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Knowledge Transfers following Acquisition: The Impact of Prior Trust-based Relations

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Knowledge Transfers following Acquisition: The Impact of Prior Trust-based Relations

Abstract:

Prior relations between the acquiring firm and the target company pave the way for knowledge transfers subsequent to the acquisitions. One major reason is that through the market-based relations the two actors build up mutual trust and simultaneously they learn how to communicate. An empirical study of 54 Danish acquisitions taking place abroad from 1994 to 1998 demonstrated that when there was a high level of trust between the acquiring firm and the target firm before the take-over, then medium and strong tie-binding knowledge transfer mechanisms, such as project groups and job rotation, were used more intensively. Further, the degree of stickiness was significantly lower in the case of prior trust-based relations.

1. Introduction

A successful integration of an acquired firm into a multinational corporation depends on an effective communication between the two formerly independent units. Therefore the two firms, now headquarters and a subsidiary, need to build up routines regarding how to communicate. Several knowledge transfer mechanisms going from computerized communication techniques to pure dyadic face-to-face contacts between individuals can be used for this purpose. However, communication is never easy and knowledge transfers across firm boundaries are often a complex matter. It is often pointed out that a high degree of stickiness exists when transferring knowledge between organisational units, and especially in transfers consisting of elements of tacit knowledge.

Specific transfer mechanisms are therefore needed to secure transfers of knowledge with a high degree of criticalness. Such transfers carry elements of value-creating resources and include capabilities and competences and are therefore critical for non-owners to receive. However, such transfers will not occur without a considerable level of trust between the dispatcher and receiver of knowledge. The reason is that competence transfers make the dispatcher vulnerable to imitation. Without trust a high degree of stickiness in the transfers is therefore foreseen.

The integration of acquired units can be interpreted as a learning process in how to transfer knowledge, but simultaneously it can be seen as a trust-building process where both elements minimize stickiness. However, if relations between the two actors are established

before the take-over, for example, through a strategic alliance or through a dyadic market relationship, the two organisations have already established cross-border communication patterns through an adaptation process. Further, the atmosphere of trustworthiness makes the transfer of critical knowledge more likely to take place subsequent to the acquisition.

The hypothesis tested in this paper is that previous trust-based relations between the acquirer and the target smoothens the subsequent integration process and make the use of corporate knowledge transfers more likely. Here trust paves the way for using strong tie-binding transfer mechanisms such as job-rotation. The use of strong tie-binding transfer mechanisms is less likely in take-overs without any prior relations. The second hypothesis tested is that prior trust-based relations also cause less degree of stickiness in knowledge transfers, again in a comparison to the situation of low or non-trust-based prior relations between the acquirer and the target.

The purpose of the paper is to put a focus on how previous trust-based relations between an acquirer and a target influence the use of knowledge transfer mechanism between headquarters and the new subsidiary. In Section Two different aspects of trust and prior relations between acquirer and the target will be discussed. In the following Section the three different transfer mechanism - workshops, project groups and job-rotation - will be outlined and the relation to weak tie-binding versus strong tie-binding mechanisms will be established. In section Four a model by Szulanski (2000) describing different stages of stickiness is discussed in more detail. A model describing the relationships of trust, transfer mechanism and stickiness is presented in Section Five. The data collecting methods, here a questionnaire study, are shortly discussed in Section Six and some basic characteristics of the sample of 54 Danish firms acquiring abroad in the period 1994-1998 are outlined in Section Seven. The statistical results, based on a t-test of two groups of pre-levels of trust, are presented in Section Eight and finally concluding remarks are to be found in Section Nine.

