

Knowledge transfer to partners: a firm level perspective

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Abstract

Purpose – Firms at the center of an organizational network may benefit from educating and building up competencies of their partners. For that reason, centers often seek to transfer knowledge from the center to partner firms. They even set up systems of inter-organizational knowledge transfer to plan, to coordinate, and to control such transfers on a firm level instead of managing single knowledge transfer projects individually. However, little systematic attention has yet been paid to such systems on a firm level. This paper seeks to analyze the managerial mechanism to decide what knowledge to transfer to what partners.

Design/methodology/approach – To address this gap, data were gathered on nine leading multinational center firms. An explorative approach was adopted using case study research to look at the characteristics of network centers, network partners, knowledge, transfer channels, and programmes.

Findings – It was found that center firms offered knowledge transfer products to partners and set up portfolios of knowledge transfer programmes targeted at specific partner groups. There is further elaboration on fundamental decisions on the programmes' design, communication, access, and pricing.

Originality/value – The research contributes to shed light on how center firms manage knowledge transfer activities from the center to partners on the firm level and how they structure it in the form of programmes. Therefore, the paper does not focus on the management of knowledge transfer in particular partnerships or networks, but also considers interdependencies between individual knowledge transfer initiatives.

Keywords Knowledge management, Knowledge transfer, Multinational companies, Partnership

Paper type Research paper

1. Introduction

Building and strengthening relationships to partner firms strongly influences a firm's performance (Dyer and Singh, 1998). Particularly firms with a central position in an organizational network may profit (Spencer, 2003). They can reinforce their position and achieve their business objectives by creating value for partners and thus attract and strengthen partners to compete with firms in rival networks. As knowledge can be considered the dominant resource to create competitive advantage (Grant and Baden-Fuller, 1995), network centers create value by actively transferring knowledge from the center firm to partner firms. As a result, they attract new partners and enable them to collaborate as well as strengthen existing partners by developing their skills and competencies (Lorenzoni and Baden-Fuller, 1995).

However, partners are heterogeneous. Partnerships may cover vertical and horizontal collaborations along the entire value chain. Their importance for achieving center firms' business objectives and their demand concerning knowledge provided by centers may vary widely. Characteristics of partners differ, as can their motivations and the roles they play within a network (Inkpen, 1998). However, as knowledge is of little value if not supplied to the

Received 3 November 2009
Accepted 26 January 2010

right partners (Teece, 2000), a fit between knowledge, transfer channel, and partner characteristics is required. With many diverse partners, this is very complex. Thus, managers of network centers need to establish a mechanism that supplies the right knowledge to the right partner via the right channel. However, knowledge transfer is not free of costs. Thus it should be carefully planned and controlled considering both its benefits and its costs.

Managing and integrating inter-organizational knowledge transfer on a firm level has advantages compared to managing knowledge transfer projects independently from each other. Knowledge can be transferred at lower costs or higher quality compared to transfer in independent projects. Advantages result from systematically managing knowledge transfer in the relationship to partners across functional or organizational barriers of a center. Network centers use facilities, e.g. classrooms, specifically designed to carry out inter-organizational knowledge transfer that are shared across knowledge transfer projects. Common technologies are used across transfer projects, e.g. online learning platforms. Furthermore, skills in integrating knowledge into transferrable products, e.g. lectures, can be leveraged. Experience gained in one knowledge transfer project may be used in subsequent transfers. For these reasons a network center needs to design and implement a system of inter-organizational knowledge transfer that integrates, coordinates, and structures knowledge transfer initiatives on a firm level.

Prior empirical research on inter-organizational knowledge transfer has mainly investigated two-way knowledge exchanges between firms or the way how one focal firm may learn from its partners (Van Wijk *et al.*, 2008). For example, Mowery *et al.* showed how the participation in an alliance affects capabilities of focal firms (Mowery *et al.*, 1996). Yet, only few empirical studies have focused on focal firms that deliberately transfer knowledge to partner firms. For example, Dyer and Hatch demonstrated that firms can achieve competitive advantage as a result of knowledge transfer to their suppliers (Dyer and Hatch, 2006). While prior studies have focused on management of knowledge transfer in single projects or in particular alliances or networks, they did not look at the management of interdependencies between knowledge transfer initiatives of a firm. Consequently, little is known about the phenomenon of network centers setting up knowledge transfer systems. These systems serve to integrate and coordinate planned knowledge transfer to partners on a firm level and help to structure knowledge transfer in programmes that are targeted towards specific partner groups.

The approach to structure knowledge transfer in programmes can be compared to business schools. These have set up multiple programmes for different groups of students, among others MBA, PhD, or executive education programmes. Each programme needs to be planned and controlled and varies in the knowledge content and teaching approach, i.e. the knowledge transfer products. They further comprise rules that specify admission requirements or whether courses are required or elective, among others. While participation in programmes of business schools is limited in time, this is not necessarily the case for partner firms enrolled in programmes of centers firms where participation may be indefinite.

Since systems of knowledge transfer to partners on a firm level and programmes with predefined rules to configure such knowledge transfer have, to the authors' knowledge, not been investigated before, the purpose of this paper is to describe and structure the phenomenon. To do so, the authors investigate inter-organizational knowledge transfer systems of nine case firms by studying center, knowledge, transfer, partner, and programme characteristics. They explore approaches to the configuration of transfers and to the structure of programmes. Further, they identify context factors that influence decisions on knowledge transfer systems.

2. Theoretical background

It has been shown that the structure of inter-organizational partnerships influences knowledge transfer. In a network structure, central firms have a positive impact on knowledge transfer. Network centers are well connected with other network members and have considerable effect on the overall network (Iyer *et al.*, 2006). Most importantly, centers

enjoy a knowledge advantage, for example in terms of knowledge about network partners and the design and management of the networks themselves. This puts centers in a unique position that allows them to further strengthen the network through the transfer of knowledge from the center to partners, and to eventually benefit from the ability of network partners to compete against firms in other networks. Therefore, center firms that are actively planning and fostering the transfer of knowledge with a predefined offering to all partners, in contrast to unplanned knowledge transfer that emerges in the course of a partnership, are in the focus of the authors' research.

Knowledge transfer can be described with numerous characteristics. Based on elements of a knowledge transfer system, the authors structure these along five categories. In this study, the characteristics of the center as the sender, the body of knowledge itself, transfer channels, and partners as receivers are detailed. Moreover, a sender's managerial mechanism to configure and coordinate knowledge transfer can also be described by characteristics. They constitute an additional category of characteristics and are a particular focus of this research (see Figure 1).

