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Article

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Network Orchestration for Knowledge Mobility – The Case of an International Innovation Community

Pia Hurmelinna-Laukkanen · Satu Nätti

Abstract: This study aims to increase understanding on how relatively vague aggregations of firms can be directed in a manner that facilitates innovation. In particular, we examine promotion of knowledge mobility as a part of innovation network orchestration.

Literature review and a case study of an international innovation community indicate, first, that of prerequisites to knowledge mobility, common language and codification of knowledge are relevant, and, second, that regarding the orchestration activities, maintaining a balance between autonomous flexibility and network direction together with neutrality are needed in order to build common identity and trust required for knowledge mobility.

Keywords: Knowledge mobility · International · Innovation · Network · Community · Case-study

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Introduction

The need to combine various resources in order to meet customer needs and business opportunities that emerge in value chains crossing national boundaries has made networking an increasingly important business-to-business activity. In line with this, networks of entrepreneurial firms and individuals are increasingly relied on in a range of activities such as buying, procurement, internationalization, and innovation (Blomqvist et al. 2005; Håkansson and Johanson 1992; Mazzarol and Reboud 2008; Nyström 2009; Simon et al. 2002; Street and Cameron 2007). For example, firms frequently need to combine forces to access physical and intellectual assets for innovation generation and new product/service development, or delivery channels for the created output (Beelaerts van Blokland et al. 2008; Johanson and Vahlne 1977; Neumann and Holzmüller 2007; Perks and Jeffery 2006; Rothwell and Dodgson 1991). Consequently, it is not surprising that such business-to-business encounters in innovation and innovation commercialization have attracted a fair share of both managerial and academic interest (see Neumann and Holzmüller 2007). Recently, such activities have been more actively scrutinized in international settings as well. This is because it has been demonstrated lately in numerous situations and studies that internationalization is related to the propensity to innovate, and that innovation and R&D activities are becoming increasingly international (e.g., Carlsson 2006; Criscuolo et al. 2005; Frenz et al. 2005; von Zedtwitz and Gassman 2002).

However, networking inherently brings with it the element of compromise – particularly with regard innovation that can be very risky, uncertain, and complex. Therefore, management issues have to be taken under careful consideration when building and maneuvering innovation networks. Especially international cooperation may be demanding to steer due to the complexities generated by cultural differences and other such elements (see e.g., Johnston, Lewin and Spekman 1999; Shane et al. 1995). Adding to this the fact that the characteristics of innovation networks and communities – vagueness and looseness in the front line – set challenges to traditional forms of management (see e.g., Augier and Vendelo 1999; Möller and Rajala 2007), a new approach may be required.

So far, little knowledge exists on how management could be carried out, or which factors are the most decisive in determining the success of such joint innovation activities. It has been established in prior research that there are differences in innovation contexts (Möller and Rajala 2007), some being more “manageable”, and others being more fluid and fuzzy calling for discreet influence rather than management (Ritala et al. 2012). Such latter-mentioned coalitions of actors may actually take a form of communities rather than actual strategic networks. They can be very valuable for emergence of innovations, because the change has happened towards open innovation environments and innovation processes benefiting from the contribution of various communities and intermediaries – especially in terms of new information and knowledge (see e.g., Büchel and Raub 2002; Chesbrough et al. 2006; Fichter 2009; Neumann and Holzmüller 2007; von Hippel 2007). Excessive fuzziness may, however, prohibit the network from reaching commercializable ideas and innovations. Therefore, building on prior research (e.g., Dhanaraj and Parkhe 2006; Möller and Rajala 2007), in this study we argue that certain amount of conscious direction is needed so that adequate structure for the network to work can be

established. Nevertheless, such direction can and should be executed in a manner that does not sacrifice the independence of actors and flexibility that are inherently needed for creativity and innovation creation. Such discreet influence may happen through network orchestration. In the heart of orchestration there are three specific areas: knowledge mobility, network stability, and innovation appropriability (Dhanaraj and Parkhe 2006). When these elements are present to an adequate extent, the network has a potential to achieve its goals.

In this study, we concentrate especially on knowledge mobility related orchestration. It has been noticed to be among the most important constituents of successful innovation and networking (Kogut and Zander 1996), but it also is a challenging area – especially in international settings that are increasingly frequently the context in which innovation activities take place (Davenport et al. 1999; Moenaert et al. 2000). Management of networks, knowledge transfer, and innovation have been addressed in vast body of prior literature, and examinations covering the combinations of these issues exist as well. For example, Peters and Johnston (2009) examine absorptive capacity and related contingent factors in networks. They, however, do not consider the special characteristics of different types of network environments. Likewise, Dhanaraj and Parkhe (2006) present the dimensions of orchestration especially in the context of innovation networks, but do not go deeper in determining the management/orchestration related factors in different types of innovation networks. Neumann and Holz Müller (2007), for their part, consider collaboration with customers as relevant in innovation processes, but do not consider wider networks. Möller and Rajala (2007) discuss management of innovation networks, but the more specific role of knowledge mobility or the related activities is left unexamined. In fact, despite the importance of knowledge mobility and orchestration related capabilities for those who aim to benefit from knowledge created in innovation networks and communities (see Hagedoorn et al. 2006; Malerba et al. 2004), deeper understanding of knowledge mobility as a dimension of network orchestration is still lacking.