2. The Importance of Trust-based Relations

Antecedent relations between the market participants build up reciprocal trustworthiness and together with mutual adaptations in the two organisations establish a solid basis for

efficient communication patterns subsequent to the acquisition. The relationship between the two market participants develops over time (Andersson, Johanson & Vahlne, 1997), and the firms adapt their respective organisations to make transfers of resources and communication patterns well functioning. This adaptation process reflects a unilateral or mutual adjustment of attitudes, strategy, knowledge, and ways of knowledge-transfers in the network manifested in modified products and processes (Forsgren *et al*, 1995). The adaptation process taking place between the two firms is therefore an essential component in the increasing involvement of a dyadic relationship that modifies organizations and smoothens the subsequent integration after the take-over, because similarities in organisational structures make it easier to assimilate inflowing knowledge from another corporate unit (Lane & Lubatkin, 1998).

To gain access to knowledge embedded in a unit placed outside the boundaries of a firm presuppose absorptive and adaptive capabilities (Cohen & Levinthal, 1990). Often a firm's absorptive capacity is an outcome of a personal dyadic relationship where individuals, playing the role of gatekeepers stand in the interface of the firm and its external partners (Tushman & Scanlan, 1981; Cohen & Levinthal, 1990). To give some examples, transfers of information take place through managerial relationships or between engineers in the two companies. These relationships can be formal as well as informal. A successful adaptation process is based on specific employees skills of making transfers (Stuart, 1998). Such skills take time to develop, and successful adaptation processes then depend on a long-lasting relationship between the two firms. Here adaptations reflect a continuously learning process, where repeated business exchanges give insight to the partner's needs and capabilities. This learning process reduces cost and increases synergy effects (Anderson, Johanson & Vahlne, 1997). Subsequent to the take-over there will be individuals in both organizations who know how to communicate and further translate and dispatch information to other employees in their respective organisations.

The knowledge transfers between independent actors depend on the level of trust between the dispatcher and receiver of knowledge. A common statement is that knowledge transfers through the market create transaction cost (Williamson, 1975). One example is opportunistic behaviour that forces the partners to regulate their behaviours through the use

of contracts (Barney & Hansen, 1994; Hart, 1995). By taking a network approach the aspect of opportunism is replaced by a trust-based relationship instead (Forsgren *et al*, 1995). In a trust-based relationship the actors are ready to be vulnerable, because delivering critical information opens the door of imitation of products and competences (Kogut & Zander, 1992; Mayer, Davis & Schoorman, 1995; Teece, Pisano & Shuen, 1997). Trust is affected by the transaction involved, and the predictability of different outcomes reflects the risk involved in the exchange. Trust is the willingness to take that risk as in, for example, exchange of critical knowledge. The degree of trust therefore depends of the criticalness of exchanged resources (Bhattacharya, Devinney & Pilutla, 1998). However, actors are ready to be vulnerable since information has its highest value when it comes from trusted informants (Granovetter, 1985).

Trust relates to the adaptation process. Between the partners, general standard principles are established that both partners finds acceptable (Mayer, Davis & Schoorman, 1995; Bidault & Jarillo, 1997; Jones & George, 1998). The outcome of the relationships alters the level of trust in an ongoing process and increases in trust makes the information transferred more accurate, relevant and complete. Over time the relationships attain stability. The participants accept more interdependency, have fewer control procedures, and gain greater confidence and greater commitment to do what they agreed to (Zand, 1972). This can be seen as a strong form of trust relationship where trust emerges independent of economic and social governance mechanisms, since opportunistic behaviour violates central values, principles and standards of behaviour of both partners (Barney & Hansen, 1994).

If trust is established prior to the take-over the two actors can continue to exchange critical information immediately subsequent to the acquisition. The respective actors know that the other partner can be trusted and this pave the way of an intensive use of corporate knowledge transfer mechanisms.

3. Multinational Knowledge Transfer Mechanism

One may claim that a main point in the strategy of multinational corporations is the problem of integrating fragmented knowledge into the corporation. The multiplication of the international mergers and acquisitions increases fragmentation and new ways of

integration and interaction are needed, like internal circulation of knowledge between localized units (Cohendet et al, 1999). Acquired firms no longer remain autonomous, but become important parts of heterarchies (Hedlund, 1986) or differentiated networks (Nohria & Ghoshal, 1997; see also Birkinshaw 2000). Firms are acquired because they possess substantial elements of competence (Chakrabarti, Hauschildt & Süverkrüp, 1994) and integration and establishing of efficient knowledge transfer mechanisms are essential for the utilisation of the acquired resources.

