ontologically" separate from knowledge created in organisation. The data also revealed that the boundary spanners found it difficult to share knowledge between their formally contracted organisation and the informal network due to issues related to trust and unbalanced reciprocal exchanges. Our investigation of knowledge sharing in those networks demonstrates the difficulty in retaining knowledge on a network level due to blurring organisational boundaries and temporariness of such networks.

Keywords: Knowledge sharing, networks, knowledge retention, inter-organisational learning, boundary spanners

1   Introduction

As organisations face more financial economic challenges of increasing service variation, volume and complexity, increasing their revenue generation service values whilst reducing their operating and service costs. These

formalised networks include customers, suppliers, distributors, and third party contractors when developing new product or services. A number of studies (e.g. Bartol and Srivastava, 2002, Islam et al., 2015, Moon and Lee, 2014, Wang et al., 2014) indicate that practicing knowledge sharing results in improved organisational effectiveness and the influence of social interaction on knowledge creation for organisational learning. More recent studies have investigated how organisations are reconfiguring their business models linking knowledge management thinking to the key sources of competitive advantage (Sheng et al., 2013), whilst Wang and Wang (2012) investigated the quantitative relationship between knowledge sharing, innovation and performance. Relatively few studies have approached the problem in terms of how organisations can access specific knowledge shared in more complex internal and external networks.

This paper aims to move the research agenda forward by investigating the context of informal organisational networks where membership is voluntary, temporary and organisationally unsanctioned. Such challenges have predominately focused around (1) behavioural aspects including, organisational and individual defence mechanisms to protect knowledge, opportunistic behaviours such as free-riding, or (2) social including, for example, lack of mutual trust and asymmetric power relations. This paper investigates the competitive landscape through enhanced sharing knowledge beyond such formal networks and presents a constructivist view of knowledge sharing facilitated through purposeful institutional routines, structures, and systems. However, this concept is challenged in the context of informal organisational networks where membership is voluntary, temporary and organisationally unsanctioned. The aim of this paper is to explore how knowledge can be more efficient to improve organisational networks. We also see an opportunity to take stock of what has been done in this growing field of research and inform future research. In particular, we are keen to identify ways to strengthen theoretical contributions in the field. Hence this paper focuses on the following research questions; RQ1: How do organisations in a network access knowledge shared in that network? RQ2: What is the role boundary spanners in ensuring knowledge is shared between network and organisation?

2   Literature Review

The phenomenon of knowledge sharing has been extensively investigated focusing on different elements, such as its impact on organisational performance, culture, competitiveness and employees' behaviour. Knowledge sharing is critical for the effectiveness and efficiency of both public and private sector organisations (Titi Amayah, 2013). It used to be studied at an individual firm level; however there is increasing evidence that suggests that the development of organisational networks are critical to competitive success (Dyer and Nobeoka, 2000).

Scholars have focused on exploring the challenges associated with the development of organisational networks and their effect to knowledge sharing (Ellison et al., 2015, Ritala et al., 2015). There are a number of cultural dimensions that effect knowledge sharing; trust has attracted the most of the researchers investigating this research area (Swift and Hwang, 2013). Park and Lee (2014) examined the role of trust and interdependence in knowledge sharing in information systems projects. They suggested that network members are more likely to share knowledge with their partners when they trust them and feel dependent; members' expertise, project's value and communication affect these two elements. Hsu and Chang (2014) found that interpersonal trust has a positive impact upon intraorganisational knowledge sharing, but uncertainty might make individuals to be reluctant to share their knowledge. In a similar vein, Razak et al. (2016) highlighted the drivers that influence individual behaviour to share their knowledge. The finding of their research suggested that attitude, willingness, commitment represent, exchange of maximising benefits and minimise cost are the factors that encourage employees to share their knowledge. The literature indicates that leadership plays an important role in knowledge sharing; Lee et al. (2006) suggested that top management support encourages employees' contribution and enhances the quality of knowledge. Yao et al. (2007) reiterated this explaining that incentives, such as recognition and rewards, need to be provided as they can improve the process of knowledge sharing and develop a supportive culture. Another challenge that needs to be faced is related to the particular

characteristics of networks (Wang and Noe, 2010). For example, Bakker et al. (2006) found that networks members are more likely to share knowledge, if they are involved in the team for a long time.