In line with the above said, our aim is narrow down this gap in existing knowledge and to increase understanding on how relatively vague aggregations of firms can be directed when the aim is to facilitate innovation. In particular, we examine promotion of knowledge mobility as a part of innovation network orchestration, and aim to find out *what kind of orchestration related factors are important for facilitating knowledge mobility in global innovation communities*. This is done by building on existing literature and by conducting an exploratory case-study.

After briefly discussing the theoretical background on international innovation networks, the study proceeds to discussing orchestration and knowledge mobility in such environments. A case study is conducted in order to explore these issues. Exploratory approach is adopted due to complexity of factors related to orchestration and knowledge mobility. Finally, we will combine theoretical and empirical considerations and present the most important managerial implications. Future research directions will conclude the paper.

Global innovation networks

It can be agreed that innovation and internationalization are increasingly intertwined: innovative knowledge assets are required for successful international growth, and, on the other hand, new value and innovations can be yielded through internationalization as it supports creating and utilizing such assets widely and in new combinations (Martin and Salomon 2003; Zahra and George 2002).

While innovation activities in international settings can surely take place within individual companies (Cantwell 1995), they seldom are carried out completely within a single organization. At the minimum, ideas for new products and services or more efficient business and production processes need to be extracted also from outside sources, such as from customers (Neumann and Holzmüller 2007). More widely, the knowledge flows can also be two-directional – most notably when collaboration is carried out in buyer-supplier relationships, but also in more competitive settings (consider, e.g., coopetition (Bengtsson and Kock 2000)). It has been acknowledged that networking can essentially foster access to, and use of, internal and external resources needed for successful innovation (Harrison and Håkansson 2006). In fact, such an open attitude towards innovation may turn out to be very beneficial (Chesbrough, 2003). The typical benefits sought through innovation generating networks are related to sharing risk arising from technological complexity and uncertainty, and obtaining adequate knowledge-based assets (Bullinger et al. 2004).

Regarding networks that potentially generate innovation, certain characteristics need to be acknowledged, especially as they can take different forms. In innovation networks the goals are often related to creating radical and systemic innovations and influencing emerging fields, and the systems are typically loosely coupled by nature (Möller and Rajala 2007; Möller and Svahn 2006). Knowledge assets in innovation networks are often highly tacit, individual-bound, and dispersed (Doz et al. 2001; Lundgren 1995). There is a high level of ambiguity and uncertainty related to the cause-effect chains, and the relationship between existing and emergent knowledge is vague (Möller and Rajala 2007): it may not be known what kind of knowledge different actors possess, what kind of knowledge is needed in innovation processes, and what kind of value may be generated as a result (Arrow 1974). The network may be even more vague and fuzzy, and actually take a form of *innovation community* rather than an actual network (see, e.g., Füller et al. 2006; di Gangi and Wasko 2009; von Hippel and von Krogh 2003; von Krogh et al. 2003). In such networks the actors (organizations and/or individuals) are very hard to identify as they may come and go according to their shared interests, and they may be more or less connected to different organizations (that may eventually commercialize innovations). The participation is voluntary. Also, it may be very difficult to pinpoint, when and where an innovation is generated. Yet such community-like networks can be very valuable for emergence of innovations (see, e.g., Chesbrough et al., 2006; Fichter 2009; von Hippel 2007; Büchel and Raub 2002). The challenge is in determining how to organize such networks and how to orchestrate and facilitate innovation in them.

Orchestration and knowledge mobility

Considering the features of innovation generating networks, it can be noted that they hardly can be managed by single actor alone – although it might often seem that way when large corporations are participating through their own research organizations. Steering the network is inherently restricted by certain factors such as the looseness of the ties between the actors and autonomy that they possess, or the different cultures and languages they have. Trying to fight this may break the network and cause it to fail in producing innovations, or at least deteriorate the position of the actor taking the “leading” role. This creates the first – and perhaps the most important – obstacle to traditional management: trying to control the innovation network – let alone community-like network – tightly might actually destroy the whole system or limit the variety of the potential outcomes. Nevertheless, if there are no supporting structures, common goals or coordination at all, the system may be shortly lived. Thus, guidelines for “managing” the network may be found in orchestration.

Network orchestration builds on the idea that certain factors are inherently important for the survival and functioning of networks, and that these factors need to be actively facilitated. First, network stability is needed in innovation-related networks, since “a network that is unravelling is not conducive to value creation or value extraction” (Dhanaraj and Parkhe 2006, p. 663, see also Augier and Vendelo 1999; Håkansson and Johanson 1992; Lam 1997). For example, as the actors get more familiar with each other and learn about each others’ cultures and ways of working and thinking, they are more likely to share knowledge willingly (e.g., Blomqvist et al. 2008). It is noteworthy, however, that a stable network is not the same as a static one. Second, innovation appropriability is needed for distributing the created value fairly among the actors, as well as for dealing with free riding and opportunism. Also, facilitating appropriability can have an effect on the willingness of the parties to stay within the network.