Knowledge transfers take place in a combination of language, observation, imitation and practice, and therefore individual commitment is localized and geographically defined. It also involves individual interactions with an emotional dimension. The use of extensive travel and transfer of managers, R&D personnel and so forth between organizational units, and joint work teams and committees supports the integration of the acquired firm (Cohendet *et al*, 1999).

One aspect is the choice of transfer mechanism. Three different instruments will be discussed here: workshops, project-groups and job-rotation¹. The three factors can be graduated according to the strength of ties between sub-units and persons they bring about. Weak ties between units can help to search or scan for information, but strong ties are needed for transferring complex knowledge (Hansen, 1999; Nooteboom, 1999). Weak ties increase the quantitative diffusion of knowledge simply by the numbers of actors that can be retold a piece of information (Granovetter, 1972), whereas hard-to-imitate resources need qualitative diffusion by establishment of tightly coupled relationships (Steensma & Carley, 2000). Interpersonal communication is therefore often the way by which engineering personnel acquire and disseminate important ideas and information (Katz & Tushman, 1983). The reason is that a communication channel is more reliable when building on frequently personal contacts (Arrow, 1969) and, as stated before, critical knowledge transfers are an outcome of sustained and repeated exchanges that build up trust between the dispatcher and receiver of knowledge. An acquired firm for that reason needs to be coupled to other corporate sub-units by corporate knowledge transfer mechanism to

¹The chosen mechanisms are all based on personal face to fact contact. Increasing in importance is the use of computerized communication techniques such as the intra-net (De Meyer, 1991; Håkanson, 1995; Gammelgaard, 2000). However this aspect will not be discussed here.

established both loose connections used for information scanning and tight relations used for transfers of critical knowledge (Hansen, 1999).

Participating in workshops and scientific conferences often represents an opportunity to form new network ties, because these often demand less structured frames for interactions (Nooteboom, 1999). Additionally, the maintenance of weak ties might be the most important consequence of a workshop (Granovetter, 1972). At the personal level, conferences are a forum for information scanning and ideal to establish loose contacts, so employees afterwards basically know whom to contact in the corporation to acquire specific knowledge (Nooteboom, 1999).

In the case of acquisitions the use of workshops is an efficient integration instrument because initially acculturation and effective personal integration requires some form of face-to-face interaction. Seminars, workshops and conferences are instruments that promote the establishment of informal contacts to a broad band of employees from other units, contrary to participating in project groups that provide intensive and formal network relations to a few particular people in the organization (Håkanson, 1995).

Project groups are stronger in their structure. This transfer mechanism is often used to solve specific problems, or to build up a particular capability in co-operation between different corporate units. However, this structure is a kind of hybrid, because it never reaches full frequency like in job-rotation, but at the same time it does not involve the same degree of looseness as a conference. Therefore despite the fact that the set up of project groups consisting members from different sub-units will improve communication, the degree of knowledge transfers will always be lower between members rooted in different cultures and corporate allegiances than between members who daily work together (Hennart, 1982).

Following the line of reasoning for building strong ties, the most effective way to integrate and establishing tight personal relationship in a MNC must be through job-rotation. Though, in general, the use of job rotation both causes weak and strong ties, because the establishment of new networks for the expatriate also establish links between the new

network and his existing networks. This mobility bridge weak tie between more coherent clusters giving an easier flow activated at meetings (Granovetter, 1972). Job-rotation also include employment in new functions and creates diversity of background for employees, e.g., giving R&D engineers knowledge of manufacturing operations, or foreign researches practices or create relations to foreign sources of knowledge (Cohen & Levinthal, 1990; Grant, 1996). Further, in the case of acquisition of non-internationalised local-oriented firms expatriates are used as a vehicle for increasing the subsidiaries' international knowledge bases. The employees learn how to operate in an international environment (Downes & Thomas, 2000). A survey by Capron & Mitchell, (1998) show that acquiring firms rotate people from the acquired unit in order to teach them the existing corporate managerial system.