In the knowledge sharing literature, challenges to knowledge retention have been stressed in several instances. Liebowitz (2008) described knowledge retention as strategies that organisations adopt to protect knowledge from leaving the organisation. Knowledge retention is perceived as being important for competitiveness and as one of the pillars of KM practices (du Plessis, 2005). In a knowledge-dominated business environment, knowledge becomes the firm's most valuable competitive advantage and asset (Grant, 1996). Knowledge as an asset decides the organisation's strategy of competitiveness and alliances. Where knowledge as an asset becomes accessible and flexible, organisations will more easily join alliances, since they will not be risking any loss of knowledge (Harrigan, 1985). This signals the risk of knowledge attrition that organisations strive to prevent (Earl and Scott, 1999). Knowledge attrition is explained as being when an employee who has leveraged his/her knowledge in an organisation leaves that organisation with that particular knowledge in his/her mind (Hargadon and Sutton, 2000). There are certain types of experiences and information that are better being disseminated; in other words, the cost of their dissemination is less than the cost of being locked in the human body.

Previously uit Beijerse (2000) suggested that SME's that are good at sharing knowledge seem to be limited in their operational capability to retain knowledge. This may be due to increased pressures of competitiveness where organisations seek to protect their knowledge. Liebowitz (2008) introduced the pillars of knowledge retention as: (1) recognition and reward systems; (2) bidirectional knowledge flow, such as flow from organisation to network and the other way around; (3) personalisation and codification of knowledge sources; and (4) keeping the golden talents. Such pillars are useful where knowledge is hidden by knowledge workers to gain power or protect self-interests or where knowledge is partially shared (Connelly et al., 2012). Organisations generally accept that knowledge retention is important that more efforts need to be done to retain knowledge but Levy (2011) argued that those organisations need not to spend time and effort on assessing knowledge losses and focus more on operational solutions that bring planning and implementation in the forefront of any knowledge retention projects.

Literature reveals that there are a number of benefits that organisations can gain through promoting knowledge sharing (Hau et al., 2013). Knowledge sharing between employees, across and within teams contributes to knowledge application and innovative activities, and has a positive impact upon production costs, new product and service development and team performance (Mesmer-Magnus and DeChurch, 2009, Wang and Noe, 2010). Dyer and Nobeoka (2000) examined the network-level knowledge sharing processes within Toyota's network and found that the company gained productivity advantages, such as a reduction of cost associated with gathering and applying valuable knowledge. Similarly, Liu and Phillips (2011) stated that knowledge sharing enhances firms' absorptive capacity and innovation capability.

Organisational learning is achieved by collaborating with others, observing and importing their practice (Dyer and Nobeoka, 2000). Hau et al. (2013) found that reciprocity, enjoyment, and social capital positively affect individuals' knowledge sharing intentions. However, the success of those collaborations can be achieved only if the business partners involved in knowledge sharing network have developed a high level of trust between them and built long-term partnership (Chen et al., 2014). As Chen et al. (2014) highlighted within organisational networks, where high level of trust has been developed, better collaborations, knowledge sharing and, as a result, organisational performance can be achieved.

The role of boundary spanning in knowledge sharing networks is important (Tushman and Scanlan, 1981). Gupta and Govindarajan (2000) emphasised that incentives to boundary spanners create social capital and therefore promote knowledge sharing in networks. In other words, Reiche et al. (2009) argued that without boundary spanners, knowledge sharing networks do not automatically culminate in knowledge outcomes. Recently,

(Minbaeva and Santangelo, 2016) argued that the influence of boundary spanners on knowledge sharing is dependent on boundary spanner's motivation and location in the organisation.

3   Methodology

This paper is a qualitative inquiry to inductively investigate whether knowledge is retained in learning networks. The descriptive lived experiences of network members have been investigated and thus underpin the primary data on which this paper relies. The case study consisted of four knowledge-sharing networks, two photography networks; women entrepreneurship network; and a construction network in two cities in North West of England (Manchester and Liverpool). A qualitative approach was used through an ethnographic lens consisting of 18 months' participant observation study that produced 28 semi-structured interviews. The average duration of interviews was an hour and twenty minutes. The study also utilised data from network archive network spanning two years, including photos, guestbook, brochures, minutes of meetings, etc.

Table 1: Networks where data collection took place

Networks	Industry	Description of network	Data sources
Two Photography Network	Media	- Photography network based in Liverpool and Manchester - Open membership - Number of participants around 25 at each event	15 Interviews 7 months' observation - Archive
Women Entrepreneurs Network	Miscellaneous	- Training and consulting network in North West Region - Open membership - Usually 15 participants at each event	10 Interviews 6 months' observation
Construction Network	Construction	- Residential construction managers network in Manchester - Closed restricted membership - Usually 10 participants at each event	3 Interviews 1 month observation