Both appropriability and stability can assist or, if executed poorly, deter knowledge mobility, the third relevant area of orchestration. Knowledge mobility – that can be defined as “the ease with which knowledge is shared, acquired and deployed within the network” (Dhanaraj and Parkhe 2006, p. 660; see also Doz 1996; Nonaka 1994; Parolini 1999) – is needed to combine the expertise of the individuals in a way that allows for innovation to emerge (Crossan and Inkpen 1995; Kogut and Zander 1996). The extent of knowledge mobility depends on nature of the knowledge and characteristics of individuals sharing it: The nature of the knowledge (i.e., tacitness/codifiability), causal ambiguity and absorptive capacity are all important attributes, likewise actors’ capability and readiness to share knowledge. Subsequently, also the fact that a network is composed of international actors has very likely an impact on the level of knowledge exchange within the network.

Indeed, knowledge mobility is inherently more restricted in international settings than if innovation networks within one country or region would be of concern. First, (tacit) knowledge can be very sticky in international settings (see, e.g., Lam 1997 and Martin and Salomon 2003 on the relevance of tacitness for MNCs). Small nuances may be left unnoticed or misinterpreted. Also, causal ambiguity – that is closely related to the nature and form of knowledge and may thus be affected by international nature of the collaborative endeavors – may make it difficult for a network member to

understand what knowledge might be needed for generating innovations based on combinations of knowledge, and even tougher for knowledge receiving parties to ask for such assets (Simonin 1999). Absorptive capacity (i.e., organizational capability to acquire, assimilate, transform and exploit knowledge) is needed so that learning can take place in organisations and networks (Cohen and Levinthal 1990; Zahra and George 2002; Peters and Johnston 2009). In facilitating knowledge absorption, social integration mechanisms, regimes of appropriability, and power relationships are mentioned to be important contingent factors (Todorova and Durisin 2007). Again, internationalization plays a role: cultural and language issues, among others, have a great influence (Davenport et al. 1999). Considering these contextual limitations to knowledge mobility, orchestration activities are naturally influenced. These issues are discussed in a more detailed manner in the following analysis trying to uncover the factors that hold the highest relevance in promotion of knowledge mobility as an area of orchestration.

Empirical examination – The Mobile Monday case

For explorative empirical examination, we adopted the case-study approach. Issues around knowledge mobility in an international innovation network are very multi-layered and complex, calling for classifications and in-depth sights. Subsequently, a qualitative case study was well-argued research strategy offering the possibility for an in-depth analysis. A case-study strategy enables forming of comprehensive insight of phenomenon under study – and offers new views of unknown phenomenon (Eisenhardt 1989; Perry, 1998; Yin 1989). This study is explorative by its nature (see Yin 1989): Our aim was to understand knowledge mobility related orchestration in a specific type of network where complex social processes form the core of the analysis. Our process has been explorative and inductive, focusing more on finding important related themes from the rich empirical data than on building specific theoretical framework to guide the empirical study. The kind of framework would have potentially limited our view on this multi-sided phenomenon.

The case consists of analysis of the global Mobile Monday community. Mobile Monday (MoMo) was given start in Finland in year 2000. A group of active people in mobile industry invited their colleagues to a pub for an informal get-together. This voluntary group started to organize these events regularly on the first Monday every month. Around year 2004, new local network “chapters” were started by local volunteers in Tokyo, Japan, Silicon Valley (USA) and Italy. (www.mobilemonday.net.) The core idea of MoMo is to boost innovation within the branch. This happens in the international network facilitating the sharing of ideas, business concepts, new technological innovations, and best practices. Likewise, this group of volunteers wants to enhance partnership creation especially between SME’s, and contributes to the education for the broader public. (www.mobilemonday.net.) At the time of the data collection altogether 67 chapters existed, but the network is spreading fast and includes now well over 100 cities worldwide.

Mobile Monday provides a good case for exploring global innovation communities. The network brings together varying parties from around the world. Mobile Monday is a fairly long-lived and yet increasingly popular and successful network operating in

international settings and utilizing its international nature efficiently. Its main goal is to facilitate innovativeness of mobile application industry, which makes the case illustrative in many respects. It is a good example of “fuzziest end” of innovation networks (see, e.g., Hurmelinna-Laukkanen et al. 2011), a community that is not strictly guided by any specific organization, but is more focused on voluntary communication between its members to create innovations and networks. It could be characterized as an innovation generating international community typifying well the open innovation environment. The ties between actors vary a lot within Mobile Monday. Chapter founders and leaders are typically very dedicated and meet each other regularly, but individual participants at the meetings may be more or less tightly involved. However, this increases the freedom within the network. The free forum of discussion and networking that Mobile Monday provides is a good substratum for creating, presenting, benchmarking, and testing original and new ideas, and gaining access to resources of different actors and organizations in many market places to commercialize innovations. Especially SMEs and start-ups benefit from the network in this respect. Small companies and start-ups are also an important source of innovativeness in the community as they serve as a source of knowledge, trends and fresh ideas. The network brings different actors together for new innovation to emerge. The biggest value of the network in the innovation process seems to lie in the commercialization process of ideas. Based on our preliminary analysis, this network was at the time of the data gathering in the situation where it really had to analyze its ways to develop knowledge mobility and coordination mechanisms in the network in order to further develop its innovativeness. The international nature of the Mobile Monday network, its vague composition, focal role of innovations, and the increased management and knowledge mobility related challenges allow us to identify and categorize the most important themes considering our research topic and question.