The focus in this paper is the strengthening of employees' cultural knowledge, and especially in the case of an acquisition, where job-rotation can be seen as a way to transfer external knowledge, specifically the knowledge from an acquired firm, across the borders of a multinational corporation (Foss & Pedersen, 2000). An embedded capability or skill of a scientific employee that is hard to imitate or articulate could be assimilated through a long stay in a foreign unit where daily interaction slowly but safely secures knowledge transfers to other employees.

Especially in the case of acquisitions it is possible to transfer people to different corporate units, a possibility that rarely exists in, for example, strategic alliances. The alternative is to hire the skilled person, but that person then will loose his connection to his original firm, thereby eroding the value of embedded knowledge between that person and his organisation. Moreover the person could be resistant to leave his firm permanently. In this connection, the expatriate in a multinational corporation has the opportunity to go back to his original position, a situation that does not exist if the person concerned is hired through the market.

Finally, acquired firms are likely to take an initially autonomous position in the acquiring corporation because of its former independence. Coming from an autonomous subsidiary might give some personal and cultural problems to the expatriate. Rotation is therefore

difficult to implement without the use of incentive instruments (Håkanson, 1995). On the other hand, prior relations reduce the degree of autonomy and the acquiring unit will be less unfamiliar to the expatriate. A positive relation between prior relations and the use of job-rotation is therefore to be foreseen.

4. *Stickiness*

One major problem when utilising and diffusing the acquired resources in the acquiring corporation is stickiness in knowledge transfers. However, the level of analysis most often used in the literature is the problem of transferring knowledge *per se*, and some kind of structure is therefore sensible in this discussion. The discussion here will build on the work of Szulanski (2000) who operates with four stages of knowledge transfers, each of them represented by different kind of stickiness. *Initiation stickiness* is the difficulties in recognizing opportunities for transfers. One example is the existence of a competence in a subsidiary not recognized by the headquarters or other affiliates in the corporation. *Implementation stickiness* relates to the more technical problems of knowledge transfers, where disparities in language, coding schemes and cultural behaviour create barriers. *Ramp-up stickiness* relates to the period after the transfer, where unexpected problems raise when introducing the knowledge. The new environment may react differently than expected, training of people is inefficient, staff leave the organization, or new standards change the organizational culture in the wrong direction. In the last phase *integration stickiness* causes problems in exploiting and routinizing the accepted knowledge. Difficulties may occur and the organization returns to the original setting.

Initiation stickiness relates to political and sociological explanations. One example is headquarters that consistently consider the information from a subsidiary of no relevance (Huber, 1991). Reasons for this non-recognition situation in multinational corporations are often a question of cultural and geographical distance (Huseman & Goodman, 1999) or the size of the multinational corporation, where the recognition process becomes very complex (Nohria & Ghoshal, 1997). Another aspect is the “Not Invented Here” syndrome that often makes decision-makers blind to alternatives (Forsgren, 1997). Resistance arises from ethnocentric behaviour where corporate managers believe in a superior national identity

and are suspicious of the unknown. In addition, new initiatives also threaten their current status in the organisation (Birkinshaw & Ridderstråle, 1999).

The organisational power relations often influence the incentives to make transfers. One initial aspect is hierarchical rigidities in the form of bureaucratic structures (Huseman & Goodman, 1999), but more important is the struggle for power in a corporation (Forsgren & Johanson, 1992), where the sub-units keep back critical knowledge to protect their own competences (Huber, 1991; Szulanski, 1995; Birkinshaw & Ridderstråle, 1999; Hansen, 1999), and transfers are then impeded because of goal congruence between the units (Forsgren, Johanson & Sharma, 2000). At the personal level, to protect their careers, scientists or researchers often block flows of communication because of the competitive pressure they experience (Collins, 1975). Prior relations between the firms, and between their respective employees may lower stickiness because often the valuable resources are recognized. Further, trust might solve some of the political problems that will occur in the integration process. However, by entering a new organisation system, the acquired firm still has to struggle for its position and protect its competences.

