Determinants of knowledge transfer as a context for models of knowledge brokers

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Abstract – The purpose of the paper is to present research propositions that concern the matter of knowledge brokers’ participation in knowledge transfer. The novelty relates to the fact that there is a combination of conclusions that can be stemmed from social network research, inter-organizational learning research as well as regional studies.

Key words – knowledge transfer, knowledge brokers, institutional environment

I. Introduction

Knowledge transfer that enables knowledge receiver to making use of experiences of knowledge source is an important phenomenon from the point of view of modern economic entities. The effectiveness and efficiency of the transfer of competencies that results from using organizational rules that coordinate communication may lay the foundation for the existence and the development of enterprises [Zander, Kogut 1995]. What is more, the possibility to observe and adapt ideas concerning solutions exploited by co-localized competitors may generate variability that may determine the existence and the development of clusters [Malmberg, Maskell 2006].

Transfer of knowledge may have different forms as well as be influenced by many factors. For example, taking into consideration that they all are at least to some extent combined with themselves, we may indicate on factors related to relationships among organizations (quality, embeddedness in the superordinate relationship like R&D alliance or regional network of knowledge intermediaries, geographical proximity), characteristics of both knowledge receivers and knowledge senders (market success, absorptive capacity, motivation), characteristics of the knowledge transferred (degree of knowledge implicitness or complexity) and characteristics of the transfer process, e.g. its ongoing basis form [Argote 1999, pp. 167-175]. In order for the author to give reasons for the impotance of knowledge brokers it is necessary to analyse some of them in detail.

II. Role of knowledge brokers

The great importance is attached to factors related directly or indirectly to knowledge. When talking about intra-organizational context of knowledge transfer one should pay attention to casual ambiguity or a lack of absorptive capacity. These factors can also be related to the transfer that occurs in other empirical contexts, e.g. transfer between organizations that are parts of Joint Venture [Lane, Salk, Lyles 2001], transfer among non-profit organizations [Pallotti, Lomi 2011] or clusters of enterprises [Giuliani, Bell 2005]. What is especially important now, is that a lack of ability to recognize value of knowledge and next to assimilate and commercialize it is a category with reference to it one justifies the existence of knowledge brokers in literatures [Argote 1999; Camuffo, Grandinetti 2011; Parjanen, Melkas, Uotila 2011]. If knowledge brokers need to deal with supporting of enterprises that try to create explorative strategies of building knowledge resources based on resources possessed by other organizations that possibly operate in different technological domains, then knowledge brokers face with technological barriers as well as social ones [Fleming, Waguespack 2007; Rosenkopf, Nerkar 2001]. The analysis of network linkages of enterprises show that companies that have high absorptive capacity, tend to change knowledge within closed sub-groups [Giuliani, Bell 2005]. Due to the fact that the existence of social boundaries cause that coping with technological boundaries becomes to be more difficult, the role played by knowledge brokers as well as their models should be deeply analysed.

Besides resource based view on conditions that both determine knowledge transfer as well as work undertaken by knowledge brokers, one needs to emphasize that also the engagement on the part of competitors who try and develop similar products, may limit the time when knowledge is transferred within hierarchy [Zander, Kogut 1995] or in clusters where co-localization of competitors may increase the awareness of making use of new technologies [Malmberg, Maskell 2006]. It is worth adding that knowledge can be protected within hierarchical organizational contexts by internalization or by the use of formal tools of control [Rugman, D’Cruz 1996]. In clusters, strong relations among suppliers and users may make knowledge transfer more easy, because interpersonal relations that accompany transactions make it possible to monitor and shape common standards of behaviour [Uzzi 1997; Jones, Hesterly, Borgatti 1997]. However, as the pace of technological changes is growing, actors operating within given institutional environment may rely less on trust built by investments in relation. It is more important to be able to monitor others who should be reputable and all parties may have a chance to have realistic expectations with regard to their cooperators who share common standards of behaviour [Maskell, Lorenzen 2004; Rutten, Boekema 2007: Lorenzen 2007]. That is why geographical proximity remains an important factor [Maskell, Malmberg 2006].

An analysis of networking relations shows that the maintenance of linkages with other enterprises/researchers that represent different knowledge domains may enable others to transfer knowledge, especially when it is supported by a lack of too strong focus on chosen field. It also helps companies to build their reliability because it makes it easier to protect knowledge because spillovers among different domains tend to be limited [Bergenholtz 2011, Capaldo 2007]. Hence, it can be said that knowledge brokers are faced with the task to build suitable, often informal, patterns of interactions.