The data for the analysis was collected during autumn 2008 and spring 2009. The data was gathered mainly through interviews of chapter organizers of ten chapters around the world (Helsinki/Finland, New York and Washington DC/USA, Vancouver/Canada, Tokio/Japan, Oslo/Norway, Hanoi/Vietnam, München/Germany, Bangalore/India, Jakarta/Indonesia), and the coordinators and a founder member of the whole Mobile Monday. Altogether 13 people were interviewed in different occasions. Presentations, e.g., given in Mobile Monday meetings and Mobile Peer Awards meeting in Barcelona in 2009, were also utilized as research materials, together with the secondary data received from the web pages, and the leaders of Mobile Monday, for example (e.g., the contents of the web pages – both global and local, news paper articles written on Mobile Monday, and participant lists of individual Mobile Monday meetings).

Issues facilitating and hampering knowledge mobility in Mobile Monday

Following our aim to understand what kind of knowledge mobility related phenomena are relevant in community-like innovation networks, we concentrated on such areas in our analysis. During the interviews many issues contributing to the conditions of knowledge mobility in the network emerged, both contextual characteristics and orchestration activities. A set of relevant themes started to emerge in multiple

interviews, and their roles and relationships became more visible. In particular, the following factors were found during the analysis of our empirical data on Mobile Monday community:

- The role of *language* and *knowledge codification* forming the prerequisites for knowledge mobility, and
- The role of *global coordination and local autonomy*,
- The meaning of maintaining *neutrality* of actors, and
- The premises and meaning of *cooperation between the chapters*
- Forming the basis of *common identity* and *trust*, that were ultimately needed for knowledge mobility

These factors and their roles for knowledge mobility are discussed in a more detailed manner in the following.

The role of language and knowledge codification

A notable principle forming the basis for knowledge mobility and functioning of the network in Mobile Monday is practical. Regarding structural enabling factors for knowledge mobility in the case network, English has been chosen as official *common language* for all communication in MoMo. This enables knowledge dissemination throughout the international network.

The activities in Mobile Monday build heavily on the meetings arranged in various cities. Consequently, the use of common language enables not only making the materials produced in meetings and other instances available for the whole MoMo community, but also allows the participation of wider audience and attending MoMo meetings around the world during business trips, for example: people from other locations and interested in MoMo are very much welcome to the local meetings, and many new chapters have been given start when MoMo meetings have been visited by interested individuals. Besides, the use of common language has enabled an interesting experiment; to utilize the point in time of the meeting (first Monday of the month) and variety of time zones in order to continue the discussion on the chosen topic area from one time zone to another: When one chapter ends its meeting, the next one can pick up the discussed notions and continue from there. This enables the accumulation of the knowledge created during the meetings in different places.

However, just relying on the common language principle would not be enough. As mentioned, knowledge in innovation activities is often highly tacit, embedded to individuals and dispersed in network (Doz et al. 2001). Knowledge mediated and created in MoMo meetings is *codified* in many ways. Videos and recordings are made to document the events and the related discussions. For example, in Norway, the presentations can be seen online after the event. Presentation slides are also often available online. Furthermore, some enthusiastic members have their own blogs on the chapter webpage, or on the network's global webpage. Online community (of Facebook kind) and Google groups enrich the online communication in some of the chapters. These are examples of the possibilities that MoMo could utilize even in a more structured way on a global level to facilitate knowledge codification, transfer and innovativeness. As a consequence, it would become more explicit, what kind of knowledge different actors and even chapters possess.

Furthermore, and as an area potentially fostering knowledge mobility and subsequent innovation and commercialization of viable ideas, there are some chapters (e.g., Tokio and Oslo chapters) that have databases of interesting companies in the field of the specific area. There is a kind of catalogue that includes one page of information from each company, for example. This helps in terms of contacting the local business network and finding new informants and members to the network.

Indeed, developing online community further to accompany the face-to-face meetings is one important goal for MoMo coordinators: *“Our uniqueness is in face-to-face meetings, but anyhow we have to change into online community [as well]. If we have a capability to welcome 100 000 visitors yearly to our meetings, we must have couple of millions who want to know what is happening there and be involved, although they cannot make it physically”* (Coordinator, Finland). Although not all tacit knowledge is codifiable directly, but rather is transferable only in cooperation and face-to-face contacts, almost all the interviewed actors note that knowledge codification is considered as one of the future orchestration challenges within MoMo. As the chapter leader in Norway notes: *“Online is like making the physical event transparent, discussion starts there”*. This kind of community possesses plenty of valuable tacit knowledge which would benefit the community in a codified form. Global online-service would also enhance the possibilities of small start-ups to benchmark their ideas and get more feedback from the whole network. In addition, via online systems it could be possible for start-ups or companies entering new markets to establish good contacts with financiers and potential customers. Such codification, common language, and online-systems are also needed for orchestration at the level of actual orchestration activities such as balancing global coordination and local autonomy, and for fostering collaboration between the chapters, for example.

The role of global coordination and local autonomy

Considering the factors that have an effect on the features of the network and subsequent knowledge mobility in Momo, the *balance between global coordination and local autonomy* is of high relevance. In MoMo there are numerous network chapters acting locally in variety of countries and cities. Therefore, establishing genuine connections between the members of different chapters calls for certain structures. Furthermore, overarching coordination is needed in order to disseminate and accumulate knowledge created in the network, present new practices, and to benefit from lessons learned. On the other hand, too tight coordination may hamper knowledge sharing and innovativeness of the community by chaining actors to one-eyed way of doing things.