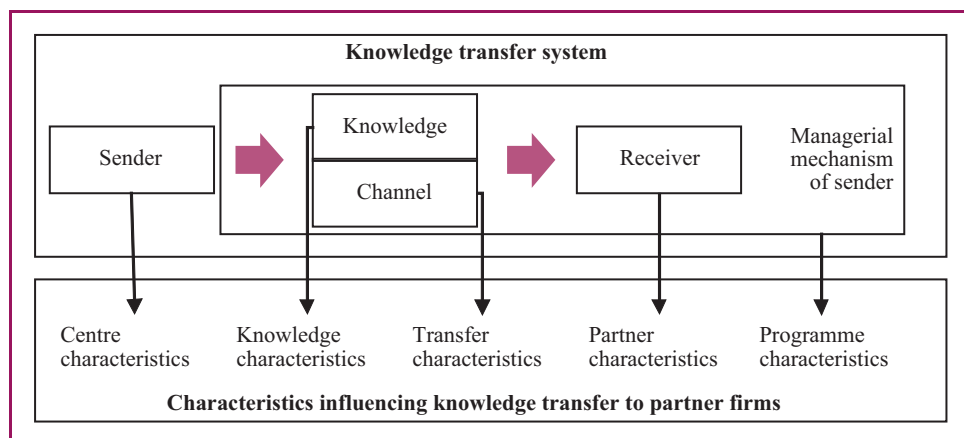
Center characteristics

When considering network center characteristics, managers should keep uppermost in their minds the business objectives of the center itself. Firms have many different objectives with varying time horizons when entering and participating in networks (Koza and Lewin, 1998). One elemental objective is to align firm business strategy with network strategy (Koza and Lewin, 2000). Likewise, knowledge transfer strategy must also be aligned with network strategy. Thus, centers are characterised by their business and network objectives and their efforts to plan and control transfer from the center to network partners. The part that knowledge transfer can play in achieving these objectives differs according to the knowledge intensity of the industry that the center is active in. Apart from these characteristics, number and diversity of partners that the center transfers knowledge to, i.e. receivers, is an important characteristic as it influences which learning technologies the center should use (Bates, 2005) or how to best communicate with partners. Though declining in importance in today's wired world, the geographic distance between the center and partners still has an impact, notably in that it limits teachability of knowledge and increases the time needed for the transfer (Zander and Kogut, 1995).

Knowledge characteristics

Knowledge is tacit or explicit. The degree of tacitness, and how quickly the body of knowledge is changing, determine which modes of collaboration are most suitable, knowledge transfer effectiveness (Khamseh and Jolly, 2008) as well as the speed at which knowledge transfer can be carried out (Chen, 2004a). For example, it may be well worthwhile spending time and effort on developing a sophisticated e-learning module if the

Figure 1 Characteristics of knowledge transfer in large networks



knowledge is stable over time. As highly personal tacit knowledge is hard to formalize, it is best transferred via long term visits, personnel transfers, or personal communications (Inkpen and Dinur, 1998). This poses specific challenges to transfers in an inter-organizational context. Moreover, the content that is to be transferred, i.e. whether knowledge differs in that it relates to products, markets, or processes, influences decisions on knowledge transfer.

Transfer characteristics

With regard to knowledge transfer from the center to its partners, managers must also consider the design of the channels over which knowledge is to be provided. When is knowledge best provided over a computer network and when is it preferable to transfer it in a traditional way, i.e. not via a computer network (Changchit, 2003)? Particularly, transfer channels vary in the possibility to interact with participants during knowledge transfer. Further, the ease to individualize knowledge transfer, i.e. customization of knowledge transfer to partners, and to track the learning progress differs across channels. However, when centers simultaneously provide multiple transfer channels, managers need to decide on the degree of integration between these channels.

Partner characteristics

While primarily trying to meet the objectives of their own firms, center managers also attempt to address the needs of network partner firms (Chen *et al.*, 2006). The resources center managers devote for doing so may depend on the relative size and strength of partner firms and the scope of value chain activities involved in the collaboration with the center. Managerial decisions are also strongly influenced by the duration and stage of development of a partnership. Research has shown that more knowledge is transferred in partnerships where the partner is perceived to be trustworthy (Dirks and Ferrin, 2001). Firms are more willing to transfer valuable and sensitive knowledge to partners they trust (Andrews and Delahaye, 2000). Particularly, the transfer of tacit knowledge requires a high trust context (Inkpen and Dinur, 1998; Becerra *et al.* 2008). Managers also consider the level of a partner's related expertise, degree of motivation, and flexibility. For instance, scheduling transfer times and meeting deadlines is important to the partner (Markus, 2001). In addition to characteristics of the partner firms, center managers look at the particular job functions of individuals or positions they hold within a partner firm.

Programme characteristics

Based on its situation, the center firm needs to decide what knowledge should be transferred over what channels to what partners. To do so, a managerial mechanism needs to be in place to configure inter-organizational knowledge transfer. Prior research has shown that the configuration of these characteristics should fit the context in which knowledge is transferred (Hutzschenreuter and Listner, 2007). For centers with a number of different network partners, those contexts can be highly diverse. In order to achieve the crucial fit between configuration and context, the center might carry out individual transfer projects designed specifically for each partner contingent on their particular characteristics and needs. Since the knowledge transfer is designed specifically to fulfil the exact requirements of each partner, thus to contribute to the partner's business processes, the benefits are usually greater (Chen, 2004b).

In contrast, the center might choose to standardise knowledge transfer to a certain degree, i.e. to configure certain knowledge transfer characteristics in advance. A knowledge transfer product is an offering to transfer certain knowledge over a predefined channel. In the case of standardised knowledge transfer products, such as new product information that is taught in classroom training, text books, course material, or cases, particular knowledge and transfer characteristics are fixed without knowing the exact transfer context. Standardised delivery can be carried out at lower cost as the center can make savings both in planning and in knowledge transfer efficiency (Levin and Cross, 2004). The downside is that standardised knowledge transfer neglects differences in the context, e.g. in the situation of partners and in the value they create for the center. The challenge for center managers in large networks is to strike a balance between potential savings on the side of standardisation against the value

knowledge transfer can create for the center, value that could be augmented by individualized training.

Managing the configuration of knowledge transfer can be done in the form of a programme. A knowledge transfer programme predetermines a set of rules according to which knowledge transfer is configured for all partners enrolled in that programme. Based on specific characteristics, like partner size, these rules may specify how knowledge transfer is configured, in an entirely individualized or partly standardised way. If these rules are known to partners, they also know what knowledge transfer they will receive before joining the programme. Programme rules also may define dependencies between knowledge transfer characteristics. For example, whether particular knowledge content is offered to partners may be dependent on certain partner characteristics, like the present duration of the partnership.

3. Method and data

As the authors' research question is explanatory in nature and focuses on contemporary events, and as managerial decision-making, the object of their investigation, cannot be manipulated, case study research is highly appropriate (Yin, 2003). Furthermore, as far as the authors know, their research question represents a topic previously untouched in the literature. Therefore, they decided to employ case study research, following the process outlined by Eisenhardt (1989), to investigate what approaches network center managers follow when deciding on what knowledge to transfer, to whom, and how, for the benefit of researchers and practitioners alike.