Thirty networks were approached using emails and telephone calls to discuss the research aim and how data collection is going to be done. Five networks agreed to participate in the research but one decided to pull out before data collection started, therefore, four networks were involved as shown in Table 1 above. The main author made several contacts with the four networks to attend regular and irregular sessions (learning events) for observation. The observation process relied mainly on non-participant observation that usually takes place in for a long period of time (6-12 months) (Fetterman, 2010). The non-participant observer objectively observes the group or setting without participating in any activity. Non-participant observation allowed more time to observe the network participants (Dyer, 1995) and made room for plenty of observation field notes because of the low level of involvement in the observed network. In the interviews, an interview guide was used. This included a set of questions categorised in order to guide the flow of information from the interviewees. The categories included, for example, general background of the individual and organisation, reasons for joining the network, benefits from networks, and how interviewees shared knowledge in networks. The guide was used flexibly, which means not following the structure of the categorisation sequentially but instead used all of the categories in the interviews guide. The use of jargon during interviews was avoided in order to avoid misinterpretations. Thus, terms such as "reciprocity", "learning networks", and "knowledge exchange" were not used during the interview, but rather, general questions were used, such as "tell me what you did at an event

you recently attended". Interviews were concurrently conducted and analysed, which enabled the identification of emerging themes from the data analysis. As such, the interview guide was amended over the course of the research inquiry to align with emerging themes from the interview analysis (Lofland and Lofland, 2006).

4   Findings and Discussion

This section draws upon the interviews and observation notes to analyse interviewee accounts of knowledge sharing. Using Nvivo10, we analysed the interviews and the observation notes to investigate how knowledge sharing was experienced from a processual perspective which eventually resulted in a three-phase system of knowledge sharing. Assimilating to natural science, we coded the three phase as Condensation, Capitalisation, and Materialisation. In the first phase (condensation), the knowledge sharing activities create a raw knowledge accounts that the network participants question and investigate. It is when participants start to know each other and make first contact to touch upon the knowledge that others have. Participant A from Photography Network 1 explains how he feels in the Condensation Phase:

"..I'm a bit cautious of what [this] network may benefit my company. People say a lot of good things .. interesting. But I feel confused as how they make sense of what I am doing.."

Participant A works for Public Relations and Media company and he is specialised in portrait photography, he joined the Network because he wanted to learn new techniques and scale up the growing business. He described his feelings towards the knowledge shared in the network as ambiguous and it takes time before it could be internalised (Cabrera et al., 2006). However, the internalisation process is not only dependent upon time, but also on how the boundary spanner takes an active role in ensuring knowledge is well absorbed, transferred to their organisation and made use of (Szulanski et al., 2016).

In the second phase (Capitalisation) is where the social exchange plays a crucial role. Inferential findings suggested that people engage in networks in three forms: (1) reciprocal learning, (2) frequent appearances in the network, and (3) social media engagement. Amongst the many themes that the data generated, we clustered those that pertain to how people engage and phases of exchanges as shown in Table 2 below.

Table 2: Coding system of Reciprocal Exchanges in knowledge sharing

Category	Sub-category	themes
Reciprocal exchange	How people engage	Reciprocal learning
		Reappear at events
		Exchange through social media
	Phases of exchanges	Phase 1 (Condensation)
		Phase 2 (Capitalisation)
		Phase 3 (Materialisation)

The three themes were correlated to the three phases but the one that was influential is reciprocal learning. An example of reciprocal learning is when two participants decide to learn one subject from each other acting as co-workers or co-researchers (Lubatkin et al., 2001). They have agreed that one will do one part of the subject

and the other will do the other part. Failure of either of them to prepare for the subject will cause the circle of reciprocation to break and as a result, the reciprocal learning will halt. Participant B has her own way of this learning from the Women Network. She commented:

"I keep a CPD log so I can very simply see the month activity and notes against it, so then go to my dairy what did I do this month in terms of my learning, so not what journals did I read or what qualification did I get; what learning events did I go to, what webinars did I sign up to, to spend with, what conferences did I go to, and then against that why did I go there, so what did I hope to get out of it and what did I actually get out of it, to help me think about and reflect on that learning as well. It is a record of my CPD so again in terms of some of my clients and trade bodies, in theory they can ask for my CPD log, and if I am employed that is my personal file, so this is a good practice for me to keep. Now in our [Network], I keep track of Participant C's CPD, and she [does] of mine. It is important that we keep track, you know.. It's frustrating when I keep track while Participant C does not and vice versa.. This is insane and will get either out of the network."

Participant B is a management consultant who obtained her degree from Cambridge University and travels from Yorkshire to Manchester to attend the Women's Network that runs formal and informal events in Manchester. The Women's Network hires a place in the city centre which houses the library of a philanthropist, which makes the environment there very welcoming and warm as Participants B and C described in their interviews. The principal author was invited by the library manager to attend a few events where he spent some time in the library for the observation. Participant B was a management consultant who worked for 13 years helping small businesses prepare business plans and provided coaching as well. Participants B and C created a sub-network (closed network) as a result of their engagement in the Women's Network. The network consisted of only 3 participants from the Women's Network, namely Participants B, C and D.