So far, the balancing act has been quite successful. Although there are coordination (e.g., the chapters are bound together with certain contractual arrangements regarding the main principles) and common MoMo guidelines present in the network and offered by coordinators (considering, e.g., arranging the meetings, getting sponsors, utilizing the logo, etc), local autonomy is allowed to a notable extent. This enables local adaptations in implementation according to local culture and conditions, and it surely has influenced positively the motivation of voluntary workers.

“You have to maintain the possibility to influence... If there is a feeling that you are not able to influence, then it is “couldn’t care less”...” (Founder member of the network, Finland). One very practical example on the local adjustments comes from Bangalore (Indian MoMo chapter) where the meetings are held on Saturdays in order to avoid traffic jams of Monday evenings. Likewise, in Taiwanese chapter the principle of speaking English has been put aside as many participants in the meetings would not be able to follow the discussions or participate fully in English. This improves the functioning of the Taiwanese chapter, but unfortunately limits the chances of combining knowledge across the whole MoMo. In fact, sometimes applying practices started by MoMo founders quite strictly have produced good results. Even “culturally conflicting” implementations can be successful. For example, in Japan, MoMo activities were initiated in the highly informal pub atmosphere although the local business culture did not necessarily encourage for such a choice. Likewise, in China, a lot of skepticism rose against putting top managers and coders under the same roof to share ideas. However, both chapters turned out to be successful: bringing in more informal, Scandinavian style improved knowledge mobility in these cases. The network culture can even take over the national culture.

While the lack of exact set of rules leaves room for adapting activities according to local motives and challenges, it also makes chapter leaders’ work very challenging in the starting phase; everybody wants to realize their own motives via the network when there are no strict guidelines for organizing the activities, and the chapters often end up looking quite different. For example, whereas the New York chapter dwells more around the mobile technologies and business, the Washington DC chapter has a more political character. This also means that common goals have to be found and negotiated in each case separately, which further challenges network orchestration: *“Everybody has their own opinions and since Mobile Monday is... there are no set rules... I was trying to implement that because I want to help innovation and entrepreneurship... but it is not easy. Because there are so many parties, and I was the founder and I have my own vision... But from chaos comes order”* (Chapter leader, Norway).

Indeed, it seems that autonomy may increase knowledge creation and sharing at the local level, but limit international knowledge exchange by strengthening causal ambiguity of the whole system. If the common coordination was more emphasized, common area of discussion and understanding would be strengthened and it would further facilitate knowledge exchange. Common language and active codification of knowledge make up some of the weaknesses of limited coordination, however.

The meaning of neutrality and integrity of actors

Besides coordination and autonomy, *neutrality and integrity* of actors plays a relevant role. As noted, MoMo has no permanent work force but plenty of voluntary actors. The coordinators of the network are neutral actors not benefiting commercially from the community. This is a good starting point considering creation of trust and common identity among the participants – and the subsequent actors’ willingness to share knowledge. Firms may act as sponsors, and in that role they are able to promote their businesses. However, no company is permitted to dominate the forum or take over or

abuse the network (e.g., by extracting information on the network or harnessing it to its own purposes), even if there have been occasions in which some firm has offered to provide with different equipment, software, etc, in exchange for some level of influence or access to knowledge within the network: *"Which one to choose, being poor and ideological or the other way around. So far we have been ideological (Coordinator, Finland).* Many of the interviewed actors emphasize the meaning of maintaining the sufficient level of neutrality and integrity as important for creation of facilitative conditions for knowledge mobility. This cannot be reached (solely) through relying so much on formal agreements (Dhanaraj and Parkhe 2006) or use of power, but on social integration of the system (Todorova and Durisin 2007). *"It is an interesting and delicate balance that we as a community and founders of it seem to manage... In that we retain the integrity and independence of our voice."* (Chapter leader, New York). MoMo network can be seen as a platform for innovating and commercializing innovations by relying on the network and combining different kinds of knowledge. According to all the chapter leaders, real innovativeness is seen to lay in contacts between different kind of people with different kind of approaches and motivations to participate: *"All the levels from students to operators [are represented]... Innovation happens when there are lots of people meeting with different backgrounds, and a free beer"* (Chapter leader, Norway). Of course, there may be various ambitions related to participating the network, but cooperation should not benefit one party more than the other. Everyone should have a possibility to enhance one's business by utilizing this platform. Many interviewed chapter leaders consider the possibility to connect people, knowledge and organizations across national boundaries as an important feature – and a one that could not exist without neutrality. *"If somebody contacts him and he is a MoMo activist too, it is totally different then"* (Coordinator, Finland, describing MoMo participants contacting each other for information regarding MoMo members and knowledge assets within MoMo).

The premises and meaning of cooperation between the chapters

Connecting different actors together also relates to *cooperation between the chapters*, which influences the nature of the network and, subsequently, knowledge mobility. All in all, inter-chapters cooperation is closely linked to personal relationships and friendships between the chapter leaders (or some random connections between the participants); those who come along well tend to cooperate in the loosely coupled network with no strict structure or rules for the cooperation.