Sample

To select the case firms and not to be overwhelmed by firms that potentially might be worth investigating, the authors first defined their research question and derived criteria for the selection of case firms (Mintzberg, 1979). First and foremost, they considered only firms positioned in the center of a network and that consider management of network partners as a key to achieving competitive advantage. The authors concentrated on firms that had been particularly successful in developing their networks as indicated by their market leadership and their large partner network which often comprises several hundreds of partner firms. These partners are usually smaller and asymmetric to the focal firm. In particular the authors included focal firms in knowledge-intensive industries to provide cases of firms for which knowledge transfer is particularly important. Firms were selected from various industries in order to control for environmental factors and to incorporate a range of industry practices. Partners of the case firms may be very diverse and areas of collaboration may cover research, joint development, operations, sales, marketing, service, and development of complementary products. To control for size differences the authors limited the target population to large multinational corporations and to firms headquartered in Europe or the USA. Further details about the authors' approach to selecting case firms are presented in the Appendix.

Analysing too many cases can become unwieldy because it increases complexity. The number of cases of this study also had to be limited given its rich research setting and the number of characteristics under investigation. As random sampling of cases is rather uncommon, the authors deliberately chose cases representing "extreme situations" and "polar types" (Pettigrew, 1990). The selected firms represent polar types as they have a particularly large number of partner firms and considered knowledge transfer programmes to be a key factor in their network strategy. The authors conducted a preliminary review of the knowledge transfer programmes of selected firms using the information given on their websites. At the end of this process, the authors contacted the firms that seemed particularly promising. Nine agreed to participate, to make a considerable time commitment, promised access to documentation, named a firm contact, and to provide ready access to a designated interviewee.

Data gathering

When conducting interviews and analysing documents, the authors used multiple sources to increase the validity and reliability of the data. First the authors collected definite data on the knowledge transfer of the firms by reading the information that these provided their partners with. As programmes must be explained to partners in detail, the authors were able to gather extensive material on the knowledge transfer of centers. A contact person in each firm provided the internal documentation they needed. In case of a firm having more than one knowledge transfer programme, they focused particularly on that programme with the largest number of registered partners.

The authors analysed knowledge transfer products, like trainings, knowledge certifications, or learning communities, which are offered to partners for sale or for free and the rules of the programmes, including requirements and incentives. They studied these in terms of center, knowledge, transfer, partner, and programme characteristics.

The authors complemented their analysis of documents with two interviews per case, totalling 18 semi-structured interviews each of which lasted an hour or more. Following a key informant approach, they interviewed nine managers, one from each case firm, who were responsible for knowledge transfer activities of the firm. They were especially interested in eliciting from the interviewees the purpose and rationale behind their knowledge transfer programmes. They also used the interviews in part to confirm the early findings from the analysis of secondary material and sources. In addition to these nine interviews, in order to have a better understanding of knowledge transfer programmes from the perspective of network partners, the authors also conducted interviews with the managing directors of three network partner firms and, in the six partner firms where this was not possible, with the center firm managers responsible for partner support. The goal in these interviews was to identify and clarify the requirements, expectations, and pay-offs to partner firms of participating in knowledge transfer programmes. Finally, in order to ensure the correctness of the data, the authors asked the interviewees to review the data and findings of the single case studies of their respective firms. Further information about the data gathering is presented in the Appendix.

4. Analysis of cases

While the two phases were not totally separate, in general, the authors first gathered the data and then analysed the cases. In a similar vein, they looked at the inter-organizational knowledge transfer of each firm individually, gaining familiarity with the data and developing an understanding of the relationships between the characteristics under investigation. This within-case analysis comprised a detailed narrative description for each case firm. This was central to the generation of insights (Pettigrew, 1990) as it helped to structure the extensive data that were gathered.

Based on the collected data, the researchers first evaluated the cases individually on the knowledge transfer characteristics. It was not until they had a thorough understanding of each firm's transfer that they further condensed the core data into a common format for each case. This was required for data of knowledge transfer characteristics that could not easily be compared across cases. For example, a high, medium, and low classification was used to code the data on the diversity of knowledge content of the firms' programmes. Programmes were classified as "Low" when the knowledge transfer products focused on one type of knowledge content only. This was the case for the programme of case firm Euro-3 that focuses on transferring product knowledge only. "Medium" means a focus on two types of knowledge content as it is the case for the programme of firm US-4. "High" cases are those in which the programme focuses on 3 types of knowledge content as does the programme of case firm US-1.

Subsequently, the authors created a series of matrices to structure the data. This allowed for a case-oriented as well as variable-oriented analysis (Miles and Huberman, 1994). In these data displays, the researchers searched for patterns across firms and variables to identify relationships and common structures, issues, and approaches to the management of

knowledge transfer. To increase the validity of the findings and to avoid coming to premature conclusions, the researchers put great emphasis on case-to-case comparisons and identifying and explaining similarities and dissimilarities across cases and on thinking about rival explanations (Yin, 2003). The authors describe in the following sections their cross-case analysis findings, regularly referring to single cases and quoting interviewees when appropriate.

Knowledge transfer systems of all center firms that participated in this study are structured in the form of programmes. Centers have a management system in place to define a portfolio of programmes and plan and control each programme. Such programmes are targeted to meet the particular demands of specific groups of partners concerning knowledge transfer. For each programme, a set of knowledge transfer products is defined that is offered to the enlisted partners. A programme further comprises rules that specify conditions under which knowledge is transferred to partners. The basic structure of the knowledge transfer systems of the case firms is shown in Figure 2.

4.1 Management system of knowledge transfer to partners

Defining a portfolio of programmes. When defining a portfolio of programmes centers need to determine how many programmes to provide, what criteria to use to distinguish programmes, how to manage programme overlaps, and which partners to admit to the programme. The authors detail each of these characteristics in Table I.

A fundamental decision center managers make is on the number of knowledge transfer programmes to offer to partners. Centers may collaborate with a set of highly diverse partners. The partners in the networks differ with respect to their characteristics, their knowledge requirements, and the benefits they expect from knowledge transfer. For this reason, it is essential that center managers understand the needs and expectations of partners in the network if they are to determine if, and when, there should be a separate knowledge transfer programme. Just as customer segmentation is common practice in marketing, center firms can thus segment partners based on their characteristics. Multiple knowledge transfer programmes can be set up to address particular segments, be it in terms of the number and type of partners for which they are designed, or the number and type of standardised knowledge transfer products offered. Specific programmes can also