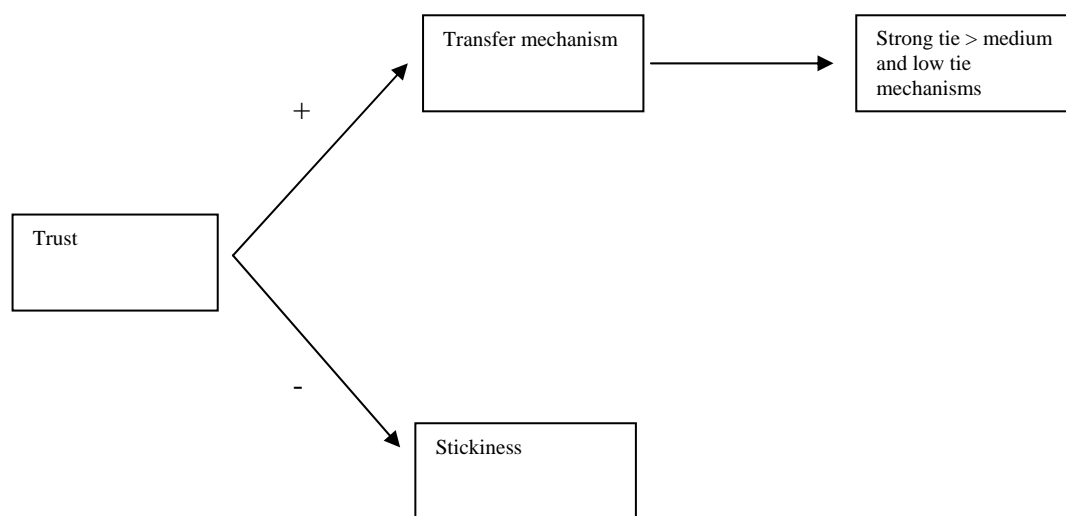
The technical problems of transferring knowledge are many, but in general these can be minimized over time by frequent use of knowledge transfer mechanisms (Huber, 1991; Forsgren, 1997). Here previous relationships are essential in the learning how to make transfers. Stickiness in knowledge transfers to and from the acquired units also decreases over time if such a unit is integrated as a result of the adaptation process.

The ramp-up stickiness is often a result of low motivation or ability to adopt the transferred knowledge (Szulanski, 1995). The employees of the acquired firm sometimes look at the acquiring firm as a threat of their existence and will therefore be in opposition. The build up of trust is therefore a foundation for a freely exchange of knowledge (Jones & George, 1998; Birkinshaw & Ridderstråle, 1999). Again, if the knowledge source is not reliable or trustworthy, receiver units will be more resistant (Szulanski, 1995) even if headquarters dictates implementation of transferred knowledge. Again prior relations, and a high degree of trustworthiness subsequently will lower stickiness, mainly because receivers to a high degree acknowledge the transferred information.

5. The Model

The purpose of the model is to illustrate the relation between a prior level of trust between the acquisition actors and the subsequent use of knowledge transfer mechanism. Further the relation between prior trust and the degree of stickiness in subsequent knowledge transfers is established. Figure one shows the relatedness

Figure 1: The relation between prior trust and subsequent knowledge transfers



In general, prior trust-based relations will lead to a more intensive use of knowledge transfer mechanisms because actors to a higher degree are willing to be vulnerable and therefore deliver information to other corporate units. The prior relations between the actors also influence the absorptive capacity, which make transfers easier. Prior trust-based relations favour strong tie-binding mechanisms like job-rotation. The organisations are to a higher degree adapted to absorb complex knowledge. Further, expatriates will feel lower uncertainty about the acquiring firm. The use of a strong tie transfer mechanism reflects a high degree of integration between the two units. On the other hand a weak tie transfer mechanism is useful to spread out information to a high number of receivers simultaneously. Project groups are efficient in specific problem solving and in innovative processes such as development of new products or processes. Strong tie-binding mechanisms like workshops are likely to be used in the integration phase, and especially