However, inter-chapter cooperation does not happen for the sake of cooperation, but certain facilitating factors are needed for cooperation that goes beyond the friendship relationships among the chapter leaders: The chapter leaders meet each other relatively frequently, but that does not mean that the chapters – let alone individual, occasional participants – would be tightly connected. Apart from few exceptions (e.g., New York chapter has collaborated with other countries), the chapters still mainly operate on their own. Genuine collaboration between the chapters might be about building up a new mission on the whole new level. The chapter leader from Vancouver puts this as follows: *"I would like us to be more collaborative, really to get to know other chapters... A lot of good ideas can come out from the global*

community... I would like to see cooperation in the international level on very specific projects, I think that it is something that was probably lacking in the past... If we want to bring MoMo to a different level, we need to have meaningful projects that again people feel I want to be part of that, let's say they want to change how people do commerce in Africa... We need projects where people can collaborate and also feel that they get rewards. There is not cooperation for the sake of cooperation, and that is why we need bigger projects".

Supporting cooperation between different groups seems to be one of the core future challenges in the MoMo network. However, growing the infrastructure, developing the routine premises (like common online system), and setting the ground rules for cooperation are needed before things start to happen on a global scale. In the first phase a strongest need for cooperation may be between the chapters in different geographical areas, who are dealing with similar kind of questions, needs, and challenges. Germany, for example, already has inter-chapter collaboration within the national boundaries. *"Maybe London is not so much interested in what is happening in Peking. On the other hand there are chapters which are established because people in Venezuela want to get some global input, or because there is no own research and development in Dubai, and that is why we want to create global linkages"* (Coordinator, Finland).

In the long run, cooperation would enable certain level of specialization among the chapters (that is, more deliberate specialization than now emerges naturally based on the motivations and characteristics of the chapter leaders). Combining these strengths in the global community would further raise the global network to the whole new level of innovativeness by combining the local resources.

Common identity and trust as the facilitators of knowledge mobility

Local autonomy, global coordination, neutrality of actors and cooperation between the chapters as orchestration activities have an effect on the possibilities to achieve *common community identity*, which is prevalent in facilitating knowledge mobility. This aspect is strongly promoted within MoMo. Chapter leaders recognize that MoMo is "a grass-root organization", "open community", "open forum", a "learning place" and a place for networking for all of those involved: *"This is for the people by the people kind of thing"* (Chapter leader, Tokio). The level of social integration is high in the system. In line with this, one principle that has been made central in MoMo is that people should come as themselves, not as firm representatives. This is also shown in the fact that business secrets are respected and not talked about in MoMo, but the more common wisdom and visions are quite openly discussed: *"That is one of the rules if you want to talk in MoMo NY anyway... you take your corporate hat off... you have to talk openly... because this is not an industry body"* (Chapter leader, New York). While this partly relates to maintaining neutrality and integrity, it also has more far reaching importance. Thanks to this principle, the Momo participants identify themselves first of all as members of the MoMo group – individuals interested in developing mobile technologies and services – not as company representatives with company goals. Consequently, in MoMo substance (e.g., promoting mobile technology and innovation) is more important than commercial success. This attitude is also an important source

of motivation for many considering voluntary work that forms the core of MoMo. As the MoMo coordinator in Finland notes: *“When you represent some company, for example in the standard development, you will go to the meeting because you are the member of the organisation and you understand these issues. You don’t go there because ”I definitely want to go there”, but this [MoMo] is the place where I want to hear and share views”*. Besides, informality plays an important role: compared to many other networks, *“MoMo is more global and more fun”* (Chapter leader, Tokio).

Surely, achieving the common identity and network cohesiveness may be negatively affected by the wide range of nationalities (i.e., different, geographically dispersed and locally oriented chapters), different organizational contexts (the participants come from start-ups, operators, mobile technology, media, music industry, game industry, non-profit organisation...), and diverse professional backgrounds and related motives (there are managers, technology experts, marketing people, financiers, researchers, students, etc. in the meetings), *“We welcome students, universities to come with us... We have speeches about everything under the sun... Web.2. mobile gaming, mobile entertainment...”* (Chapter leader, Vancouver). Building common identity may be challenging in the international context because of the variety of cultural norms, and sometimes the local chapter is closer to the participants than the worldwide MoMo (for example, in Germany MoMo chapters in different cities are organized in the form of association and they form a quite closed entity with no strong links abroad). Besides, adjusting to the principles may in some cases be slightly challenging. For example, in Japan, people inherently tend to identify themselves very strongly to the company they represent (even before their family). However, strong and common “MoMo culture” and informality of the events soon takes over. Part of this is explained by the fact that there are often participants from foreign countries in the meetings, but still, the achieved atmosphere cannot be explained solely by that. (Chapter leader, Japan). Hence, in the prevailing situation the differences of participants do not always fight against the cohesiveness of the network, but more or less enrich the activities. *“Different people get different things from the community, but we just have to understand that there are different things, and that’s fine”*. (Founder member of the network, Finland).

In sum, it seems that when the network possesses a relatively clear common vision and agenda, common jargon “above” language and organizational limits, and common knowledge base related to the specific business area, conditions are facilitative for common identity building and efficient knowledge mobility. However, in order to reach genuinely open platform for discussion, trust is needed to complement common identity.