Figure 2 Structure of knowledge transfer systems

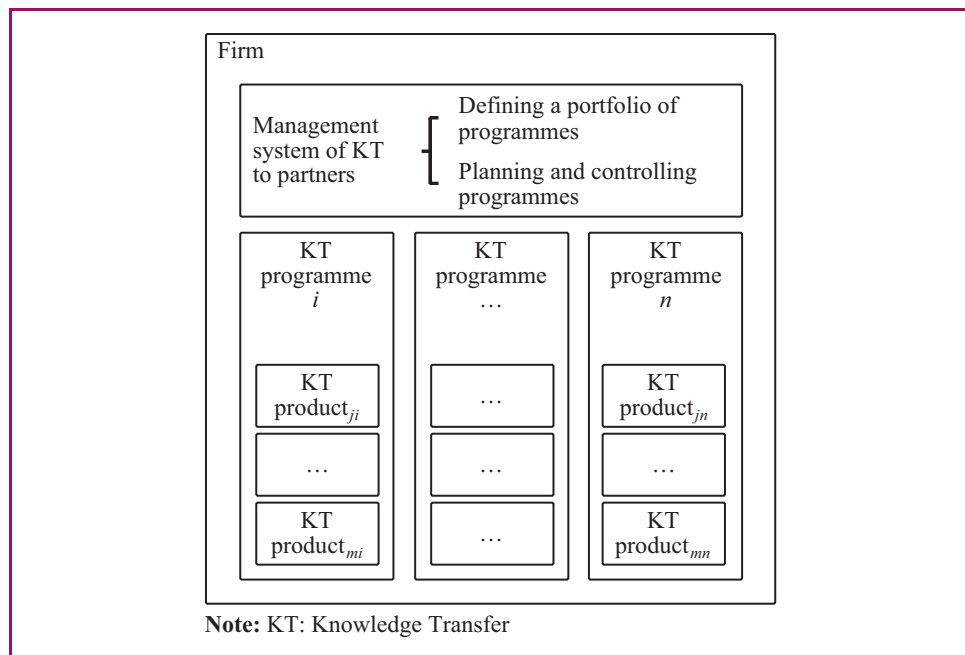


Table I Extract of case data on management system of knowledge transfers to partners

Category of characteristics	Characteristics	Data sources	US-1	US-2	US-3	US-4	Euro-1	Euro-2	Euro-3	Euro-4	Euro-5
Defining portfolio of programmes	Number of programmes	Interviews	1	3	5	1	1	21	1	1	3
	Criterion to differentiate programmes	Programme documentation	None	Partner's business model	Value chain activity of partnership	None	None	Value chain activity of partnership, region, product	None	None	Value chain activity of partnership
Programme	Programme overlaps	Programme documentation, interviews	No inconsistencies	Minor inconsistencies	No inconsistencies	No inconsistencies	Inconsistencies	Minor inconsistencies	No inconsistencies	Minor inconsistencies	No inconsistencies
Programme	Programme admission	Programme documentation	Available for all partners	Available for all partners	Available for all partners	Mandatory for all partners	Available for all partners	Available for all partners	Available for all partners	Available for all partners	Available for all partners
Planning and controlling programmes	Degree of centralisation	Organisational chart, documentation on organisational units, interviews	High (one organisational unit responsible)	High (one organisational unit responsible)	High (one organisational unit responsible)	High (one organisational unit responsible)	Low High (multiple organisational unit responsible)	High (one organisational unit responsible)	Low High (multiple organisational unit responsible)	High (one organisational unit responsible)	High (one organisational unit responsible)
	Time horizon of objectives	Written company documents on targets	Mid- and short-term	Long- and mid-term	Mid- and short-term	Mid- and short-term	Long- and mid-term	Mid- and short-term	Mid- and short-term	Mid- and short-term	Long- and mid-term
Center	Performance measure	Interviews, company reports on partners, tracking options in knowledge transfer products	Knowledge transfer usage and outcome	Knowledge transfer usage and outcome	Knowledge transfer usage and outcome, and partner performance	Knowledge transfer usage and partner performance	Knowledge transfer usage	Knowledge transfer usage and outcome	Knowledge transfer usage and partner performance	Knowledge transfer usage and outcome	Knowledge transfer usage and outcome
Center	Objects of analysis	Interviews, company's reports on partners	Network and partner firm	Network and partner firm	Network, partner firm, and individual	Network, partner firm, and individual	Individual	Network, partner firm, and individual	Network and partner firm	Network and partner firm	Network and partner firm

be designed to account for differences that exist across countries or regions. Case firm US-2 differentiates its three programmes based on the business model of partners. It collaborates with independent software vendors, original equipment manufacturers, and IT services companies and designed separate programmes for each type of partners. In contrast, Euro-2 uses more than one criterion to differentiate its programmes. It offers product and region specific programmes as well as programmes that are specific to the value chain activity of the collaboration with partners, like development, sales, or service programmes.

In either case, a fit between configuration of knowledge transfer and context is not achieved through coordination by the center, but by partners choosing which programme to join and which knowledge transfer products to select based on their specific context. However, multiple programmes also have a downside. They increase complexity and require coordination between them to avoid inconsistencies and unwanted redundancies. US-1, for example, had had an unsatisfactory proliferation of its knowledge transfer programmes after which it decided to integrate its activities into one single programme. Considerable effort went into designing a structure flexible enough to serve all its different partners. Euro-2, on the other hand, has more than 20 programmes.

Especially when knowledge transfer involves separate organizational units, achieving consistency is a significant challenge. As the senior vice president of Euro-1 put it, "Again and again, it happens that other departments produce their own knowledge transfer products and distribute them to partners on their own. That is highly problematic for us. First of all, it confuses partners to receive content from different sources and to different conditions. That does not make a professional impression. Also, partners are not familiar with the format of the products. What's more, we [a organizational unit dealing with knowledge transfer on a firm level] are hampered in identifying needs for knowledge transfer and planning it because often we do not get noticed about transfer from other departments in time or even at all."

Programmes are usually available to all partners and these are free to join programmes. They choose to join a programme if they expect its benefit to be higher than the costs that arise. This is the case if partner characteristics, prominently the functional focus of the partnership with the center, fit with the knowledge, transfer, and programme characteristics. Case firm US-4 is an exception as its partner firms must either engage in the complete knowledge transfer programme, or leave the network or are not allowed to join the network in the first place respectively. Before they begin work, every partner employee must successfully complete a specific educational programme that includes knowledge about the products, but most importantly detailed and highly codified knowledge about how business processes have to be executed. US-4 also gives training material to its partners so that they can continuously educate their own employees, and so that training is uniform across the board. As the managing director of one the partner firms of US-4 explained, "To get new hires up to speed it takes about two weeks. And we continue to train our employees constantly. Attention to detail is really important because that's what really makes the difference. A lot of training is done on the job but we also use training material and instructional videos."

US-4 is able to follow such an inflexible approach as it is in a very powerful position *vis-à-vis* its partners. US-4 chooses this approach precisely because it wants to control partner behaviour, to ensure the quality of partners' products or services or to guarantee consistent communication of the center's brand. By prescribing a broad range of knowledge transfer, the knowledge bases of network centers and of their partners partially converge. Since partners are required to take part in the entire set of knowledge transfer products, they are not able to specialize in specific knowledge areas or to differentiate themselves through their knowledge. Hence, they are severely restricted in their ability to build or sustain a competitive advantage over other partners. Therefore, such an approach can only be followed successfully if there is no competition between partners.

Planning and controlling programmes. A system to plan and control programmes can be described by characteristics including its degree of centralisation and time horizon, the used measures, and the range of objects that are analysed. When planning knowledge

transfer activities, center managers link knowledge transfer products to specific business targets of the center, and to network targets that may further center interests. The interviewees clearly saw it as beneficial to plan and control an integrated system of knowledge transfer on a firm level instead of planning and controlling knowledge transfer initiatives individually by separate organizational units, e.g. business divisions or departments. The interviewee at US-1 describes the central planning process this way: "We have a clearly defined strategy answering how the market is essentially divided with partners and with clear targets on where we want partners to move. Here is the market, here is the industry and the micro verticals, and here are the key solutions within those micro verticals. Next, we look for white spaces and partners with skills to fill these white spaces and then offer these partners a lot of market and product information to support them."