when the acquiring firm has no detailed information about the acquired units resources. The formation of project groups and the set up of workshops can take place during a market-based relationship and especially in the case of strategic alliances. Weak tie-binding is then already established when the acquisition is based on a prior relationship. The model therefore illustrates that weak and medium tie-binding mechanisms are commonly used subsequent to a take-over, but the use of strong tie-binding transfer mechanism depends on at least an acceptable level of trust between the partners, established through a prior relationship. This gives the following hypothesis:

H1: The use of jobrotation subsequent to an acquisition is higher in the situation of medium or high prior levels of trust between the acquirer and the target compared to a low or non trust situation.

The degree of stickiness will also be lower in the case of a prior trust relation. A higher degree of recognition initially is likely because of the already established exchanges of resources and information, because of minimized cultural distances. The solving of technical problems in transfers is likely to occur over time. High levels of trust also influences the ramp up stickiness and as an example core employees would be motivated to stay in the acquired firm. The discussion here leads to the following hypothesis:

H2: Stickiness in knowledge transfers subsequent to the acquisitions is lower in the situation of medium or high prior levels of trust between the acquirer and the target compared to a low or non-trust situation

6. Data Collection and the Sample

A questionnaire was sent by post in the spring of year 2000 to the CEOs of 151 Danish firms acquiring abroad in the period 1994 – 1998. Three send-outs by post and a follow-up phone call to non-responding firms resulted in 54 returned questionnaires. The response rate was 35,76%. The response rate is acceptable, compared to other surveys in general, though the absolute number of responses is low.

A bias control of the responding firms compared to non-responding firms includes figures of numbers of acquisitions in the survey period, investment countries, headquarters

establishing year, corporate numbers of employees from 1993 and 1998 and corporate turnover, 1993 and 1998. The result of this test shows no bias of significance.

7. The Sample

The acquiring Danish firms are typically medium-sized with less than 1.000 employees, although a few firms are very large and internationalised, which gives a mean of employees of respectively 1182 and 3.95 numbers of employees in Denmark and abroad. The typical firm acquires less than one firm per year in the period but again some firms acquire more frequently. At the top of this scale one firm acquired 74 foreign firms in 18 different countries. The targets are often small firms, and the median is 170 employees and a turnover at the time of take-over was in average US\$ 17,50 Million. In 41 of the 54 cases there was some kind of prior relationship. 27 firms indicated a competitor relationship, six firms acquired a former alliance/joint venture partner, five of the relations were to a former supplier, and two firms acquired a customer². A total of 32 firms noted the number of years of the relationship. The mean is 5,71 years with a median at 5 years. This figure indicates a medium relation period before the take-over. A total of 17 firms indicated less than 5 years, 8 firms was represented in the range of 6-10 years, and finally 5 firms had more than 10 years of relations. The maximum period was 20 years, and the standard deviation was less than 6 years. Most of the firms had rather frequent contact to the coming target. In terms of contact 28 firms responded to that question and 11 of them indicated a weekly contact with the target firm. 10 indicating a monthly contact and only 7 noting yearly contact with the target firm.

8. Statistical Results

For testing the effect of prior trust on the use of knowledge transfer mechanism and stickiness the cohort was divided into two groups: one with medium or high levels of trust between the two firms and another group with no prior relations or where the relations only resulted in a low degree of trust. For that purpose a 1-7 point Likert scale was used, where “1” indicated a poor level of trust and “7” showed a high level of trust. 30 firms responded with 3 or more to the question and were categorized in the group of medium or high level of trust. In 24 of the cases there were not any relations or the responder indicated a “1 or

² One firm did not specified the relationship, but later in the questionnaire they indicated the relationship

2”. The four transfer factors were likewise based on a 1-7 point Likert Scale. The first question asked about the degree to which the acquired firm participated in workshops and conferences internally in the corporation. The second question reflected the degree to which the acquired firm employees participated in project groups with employees from other parts of the corporation. The third question involves the element of job-rotating employees to other corporate units or employees from other units that were expatriated to the acquired firm. The final question was phrased as to whether in general it causes problems to transfer knowledge of technology and competences from the acquired firm to other units in the multinational corporation. This kind of knowledge was chosen because it is likely to comprise the highest degree of tacitness (Polanyi, 1958, Nelson & Winter, 1982; Winter, 1987; Nonaka & Takeuchi, 1995).