A *trusting atmosphere* creates a fertile substratum for open communication and sharing ideas. In MoMo, open source ideology is one of the building blocks of the community culture, even if its adoption is not self-evident. Especially those who come from the companies with a strong “NDA culture” sometimes tend to hold back (for a while at least) because old habits stay hard. Still, many are able to see the benefits of open communication: *“The whole thought of controlling knowledge flows is wrong. In the kind of community and open environment, if you start to limit it and control it... This is also the kind of thought which is not clear for many companies, that it is good to share because others will share to you as well. If you nestle yourself, you do not*

communicate and they won't tell you, you'll stay a bit out." (Founder member of the network, Finland). Indeed, many actors trust in achieving success through openness: They believe that by sharing knowledge, they can make others more willing to give back, and the actor's influence, attractiveness, and status in the network can rise. Especially those who come from small companies or start-ups (which are used to open communication and possess an entrepreneurial spirit) are typically ready to trust other participants and share their knowledge in order to get support for commercialization from the network: *"I think that quickness and execution are the trumps in this business. Nobody's ideas are better than the others', no newer or any more miraculous. It is all about how to get others involved to the idea, and how to combine the team for that, how to get somebody interested in this. And in that case the one who is first doing it and creates a network behind the idea, he has the superior competitive edge, compared to the fear of somebody catching the idea."* (Coordinator, Finland).

However, trust does not come automatically, and it needs to be supported. This has been noted in MoMo. According to some views – even if the possibilities to create connections by using the latest technology has made new kind of social online communities feasible – the basic mechanisms of creating trust among the actors have not changed: *"You cannot build trust with thousands of people any better than earlier. You may have different kind of tools, but however, it is still "a person-to-person kind of thing"... We can always utilize technology, but those are just tools, it does not compensate the need to build up the relationship and trust"* (Founder member, Finland). Therefore, adequate coordination, adequate autonomy, neutrality, and cooperation need to be promoted and used to build trust.

Discussion and conclusions

As Neumann and Holzmüller (2007, p. 111) note, the "general innovation literature offers a multitude of success factors which determine innovation"... "as well as a long list of characteristics of innovative organizations". However, discussion on these issues in innovation networks and communities – especially from the management point of view – is still scarce (Dhanaraj and Parkhe 2006; Ritala et al. 2012).

In order to address this gap in existing knowledge, we examined the focal themes emerging in international networks and communities that have the potential to generate new innovations. In particular, we put emphasis in studying the premises of orchestration and orchestration activities to influence knowledge mobility in such complex networks. The literature review and especially the conducted exploratory case-study revealed some specific issues and allowed making some analytical classifications. Most notably, there seem to be (1) certain prerequisites and (2) specific orchestration activities that affect the level of knowledge mobility as a central area of network orchestration. Furthermore, the orchestration activities are connected to each other. The following illustration (Figure 1) summarizes our findings regarding the most frequently emerging factors and their relationships.