The authors also found that having a central organizational unit in the center firm that is responsible for the production and direct supply of all of the knowledge products has a positive effect. This way, centers can bundle expertise and create synergies, e.g. by sharing a technology platform to transfer knowledge products, and can also ensure a consistent product "look and feel". Thus, compared to single knowledge transfer projects, cost savings can be realized through centrally carrying out knowledge transfer to partners on a firm level. While the managers that were interviewed agreed that having a central unit does have considerable advantages, they also pointed out that it is quite challenging to gain acceptance for one by already established, and sometimes powerful, units.

Building and developing a network of partners is a long-term strategy. Immediate performance effects on centers of providing knowledge transfer to partners are rather difficult to determine. Center firms charge for certain knowledge transfer products and thus generate direct revenues, yet the interviews revealed that center managers do not have a definite understanding of the indirect effect of knowledge transfer to partners on the financial performance of their firm. It is all the more important for centers to plan knowledge transfer and control its effect on partners on a very detailed level to get a better understanding of the underlying cause and effect chains. The cases show that the time horizon of knowledge transfer targets is often short or mid-term. Managers even look for quick returns from their investments in knowledge transfer to partners, and there is often a premium placed on immediate performance improvement. US-3, for example, provides special sales skills training that can directly affect partners' sales performance and US-1 transfers knowledge aimed at improving the management of marketing campaigns.

Useful performance measures of knowledge transfer systems entail examination of programme use and outcomes, e.g. measured by the number of certified partners, their frequency and duration of programme use, and assessment of partner performance, e.g. specialization, profitability, survival rate, or the rate of innovation of partners. The measures may refer to different objects that are to be planned or controlled. Very detailed analysis is performed by case firm US-3 that sets targets and controls knowledge transfer on an individual level, on a partner firm level and on the level of the entire network. For example, US-3 explicitly controls for partner firm profitability. It undertook an initiative with the specific aim of increasing profitability of partner firms which included knowledge-related measures that led to an average increase in profits of 12 percent of the partners. This initiative demonstrated to current and prospective partners that US-3 is highly committed to the development of the members of its network. The head of its global education effort explains further, "Our programme does a good job by keeping track of technical knowledge our partners have on an individual level. For example, we do know how many and what kind of trainings partners have attended in terms of courses and volume. The company then moves up or down the levels based on whether the people still work there or have moved to a different company. The advantage in tracking this is huge for us, our ecosystem, and also the individuals."

4.2 Knowledge transfer programmes

While a case firm may offer multiple programmes to its partners, the authors examined the programme of each case firm in detail that had the largest number of registered partner firms. In the cross-case analysis, the authors found that managers are not able to focus on all

possible knowledge transfer characteristics when deciding on the design of a programme. Instead, they learned from the interviewees that selected characteristics remain central to managerial decision-making. These characteristics deal with the programme design, its communication, the access to the programme and its pricing. The case data of the investigated characteristics of the largest programme are shown in Table II. The authors detail each of these characteristics below.

Programme design. Transferring knowledge to partners can be very costly. These costs are supposed to be offset by the value that partners create in return. However, partners differ and so does the value that they are expected to create in the course of the partnership. Partner commitment to the center and the network or the duration of partnerships varies. The degree of trust that has built up over time between a center and its partners, which has been identified as an important factor for partnership success (Uzzi, 1997), varies as well. To equally provide all knowledge transfer products to all partners would possibly lead to opportunistic behaviour on the part of partners. Some partners would receive knowledge that is not in due proportion to their importance for the center. For these reasons, the most costly products should only be provided to the most valuable partners. Differences of partner characteristics, like their perceived commitment to the partnership, their partnership performance and demonstrated trustworthiness, can be taken into account by providing access to exclusive knowledge transfer products. The design of a knowledge transfer programme should consequently differentiate knowledge transfer products according to their exclusivity, i.e. whether they are available to all network partners or only to a limited number of them, and whether their availability is open-ended or for a limited time.

By providing exclusive knowledge transfer products, network center managers offer incentives for desirable partner characteristics and usage of knowledge transfer products by partners. For instance, the center might require that a partner has a given number of trained or certified employees in order to get access to exclusive knowledge transfer products. This way a center can influence a partner's selection of knowledge transfer products by encouraging behaviour that is in alignment with center targets. The exclusive knowledge transfer products are often organized in discrete levels and requirements are put in place to attain a certain level. As the vice president at Euro-2 responsible for knowledge management put it, "Through the programme, we have very clear requirements for partners to achieve a level. And they in turn get very clear benefits based on what level they are. We have a business model that says, we expect a certain amount of return from those levels and that associates costs accordingly, thereby creating a win-win situation for us and our partners. Determination of what we get back from each level is based on both historical data and current business planning."

Over time, the knowledge that is transferred affects partners' characteristics, e.g. the closeness of the partnership can be influenced by how frequently and regularly a partner uses knowledge transfer products. Thus, partners are able to gain access to more exclusive products over the course of the partnership with the center. The programme design can be characterised by its degree of flexibility for partners, i.e. the number of distinct levels of partnership that might be attained and their range of requirements, how widely spaced these levels are, the range of rewards offered, and the degree of freedom partners have in choosing content.

In essence, a programme is more flexible when requirements are not prescribed by the center, but rather when partners are involved in setting the criteria. An often used approach is a point-based design in which partners earn points for fulfilling different requirements and the number of accumulated points determines the partner level. Partners determine what type of knowledge is transferred, the timing, and choose incentives from a selection by themselves. For example, partners might choose to receive more knowledge transfers, or they might look for marketing support as incentive. This kind of approach is described well by the US-3 manager who oversees global education, "You have to let our partners decide themselves what they want to learn, and also how they want to learn. So we offer flexibility with regard to the transfer mode and to time constraints of our partners." Further, such an approach has the benefit that centers can precisely determine the demand for certain knowledge transfer products by analysing their usage.