The use of a 1-7 point Likert scale makes it possible to compare the means of the two groups. By using a T-test takes the variances within the group into account and points out the degree of significance between the means. The T-test is often used in clustering analysis, where means in different variables are used to, for example, establish roles of foreign subsidiaries (Jarillo & Martinez, 1990). One tailed analysis is used since the comparison between two groups will always turn out to be either negative or positive in regard to which order the two groups are compared.

The results of the t-test are presented in table 1. Here it is shown that hypothesis 1, saying that job-rotation is more often used in those acquisitions were prior medium or high trust-based relations can be observed, is supported at a 5% significance level. The supposition of equality between the two groups in the use of workshops and project groups is supported in the use of workshops, but the formation of project groups is significantly higher at a 10 % level. However, there is a strong tendency towards are more frequent use of workshops too in the high or medium trust group, indicated by a p-value of 0,18.

Taking a look at the absolute figures changes the picture. The use of jobrotation is still significantly higher in the high trust group but in general the use of this transfer mechanism is very low in both groups. Therefore the use of job rotation is not more important than participating in, for example, workshops, when measured in absolute terms.

Table 1: T-Test for differences in mean values for different knowledge transfer mechanisms and stickiness

Transfer factor	Mean	Mean	T-value
	high or medium trust group	low or non-trust group	
Workshops	5,27 (1,03)	4,96 (2,13)	0,92
Project groups	4,93 (3,21)	4,04 (5,22)	1,57*
Job-rotation	3,46 (2,25)	2,71 (2,48)	1,98**
Stickiness	2,83 (1,51)	3,61 (2,61)	2,07**

Based on a t-test assuming equal variances

σ^2 -values are set in parentheses

1=no importance, 4=moderate importance, 7= high importance

*= 10% significance level, ** = 5% significance level, *** =1% significance level

Transfers of knowledge are in the case of foreign acquired units by Danish firms mostly based on weak and medium tie-building mechanism. The participation in corporate workshops is apparently a common phenomenon, which is indicated by the high mean and the low variance. In some of the cases participating in project groups is of high importance but the high variance indicates the opposite behaviour as well.

Job rotation is in focus here because it theoretically was characterized as a mechanism that ensures the transfer of tacit and critical knowledge. Trust was assumed to be an important element because the transfer of critical knowledge makes the dispatcher vulnerable to the receiver. However, only four firms responded with a “6 or a 7” to the use of that transfer mechanism. In three of the cases the responders simultaneously reported a “6 or a 7” in the level of trust. In the last case the question concerning trust was not answered. In the first case the Danish corporation was medium sized with 400 employees. The relation between the acquirer and the target had been taking place for several years, but was based on a yearly contact. In the second case the Danish firm consisted of 3.500 employees, the relations had been taking place for 5 years but also on a yearly basis. The third respondent, a firm with 2.000 employees, did not answer the question of prior relationship. In the two first cases the relation between the acquirer and the target was on a competitive basis. In

the last case a former supplier through one year was acquired. However, the relation was on a weakly connection, which indicates a high degree of frequency. This acquirer was medium sized with 400 employees.

The most significant impact that prior trust-based relations have on the subsequent knowledge transfers is the very low degree of stickiness it causes. In the group of acquisitions based on substantial elements of trust stickiness only occurs to some degree, often quite low. In contrast, without trust-based prior relations the acquisition partners face a medium and, in a few cases, a high degree of stickiness. The difference between the groups is significant at a 5 % level.