Participant C opened her CPD (Continuous Professional Development) log on her iPad and showed it to Participants B and D using an MS PowerPoint presentation. She explained what she had done over the last month and explained what she had learned from dealing with a client who ran a small printing business in Wigan. Participant B appreciated the CPD's progress and she suggested that Participant C should do certain actions with her client.

Network participants expressed their concern of the challenges to knowledge retention. Participant E from Photography Network 2 commented:

"I had opportunity to get access to some good proper business skills and knowledge and strengthening the business. For me I suddenly realised that I could not capitalise on this knowledge properly in our company. I thought the ideas I walked away with wold be resourceful to the company but.. I mean it's great access to knowledge in our network, but how the integration of what we know in our company and we learn from this is..it's not a proper fix.."

Participant E was describing his frustration that tacit knowledge that is shared in network in different ways was not made accessible to his own organisation. When he was asked why it is the case, he replied:

"When we had long discussions on how camera shutters play role in shadowing the image, my colleagues at the company were not convinced. They rejected the idea simply because they were introduced this new technique without grounding. I sympathise because two members of the network were not happy too at the beginning, but the exposure to the experiment and two sessions of discussions were important for building the confidence to use this technique."

Knowledge that is created and shared in networks was facing an issue of continuity since they were locked up in the network blurred boundaries. Organisations may not have access to this knowledge due to access barriers despite the efforts played by boundary spanners. One of the reasons this was the case is the short time that organisations dedicated for the knowledge to be internalised. (Levy, 2011) suggested that knowledge retention

should take from three to six months. The issue with this is that networks have a volatile nature where membership is sustained for long time. Unlike organisations which can compensate for absenteeism (Burke, 2011) network members do not attend each and every event held and, therefore, knowledge created in networks is at the risk to be lost if mechanisms are not made put in place to help overcome knowledge attrition.

Networks members tried to store knowledge in various ways to protect it from attrition. For example, Participants B, C and D used their CPD log to document the knowledge shared although this does not ensure that knowledge can be accessible or retained (Schiuma et al., 2012). Participant F is a construction manager who leads multimillion property development project in Manchester. She joined the Construction Network, which links project managers from the same large company, for five years. She usually keeps network participants informed if her project progress like the rest of the participants do with their projects. Participant described her experience with Project XYZ as follows:

"My team sometimes lost interest in solutions I provide because they see them as inferior coming from a network they are not signed up in, which leaves me not sure exactly what I need to do in this case. Although I summarise the minutes of meetings in [the] network to give them kind of tracked details of how a decision is made on commissioning fixtures and fittings for this piece… for example"

Therefore, the documentation of knowledge networks appears to be crucial. Despite the traditional documentation processes such as minutes of meetings, more innovative ways need to be in place to ensure knowledge is accessible and retained.

5   Conclusion

As a lens through which to study knowledge retention in knowledge-sharing networks, this research builds a theoretical approach by drawing on Social Exchange Theory. Thus, the rationale for an explanatory model to inform theorists and practitioners on how to improve knowledge retention in networks is first justified, before being outlined. The use of extended knowledge-sharing networks provides a methodology to highlight the blurred network boundaries that is often underutilised and suffers from incomplete and insufficient information, and knowledge retention (Gupta and Govindarajan, 2000). It is hoped that ethnographic lens has contributed to refining the plethora of knowledge-sharing initiatives, and brought about some elements which will support knowledge retention across such organizational where membership is voluntary, temporary and organisationally unsanctioned.

The paper provided the building block for implementing knowledge sharing across networked organisations understanding the network knowledge "ontologically" and boundary spanners between their formally contracted organisation and the informal network that are often exposed to unbalanced reciprocal exchanges (Minbaeva and Santangelo, 2016). Our investigation exposed the difficulties in retaining knowledge due to these recurring blurring organisational boundaries and temporariness of such networks.

This paper provides an extended view of knowledge-sharing networks through the adoption of knowledge-sharing initiatives to identify the social exchange, of how people engage and through what channels they exchanges: Condensation; Capitalisation; and Materialisation. Furthermore, the conversation of the raw knowledge accounts provided an important contribution for researchers and practitioners by develop the notion of reconciling network knowledge and social exchange in order to develop explanatory model to inform theorists and practitioners on how to improve knowledge retention in networks (cf. Minbaeva and Santangelo, 2016, Tushman and Scanlan, 1981).

6   References

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