Table II Extract of case data on largest programme

Category of characteristics	Characteristics	Data sources	US-1	US-2	US-3	US-4	Euro-1	Euro-2	Euro-3	Euro-4	Euro-5
Programme design Programme	Number of programme levels	Structure of partner portal, programme documentation	3	4	4	1	1	3	1	3	4
Programme	Range of level specific requirements	Interviews, documentation of programme requirements	High (number of distinct requirements)	High (number of distinct requirements)	High (number of distinct requirements)	Low (number of distinct requirements)	High (number of distinct requirements)	High (number of distinct requirements)	Low (number of distinct requirements)	High (number of distinct requirements)	High (number of distinct requirements)
Programme	Range of level specific incentives	Interviews, documentation of programme incentives	High (number of distinct incentives)	High (number of distinct incentives)	High (number of distinct incentives)	Low (number of distinct incentives)	High (number of distinct incentives)	High (number of distinct incentives)	Low (number of distinct incentives)	High (number of distinct incentives)	High (number of distinct incentives)
Partner	Focus on partner firms or individuals	Documentation of programme requirements and incentives	Organisational and individual focus	Organisational and individual focus	Organisational focus	Organisational and individual focus	Individual focus	Organisational and individual focus	Organisational focus	Organisational focus	Organisational focus
Partner	Diversity of targeted value chain activities	Functions of partners, knowledge transfer product description	Medium (developer, sales, marketing)	Medium (developer, administrators, sales)	High (management, technology design, sales, support, consulting)	High (management, food preparation, sales, service)	Low (developer)	High (technical architect, developer, administrators, sales, consulting)	Medium (sales, consultants)	Medium (management accounting and legal R&D)	High (engineers, sales, service, consulting)
Knowledge	Diversity of knowledge content	Knowledge transfer product documentation	High (product, process, market knowledge)	High (product, process, market knowledge)	High (product, process, market knowledge)	Medium (product, process knowledge)	Medium (product, process knowledge)	High (product, process, market knowledge)	Low (product knowledge)	Medium (product, market knowledge)	Medium (product, market knowledge)
Communication Center	Design of partner interface	Interviews, transfer channels	One interface	Multiple interfaces	One interface	One interface	Multiple interfaces	One interface	Multiple interfaces	Multiple interfaces	One interface
Knowledge	Information about programme structure	Partner portal, website	Extensive number and content of documents	Extensive number and content of documents	Limited number and content of documents	Extensive number and content of documents	Extensive number and content of documents	Extensive number and content of documents	Extensive number and content of documents	Limited number and content of documents	Extensive number and content of documents
Partner	Partner feedback	Interviews, feedback possibilities	Highly encouraged	No	No	No	Highly encouraged	Barely encouraged	No	No	Barely encouraged
Access Transfer	Transfer channels	Knowledge transfer product description	Via networks (web-based training, online resources, learning via networks (classroom, computer-based training))	Via networks (web-based training, virtual classroom), not via networks (classroom, computer-based training)	Via network (web-based training, virtual classroom), not via network (classroom)	Not via networks (video, manuals, self-paced workbooks, classroom training, training on the job)	Via networks (source code, mailing lists or discussion forums, links built into development tools)	Via networks (web-based training, discussion forums, blogs, articles, whitepaper, newsletter, wikis), not via networks (classroom, informal meetings)	Via networks (online resources)	Not via networks (classroom, events, meetings)	Via networks (web-based training, virtual classroom), not via networks (classroom, computer-based training)
Transfer	Integration of channels	Knowledge transfer product description	High integration	High integration	High integration	High integration	Low integration	High integration	Low integration	High integration	High integration
Pricing Programme	Pricing method	Interviews, written company documents on incentives	Pricing mainly based on centers' and partners' perceived values	Pricing mainly based on centers' and partners' perceived values	Pricing mainly based on centers' and partners' perceived values	Pricing mainly based on centers' and partners' perceived values	Mark-up pricing	Pricing mainly based on centers' and partners' perceived values	Pricing mainly based on centers' and partners' perceived values	Pricing mainly based on costs or perceived values	Pricing mainly based on centers' and partners' perceived values

Yet, a flexible programme design is not always necessary. When partners are similar, their knowledge transfer needs are likely to be similar. For example, financial services firm Euro-3 generates more than 70 percent of its new business via self-employed and part-time sales staff. As a consequence its knowledge transfer programme is confined for the most part to targeting their partners' sales personnel. The partners themselves are homogenous in their characteristics and essentially differ only in the geographic area they cover. Hence, Euro-3 cannot meaningfully apply different partnership levels. It transfers product and financial market knowledge to support the sales force. But there is another dimension that can come into play and that is a partner's power compared to that of the center. Partners that are relatively powerful are less likely to accept a rigid programme that may not fully fulfil their individual needs.

Managers report that the effectiveness of such an incentive structure is heavily influenced by whether it is focused on both partners as firms and individual employees. Status levels and the associated requirements and incentives should be targeted not only at the partner firms but also their employees as individuals in order to encourage them to learn. It is further crucial that products, incentives, and requirements are in alignment at both the inter-organizational and interpersonal level. Most interviewees reported that their programme focuses on partner firm level. Four case firms' programmes offer incentives for the use of knowledge transfer products on an organizational level only and they have not considered rewarding individuals for their learning.

Programmes can further be characterised by the diversity of targeted value chain activities. Knowledge transfer products themselves are targeted towards individuals and to specific roles played by partner employees along the industry's value chain. Programmes differ in how well knowledge transfer covers those roles. When partners are relatively small in comparison to the center, training their managers to focus on industry problems and on products and activities which are expected to be highly profitable is vital. Also tracking and reporting expertise and status of training progress of partner's employees becomes more important. Case firm Euro-1 is an example of a center with a knowledge transfer programme with no diversity in its targeted value chain activities. It actively transfers knowledge to developers only. In contrast, US-3's programme targets partners involved in technology design, sales, support, consulting, and even the management of the partner firm.

A diverse programme has a broad range of knowledge content that depends on whether the transferred knowledge deals with products, markets, or processes. The center manager determines the extent of knowledge included in transfer products based on the business model of the center firm, the type of network partners, and the knowledge to be transferred. The cases show that the range of knowledge content is broad when the knowledge advantage of the center is high compared to that of the partners because the center's knowledge advantage offers more possibilities for knowledge transfer and the potential impact of the knowledge transfer is greater. While US-1 transfers product and development process knowledge, US-2 goes beyond that adding knowledge about technology, sales and marketing processes, and also about tools that support those business processes. Furthermore, US-2 transfers market knowledge about existing and potential customers, the competition, and also about other partners. A managing director of one of the partners of US-2 details why such a broad range of knowledge is so valuable, "Most of the transferred knowledge is about products and processes. Given the poor survival rate of partner firms in our industry, it is vital that partners are increasingly supported in management aspects to ensure that we are successful in the long-term. Knowledge about markets is extremely interesting and important for us. It helps us to focus on promising business areas."

Communication. A knowledge transfer programme and its structure need to be communicated to partners. For partners to decide themselves which programmes to join and what knowledge transfer products to choose, they must be aware of what is actually offered. And the case firms provide extensive information about their programmes and structure, either in written documentation or via interactive partner portals and websites. Yet, it sometimes is difficult for partners to understand and determine the value and quality before the knowledge is transferred. When it comes to deciding on communication, centers need to decide on how to increase transparency and help the partner to understand the

products while concurrently preserving the value of exclusive knowledge. Case firm Euro-4 from the pharma industry has implemented a stepwise process to gradually increase transparency of particularly complex and valuable knowledge transfer products for partners. It initially provides information on the respective products on a very high level, only. Partners accordingly have to sign agreements after each process step in order to receive information on the respective products in greater detail.