On the one hand, it has been shown that strategically positioned knowledge brokers in companies, have the impact on innovativeness e.g. Tushman 1977]. On the
other hand, the same models emphasize passive role of social networks in knowledge transferring [Obstfeld 2005]. It may partly result from the fact that researches on the topic have been conducted in hierarchical organizational context. Then, apart from social mechanisms, one needs to take into account some additional formal integrative mechanisms or formal control [e.g. Gupta, Govindarajan 2000]. They all may cause that the problem of undesirable use of transferred knowledge by broker has not been explored sufficiently yet. When facing with implementation problems, one has to pay special attention to the role of actors’ mobilization that can help with diffusion of innovations [Obstfeld 2005]. When the degree of interdependence among knowledge elements grows, which is reflected by its complexity, brokers may be faced with problems of a lack of trust, limited rationality, or distorted knowledge that can be transferred with delays. It requires that researchers focus on the role of intermediaries structures that can be more decentralized [Zhao, Anand 2013] or specialized [Whelan et al. 2010]. When operating they may be focus mainly on facilitating of direct relations among parties that take part in transfer [Obstfeld 2005].

They can also make use of tasks division in such a way that some parties build suitable knowledge resources and other parties focus on the maintenance of broad network of social relations [Whelan et al. 2010]. These phenomena lead to at least partly redefinition of roles played by brokers. However, with regard to growing importance of the role of social relations, it can be assumed that clusters of companies operating in region can be proper context for verification of hypothesis concerning determinants of knowledge transfer as well as different forms of work undertaken by knowledge brokers [Rutten, Boekema 2007]. In current literature, problems of the exposition of regions to resources of global knowledge or the presence of public knowledge as well as possible activities undertaken by local authority that involve building regional competitive advantage based on regional networks seem to fully justify this choice. It enables the author to show the crux of the matter regarding the role played by knowledge intermediary structures whose activities are additionally conditioned by different determinants of knowledge transfer.

Two ways of conducting business can be distinguished now. The first one is related to relational way. It is important here to say that it does not relate to high level of trust and possible reputation built by repeated transactions with the same cooperator [Ring, Van de Ven 1992], which is when there is relational contracting that was described with comparison to the assumptions of transaction costs economy [Jones, Hesterly, Borgatti 1997]. It was claimed that when risk was high as well as trust among parties was high, it was possible for parties to exchange resources and at the same time to decide on issues related to costs, quality or volume as time went by and these issues did not have to be defined precisely from the beginning of the cooperation [Jones, Hesterly, Borgatti 1997].

Here, the author tends to analyse interorganizational relations that are highly changeable, because partners can be abandoned due to current situation on the market. Also, companies may create their relation based on project relations, which is when companies look for solutions for specific customers’ demands within strictly defined time period. Then information can be spread through meetings, rumours or direct observations, which can cause that the cost of information acquisition is lowering. The culture of community comprised of collective beliefs, values, conventions and language shapes. And these all factors make it easier for companies to collect and understand information [Maskell, Lorenzen 2004]. So, it can be claimed that for localized network of interorganizational relations, it is possible to rely on reputation even if the network is not cohesive and the collective institution that allows companies to cooperate is a weak tie. Actors may not create cohesive, strong relations based on triads structures, however, they can be informed really well.

The important point here is that view on knowledge transfer that occurred in clusters was that knowledge how to work with other organizations, which generally needed to be shaped as a result of both big and risky investments in relation, is common. In this way all community incurred costs that are necessary to create knowledge of such kind, but the assumption was that the same community can derived advantages from the access to this diversified knowledge in region without incurring additional investments that are connected with given relationship [Lawson, Lorenz 1999]. Now one can consider companies that rely on collective institutions that can have the impact on costs reduction without the necessity to incur high costs when they want to change partner [Maskell, Lorenzen 2004]. Here one may say about so called social trust, which means that “collective group of agents takes mutual cooperation for granted, even if they have no direct experience with each other” [Rutten, Boekema 2007: Lorenzen 2007, s. 214]. But some problems arise when knowledge that flows through clusters becomes to be more and more complex. It can happen even in case of codified knowledge which stems from global and distant sources and from that reason it can be difficult to be understood by local players [Camuffo, Grandinetti 2011].