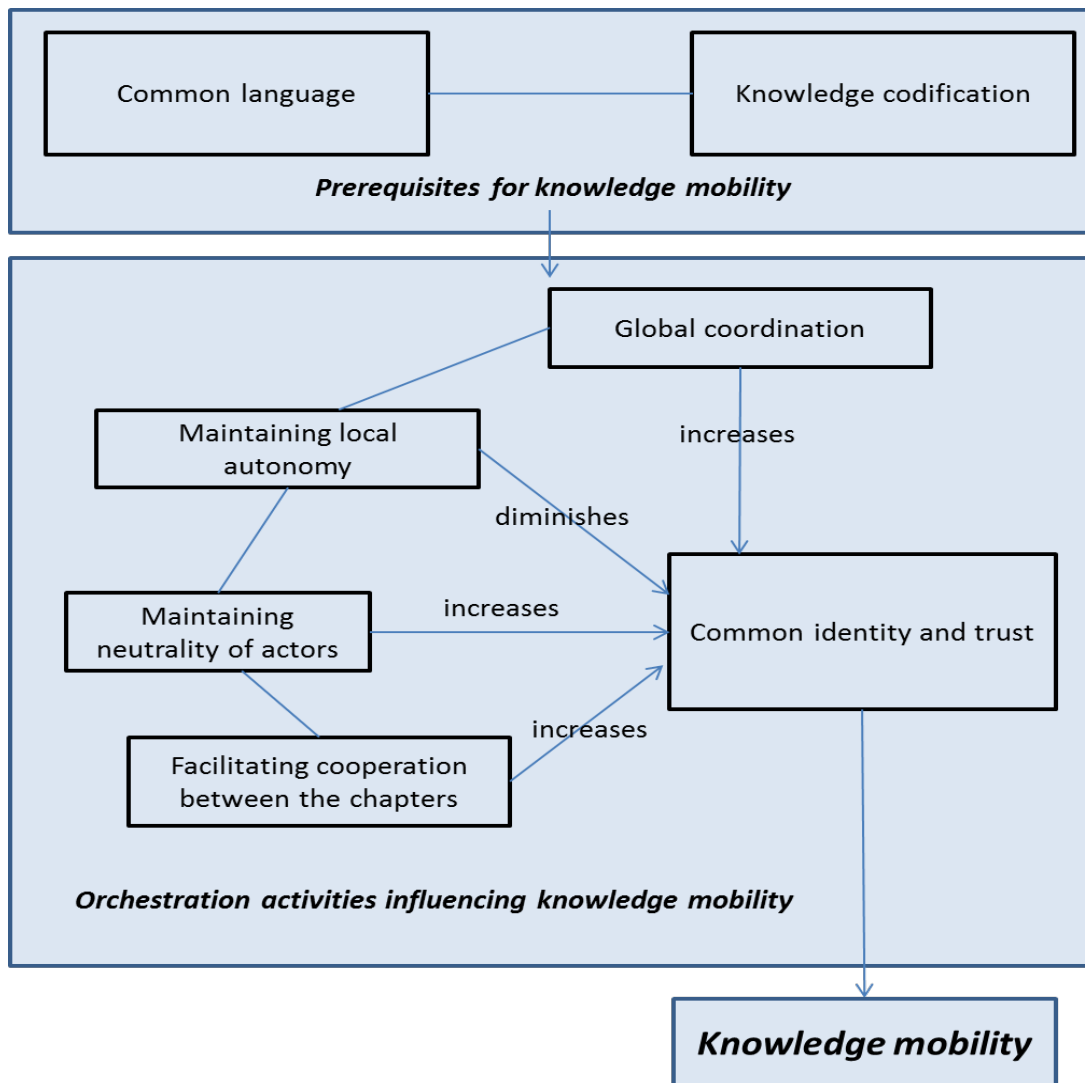


Fig. 1: Prerequisites and orchestration activities influencing knowledge mobility in international innovation network.

Based on our findings, knowledge mobility as an area of orchestration in global innovation network builds on such *prerequisites* as *knowledge codification* and efficient identifying and capturing of relevant knowledge that can increase know-how in particular areas (see Garg et al. 2003; Tu et al., 2006). Indeed, efficient and rich documentation in *common language* (consider, e.g., online platforms and communities, common websites that are independent of time differences or national boundaries; see, e.g., Bieber et al. 2002) can diminish excessive stickiness of knowledge and bring down cultural barriers. In the case-network – or innovation community – relying on English language makes it easier to disseminate knowledge worldwide not only in the MoMo meetings but also through websites. This, for its part, increases the visibility of latest ideas and development directions.

Nevertheless, excessive emphasis should not be put on communication technologies when promoting innovative ideas and practices in international settings is targeted. Instead, many *orchestration activities*, including organizing face-to-face contacts, are needed in order to build up a sufficient level of *trust* for facilitating knowledge transfer between the actors (see also Ebert 2009). In other words, there should be a balanced choice of different communication means (Büchel and Raub 2002). In addition, *long-term interactions* between the network members located in different countries are needed in order to foster absorptive capacity and allow overcoming excessive causal ambiguities (see Breschi et al. 2000; Cohen and Levinthal 1990; Garud and Nayyar 1994; Montobbio 2003). In that process both formal and informal interaction (i.e. *balancing coordination and autonomy*) is needed (Büchel and Raub 2002; Kale et al. 2000), together with teaching and close collaboration (e.g., between organizations with close geographical proximity or even in the global level) (see, e.g., Moenaert et al. 2000). Regarding the MoMo example, the chapter leaders within MoMo meet both face-to-face and virtually, formally (when the global meetings and peer awards are organized) and informally, but the communication between the (ad hoc) participants may be more limited. In such a setting, network stability is on the shoulders of the chapter leaders, which could also affect knowledge mobility. On the other hand, the participant turnover keeps the network dynamic enough for innovation activities to emerge (Crossan and Inkpen 1995). Furthermore, collaboration between the chapters geographically close to each other takes place already, and there are hopes that such inter-chapter collaboration would become more typical across MoMo.

In addition to common language, access to knowledge through different means, and certain trusting and stable connections, our study clearly shows, how important a role the *common identity* among actors plays as a knowledge mobility facilitator in this kind of international network (see also Dyer and Nobeoka 2000). The strong identity facilitates knowledge mobilisation in situations where people come from different business contexts and cultures, and have a variety of professional backgrounds. Especially *neutrality and integrity* present within the MoMo network seem to improve common identity and trust, and hence openness can be taken to the level where innovativeness is really supported: with company direction such discussion might not be possible.

These notions give start to certain managerial implications. It seems that common language and codification form the basis for utilizing different orchestration activities. The orchestrator(s) of the network might want to be slightly stricter in establishing these. The orchestration activities (maintaining neutrality and integrity, facilitating coordination, and balancing between local autonomy and global direction), on the next level, need to be conducted in a manner that facilitates building of common identity and trust. It is important to keep setting rules and structures to the minimum, and put effort in concentrating on the substance. In other words, successful coordination calls for orchestrators that are more concerned of the wellbeing of the innovation network or community than making money out of it.

While this study only focuses on limited points of view and surely does not tell the whole story, it provides a starting point for understanding the premises of knowledge mobility in community-like, international networks that promote innovativeness and innovation. Further research will undoubtedly show the importance of aligning the

network type and orchestration activities, and describe those in a more detailed manner. Also, considering other aspects of network orchestration than just those related to knowledge mobility – and the linkages between them – is a topic for further studies. Also quantitative research may provide more information on the phenomenon. We believe that this area still is under-researched, and that the limits of our study, subsequently function as new avenues of relevant research.

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