Centers try to make it as transparent as possible, which knowledge transfer products are available under what condition. Interviewees confirm that it is particularly important for partners to know who is responsible for the respective knowledge transfer products and can be contacted in case of inquiries and requests. The authors found that it is beneficial for the center to provide partner type specific or even individualized communication, if it can provide a single interface to partners. Managers face internal challenges when they attempt to implement such an interface as it requires coordinating the efforts of departments involved in knowledge transfer and in partner management. Also, for this to be possible the interface needs a system to systematically collect and access detailed information about partners and track their knowledge needs. Continuous feedback from partners to centers is crucial. Centers can encourage this by providing a communication platform. US-1 is a good example. It has built a large and active community of developers and partner firms, the advantage of which is an enhanced understanding of partner needs, more opportunities to meet them, and partner specific communication.

Access. Easy access to transfer products and ease of exchange largely affects usage. If access is unsatisfactory, partners tend to get frustrated and this diminishes their motivation to learn and actually use the knowledge transfer products offered. This is underlined by the vice president of Euro-5, "First of all, we try to make it as easy as possible for partners. They all have limited time and every time they take away from their business to get trained cost them money. That is why we try to [...] avoid complex structures and access procedures." The managers of the case firms put emphasis on the transfer method itself and in particular on whether to provide knowledge over a variety of transfer channels. With the exception of just one of them, they provide knowledge over a broad range of channels. They do so to address differences in characteristics of the knowledge that is being transferred, e.g. its tacitness and dynamism. Also a range of channels may suit differences in the characteristics of the receiver, their particular needs and level of seniority for instance. Yet, offering multiple channels also requires centers to integrate them in order to avoid inconsistencies in knowledge transferred over different channels. Computer services industry firm Euro-1 provides access to its knowledge via networks only. Its programme focuses exclusively on individuals working in software development. Developers who have obtained the highest partnership level are given complete access to the source code in every development stage and may directly contact center employees to request information and ask questions.

Pricing. Receiving knowledge from a center is valuable for partners and they are willing to pay for such knowledge transfer. On the part of the center, transferring knowledge to partners can be seen as an investment in the network with uncertain returns. And centers are anxious to quickly recover these investments, at least in part, by charging a price for the transferred knowledge. To this end, case firms charge the usage of single knowledge transfer products while there is no membership fee for the entire programme. The pricing is often influenced by the costs that incur for producing and disseminating knowledge transfer products, the perceived value of the products by partners, and the expected value of transferring knowledge for the center. As network centers strive to increase the transfer of knowledge that is particularly valuable for them, they advertise selected activities or offer them at preferred conditions, and partners seem to be influenced by such incentives.

5. Discussion

Apart from the research stream focussing on inter-organizational knowledge transfer, another stream has focused on knowledge transfer and knowledge management systems within the firm boundaries. In their study, the authors focused on the linkages between inter-organizational knowledge transfer activities and how these are managed on a

firm-level. However, linkages may also exist between inter- and intra-organizational knowledge transfer activities. The authors believe further research on these linkages would be worthwhile as by managing and integrating all knowledge transfer activities of a firm, economies of scope may be realized.

The authors' research has identified that communication in knowledge transfer programmes is an important aspect, and found that managers attempt to achieve high transparency in their programmes. To the best of the authors' knowledge this finding is new. The authors believe one explanation for this may be differences in the context of prior studies and particularly in the motivations of the sample firms for entering and participating in partnerships and knowledge transfer. In the context of this study, centers strive for high transparency since the costs of partners to search and use knowledge transfer products can thus be decreased. Almost all of the existing empirical studies on inter-organizational knowledge transfer to date either do not distinguish between the motivations of firms or they consider only the motivations for acquiring knowledge. Nonetheless these are decisive issues. Accordingly, further empirical research on firms that actively plan and offer knowledge transfer to partners is clearly needed.

In their research, the authors have analysed network centers as these usually have a knowledge advantage over other network partners. They believe that further research from the perspective of firms in other specific positions within networks, especially in a dynamic context, is a fruitful endeavour. This is especially true when it comes to adaptation of partnerships over time, a topic which has been investigated very little up to now (Contractor, 2005). How do positions change over time, and how does knowledge transfer programmes change and develop as the partnerships change over time, are promising questions for future research. Whereas the authors' research has been limited to knowledge transfer from network centers to partners, they propose further research on other knowledge transfer, i.e. from partners to the center and from partner to partner.

The authors followed Eisenhardt's recommendation and selected the firms for their case study research deliberately, rather than randomly, in order to provide examples that highlight the phenomenon in which they are interested. The authors focused on center firms that have achieved building up a large number of partnerships and that have considered knowledge transfer programmes to be an important part of their strategy. While beyond the scope of this paper, the authors believe that identifying precisely what role knowledge transfer programmes play in the success or failure of centers' attempts to manage inter-organizational partnerships is a topic well worth examining. They believe that it would be also worthwhile to further investigate how the enrolment in a knowledge transfer programme affects competitive advantage and success of partners and whether the effect varies with different approaches that centers follow.

In this study, the authors have recognized a selected set of contextual variables to be particularly important for the management of knowledge transfer to partners. For example, if partner firms are very homogenous in their characteristics, the programme design does not need to be very flexible and, for example, distinguish between different partner levels. However, the context of managing knowledge transfer has yet received little theoretical attention. Hence, the authors think that further research on contextual factors and particularly tensions that exist within the contextual locus of center firms is needed. An analysis of the contextual locus should include factors in the macrocosm, like industry volatility, technological uncertainty, or causal ambiguity, factors in organizations, like the objectives, strategies, cultures, or decision making processes, and factors concerning individuals that are involved in knowledge transfer processes. Moreover, it should include both the context of center firms as senders of knowledge as well as of partner firms as receivers. A promising approach to investigating the context of knowledge transfer in the dynamic relationship between center firms and partners is to analyse the forces that may generate tensions (English, 2001). The authors think that a deeper understanding of the tension construct within a focal firm as well as of tensions between the center firm and partners is needed.

Finally, one limitation of the methodology applied in this study is that it is difficult for researchers that are external to a firm to fully understand the complex dynamics and politics of large center firms and their relationships with partners. Researchers might be influenced by elite respondents or the vividness of interviewees (Miles and Huberman, 1994). In order to increase its reliability and validity, this study builds on data that was collected from multiple data sources for each case firm. Furthermore, we put great emphasis on thinking about rival explanations when interpreting our findings. Nevertheless, a method that may complement further research on contextual variables of knowledge transfer to partners is the process of tension analysis as outlined by English (2001).

6. Conclusions

The authors investigated the inter-organizational knowledge transfer of nine case firms, each of which is positioned in the center of its network. Knowledge transfer systems, including their programmes, were analysed. The analysis of the case firms revealed that centers have set up portfolios of knowledge transfer programmes each targeted at a specific partner group and that are planned and controlled. The authors found that center firms offered knowledge transfer in the form of products to partners. They further identified the aspects relevant to managers' decisions on programmes' design, communication, access, and pricing. Performance measures that are used when planning and controlling these programmes include knowledge transfer usage and direct outcome or partner performance. However, effects of different aspects of knowledge transfer programmes on center firms' financial performance are insufficiently understood by managers. These are long-term, and often indirect, effects on the key performance indicators of centers. Yet, today's managers often face increasing pressure to show short-term results. As in so many other dimensions, managers must resist the temptation to increase the short-term at the expense of long-term prospects. Further research on this highly relevant issue is much-needed as it would help to control investments into inter-organizational knowledge transfer and to communicate its rationale to stakeholder groups, partners, shareholders, and employees alike.