Then problems inherently related to knowledge transfer that involve both some mismatch between experience of knowledge sender and knowledge receiver and possible lost of some important pieces of transferred knowledge can become to be difficult to be overcome. That is why the importance of knowledge brokers who should help companies to deal with complex knowledge is emphasized. However, it is important to distinguish between two different knowledge environment that are characterized by different institutional foundations. It lays foundations for building research propositions.

III. Research propositions

When knowledge that is transferred is highly complex, the level of uncertainty that stems from the threat that a given piece of knowledge can be captured by competitors is lower. Simultaneously, an opportunity to acquire some valuable insights as to how this knowledge can be used...
may turn out to be advantageous and lead companies to the success. Then companies do not hesitate to rely on the mechanisms of reputation and aligned expectations. They are willing to begin to cooperate based on general prone to trust others. This is why companies are less interested in patterns of informal relations which are maintained by knowledge brokers. The broker should possess accumulated abundant knowledge resources, which in this case determines the level of attractiveness of broker’ market offer. The second situation can be quite different. Then knowledge that flows though clusters is of medium level of complexity. Hence, it is relatively easier to recognize its value. This is why the level of uncertainty that is generated by the possibility to make use of it by competitors is higher. The greater importance is attached to the issues of knowledge protection.

Then it is important for knowledge broker to operate among knowledge domains that are diversified. It can limit the risk that knowledge can leak in undesirable way at least to some extent. At the same time the problem connected with cooperation across social boundaries is visible which is why companies try to assess how good knowledge broker is at maintaining social relations. When it possesses many relations with entities that represent different knowledge domains it is a source of competitive advantage for this broker. It helps cooperators to protect and transfer knowledge. Simultaneously the ability to communicate among different knowledge domains may prove that given knowledge broker can facilitate direct relations among companies which firstly can be prone to use hierarchical governance mechanisms instead of relational ones which are characteristic for the first situation. The author wants to propose research on the relation between components of knowledge brokers’ models and the effectiveness of knowledge transfer. It can be claimed that factors like knowledge base as well as pattern of interactions are main components of knowledge brokers’ models. Their importance is dependent on two factors which include such as knowledge attributes and characteristic features of knowledge transfer that can involve differentiated institutional stimulus.

The main research hypothesis (h1) is that both knowledge base and pattern of interaction are main components of knowledge brokers’ models that have the impact on the effectiveness of knowledge transfer. In addition to this, it can be hypothesized (h1a) that the stronger knowledge base possessed by knowledge broker is when companies in order to transfer knowledge rely more on relational mechanisms, the more likely is that knowledge transfer is completed successfully. Also, it can hypothesized (h1b) that the more diversified pattern of interactions possessed by knowledge broker is when companies in order to transfer knowledge rely more on formal mechanisms, the more likely is that knowledge transfer is completed successfully.

Conclusion

Above mentioned hypothesis constitutes a trial to implement considerations on the impact which different institutions and norms of behaviour can have on the process of knowledge transfer within regional context. Hargadon and Sutton [1997] considered their importance but they focused mainly on the retrieval process when people tried to remind themselves facts from the past that could be useful from the point of view of current problems. What is more, they conducted their research on these phenomena in the context of hierarchical organization where there were additionial factors that could influence how these norms shaped. When discussed in the context of knowledge transfer among different co-located organizations these problems become to be more complicated and their solutions requires that researchers take into account different approaches to the problem. It is especially work doing due to the fact that discussion concerning institutional environment and their impact on innovative activities undertaken by companies in different regions in Europe is common for authors from many countries. The globalization processes that result in the acceleration of processes of knowledge flows cause that analysis of knowledge attributes and their consequences appear to be important. The trial of synthesis of different possible points of view has been included in this paper. Further research can focus on the identification of next important elements that can be included in knowledge brokers’ models. Also, it can be an idea to investigate the extent to which one can say about the existence of “relational competences” [more on tis topic Janiszewski, Pyka 2014] that can exist for possible dyads created by given knowledge broker and its cooperator. This is important when current pace of technological development causes that relations that are maintained by companies become to be relatively unstable. Maybe it is a factor that can counterweigh this lack of stability but to say it for sure further researches on the topic are necessary.

References