Developing and managing a partner network from the center and offering knowledge transfer programmes are typically overarching efforts that touch on a wide range of functions, product and business lines, and regions. Managers need to coordinate different internal departments, bring together diverging interests, and win the support of the top management team. As the cases illustrate, a discrete staff position for partner management and the creation of knowledge transfer products provides much-needed strength. This would also provide partners with a single interface, essential for benefiting from synergies and for avoiding the confusion that can result from inconsistent messages from changing contact persons. The implementation of such an interface requires a technological support infrastructure and tools in order to support communications with the partners and to create, store, and access knowledge transfer products.

A central approach also poses specific challenges to the development of human resources. A crucial issue with managing knowledge transfer to partners centrally is that communication barriers and tensions may arise between those responsible for inter-organizational knowledge transfer and other involved departments. This is particularly true when the focal firm crosses over multiple countries or industries. In such a case, the central unit managing knowledge transfer partners may need to deal with organizational units with diverging mindsets and a lack of cross-understanding may exist. Communication barriers and tensions may be reduced through trainings that create awareness and understanding of differences in the institutional, cultural, and economic context (English, 2001).

Developing trust is a key management issue. Centers need to be convinced that they can accomplish their targets more thoroughly and efficiently by partnering than they can on their own, and moreover that partners can be trusted with highly valuable, sometimes sensitive, resources. Hence, managers must carefully shape and adapt the corporate culture at the center. At the same time, partners need to be convinced to trust the center firm not to abuse its power to realize short-term gains or to expand into the business areas of partners.

Especially, changes in the requirements for partners to enter the network and changes in the partnership benefits should thus be handled with highest attention and care.

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Appendix. Methods

Table A1 Sample selection		
Applied criterion	Requirements for sample firms	Rationale
Network position	Network center	Focusing on a specific position sharpens the research question
Relevance of network	Key part of the strategy	Ensuring high importance of network for firm
Competitive position	Market leader	Focusing on polar firms, i.e. firms that are successful in their network strategy
Size of network	Large number of partners	Focusing on polar firms, i.e. firms that are successful in their network strategy
Knowledge intensity	Knowledge-intensive industry	Ensuring high importance of knowledge transfer for firms
Degree of uniqueness of knowledge transfer	Standardised knowledge transfer	Focusing on a standardised transfer sharpens the research question
Industry focus	Sample should include a variety of industries	Learning from a range of industry practices
Size	Large	Focusing on firms with similar scale of resource availability
Regional scope of activities	Multinational	Focusing on firm with similar degree of internationalization
Home country	Europe and USA	Focusing on firms from similar economic background

Data collection

The authors looked at the information that was available to the public at large on the websites of the case firms. Six of the nine firms had partner-portals to which the authors were also granted full access. In each case, the portals provided partner firms, as well as employees of the center, with comprehensive non-public information related to the centers' knowledge transfer programmes. In addition, they studied detailed hard cover documentation about knowledge transfer for network partners and selection of knowledge transfer products as well as annual reports. Furthermore, they read the annual reports of the firms. The authors further familiarised themselves with the nine participating firms and their programmes by reading articles about the firms and interviews with their chief executives and board members in general business publications. Finally, they gathered detailed data from reports by well-known market research firms and analysts.

However, as the information available to the authors differed for each case firm, they slightly adapted their interview questions. In general, the interviews were divided into two parts. The first was a structured part that the authors used to introduce proven theoretical insights, settle on a common language for the following discussion, and to raise the attention of the interviewees to characteristics of knowledge transfer. At this, the authors verbally presented the five different categories of knowledge transfer characteristics. The interviewees were then asked to comment on each of the specific knowledge transfer characteristics. The second was a less structured part during which the authors aimed to identify the motivations and principles that the interviewees applied, or saw applied, in the context of knowledge transfer. More specifically, the authors asked the interviewees about:

- the partner network and its management;
- the role of knowledge transfer in partner management;
- the types of partners and their relevant characteristics;
- the types of knowledge being transferred and knowledge characteristics;
- the types of channels being used and transfer characteristics;
- the knowledge transfer programme and its public and exclusive products; and
- the management system used for controlling knowledge transfer and development of the partner network.

All the interviews were tape recorded and then transcribed into a common database that members of the research team could access and review. Details on the nine case firms (with firm names withheld) and of the data collection can be found in Table AII.

An overview, of the case firm details, partner details, interview features, and data sources can be found in Table AII.

Table AII Details of case firms and data collection

Case details	US-1	US-2	US-3	US-4	Euro-1	Euro-2	Euro-3	Euro-4	Euro-5
Industry	Pre-packaged software	Computer and office equipment	Communications equipment	Food and kindred products	Computer services	Pre-packaged software	Financial services	Pharmaceuticals	Communications equipment
Revenue (2006)	> \$20 bn	> \$20 bn	\$10-15 bn	\$15-20 bn	\$100-500 million	\$5-10 bn	\$1,250-1,500 bn (AUM)	\$5-10 bn	\$10-15 bn
Number of partners (2006)	> 100,000	< 1,000	25,000-50,000	25,000-50,000	< 1,000	1,000-10,000	25,000-50,000	< 100	1,000-10,000
Average revenue per partner (2006)	\$500,000-1,000,000	> \$10,000,000	\$500,000-1,000,000	\$1,000,000-10,000,000	\$500,000-1,000,000	> \$10,000,000	\$20 m. (Assets under management)	> \$10,000,000	\$1,000,000-10,000,000
Areas of collaboration with partners	Software development, sales, marketing, complementary products	Sales, complementary products	Techn. development, sales, service, consulting	Operations, sales, marketing, service	Complementary products	Techn. development, sales, consulting, complementary products	Sales, consulting	R&D	Sales, service, consulting
Interview partner 1	Senior Vice President responsible for management	Vice President responsible for management	Head of Global Education	Manager of Education Portfolio	Senior Vice President responsible for management	Vice President responsible for management	Member of Corporate Consulting Team	Vice President responsible for management	Vice President responsible for knowledge
Interview partner 2	Manager responsible for partner support	Managing director of partner firm	Manager responsible for partner support	Managing director of partner firm	Manager responsible for partner support	Managing director of partner firm	Manager responsible for partner support	Manager responsible for partner support	Manager responsible for partner support
Written documents coverage	Firm website, partner portal, hard cover documentation, annual reports, third-party articles and reports	Firm website, partner portal, hard cover documentation, annual reports, third-party articles	Firm website, partner portal, annual reports, third-party articles and reports	Firm website, hard cover documentation, annual reports, third-party articles and reports	Firm website, hard cover documentation, annual reports, third-party articles	Firm website, partner portal, hard cover documentation, annual reports, third-party articles and reports	Firm website, partner portal, hard cover documentation, annual reports, third-party articles	Firm website, hard cover documentation, annual reports, third-party articles and reports	Firm website, partner portal, hard cover documentation, annual reports, third-party articles

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