An acquisition can here be interpreted as a stage in an ongoing learning process in how independent units communicate. Firms start communication by forming network relations. However, communication can take place at several levels and the relation may remain simple and dyadic, where only goods and services are transferred. Trust is not built up to the same degree as in the case of strategic alliances where critical knowledge is transferred across boundaries to make, for example, product development possible in both organisations. By starting exchanges of critical knowledge, stickiness will always occur in the beginning and is likely to decrease over time. The firms learn to handle the technical problems, and are willing to absorb and implement the knowledge. On the other hand, going from a market-based relationship to a hierarchical one may create political problems, whereby information is blocked in the struggle for organisational power. However, this does not seem to be the case here where the low variances indicate that a low degree of stickiness in the trust-based group is a general phenomenon.

The mean in the group of either low trust relations or no relations at all shows that stickiness sometimes occurs after the take-over. Despite the fact that approximately four years have passed since the take-over, the group of prior relationships can often add 5 to 15 years of prior experience in how to communicate. The effect of these relationships is substantial.

Further, the figures indicate that it is possible to transfer the experience gained through a market-based relation to a hierarchical solution. First of all the firms use their experience to communicate when they transfer knowledge hierarchically. In addition, they are to a higher degree able to build up strong communication ties ensuring a more effective flow of critical and tacit knowledge subsequent to the take-over.

8. Concluding Remarks and Perspectives

Communication is not easy and organisations have to start up the learning process so that transfers of knowledge may become efficient. In a network-based relationship, the two firms adapt their organisations thereby improving the absorption and communication techniques. In this connection the build up of trust is an important element. A high degree of trust indicates that both firms are willing to ignore opportunistic behaviour and instead transfer knowledge that consists of critical elements. Trust is then the foundation for using certain mechanisms that make transfers of complex and tacit knowledge possible.

Sometimes a market-based relationship is transformed into a hierarchical relationship. The question is whether the firms are able to exploit the experience of prior knowledge exchanges. Apparently they are able to do so. A study of 54 Danish acquisitions abroad taking place in the period from 1994 to 1998 showed a significantly lower degree of stickiness in knowledge transfers subsequent to the take-over when substantial levels of trust were gained before the acquisition. Further, the uses of strong tie-binding mechanisms were more likely to occur in those acquisitions based on prior trust-based relations. However, jobrotation is rarely used generally, and weak and medium tie-binding mechanism is more commonly used without any relation to the existence and degree of trust.

The conclusion of this paper and the investigation of the relation between trust, knowledge transfers and stickiness is that prior trust-based relations minimised stickiness subsequent to the acquisition and simultaneously the firms are able to build strong communication ties between them by using transfer mechanisms such as jobrotation. The significant results also indicate that firms are able to transform market-based communication experience into a hierarchical concept.

However, the analysis and the results it derives also raise new questions to be investigated. Why is jobrotation so rarely used? If it is possible to transfer complex knowledge through this transfer mechanism, the capabilities and competences of the acquired firm could be transferred and exploited by other units in the corporation. On the other hand, the cost of expatriates is very high and the acquired firm may suffer from sending out their best employees to other corporate units.

The analysis also derives a paradoxical theme. Apparently the network relations are well functioning since high degree of trust is gained and the subsequent transfers work smoothly. The question is why change a relationship that is efficient into a new setting that might not work. Normally, network theories postulate stableness in relationships, (Johanson & Mattsson, 1988; Hallén, Johanson & Seyed Mohammed, 1991; Forsgren *et al* 1995), but revolutionising changes in the environment (Gort, 1969) or between the partners (Granovetter, 1985; Halinen, Salmi & Havila, 1999) might change circumstances in favour of an acquisition. Further, the acquiring firm might want full access to the competences of the target firm that in a market or a market hybrid situation still protect those competences from being imitated.

Prior relations have an impact on the integration of acquired units. Instead of two pure independent and autonomous organisations, each of them heterogeneous in their structure (Penrose, 1959) and stamped by their historical development (Barney, 1986) the integration or merger instead takes place between two adapted and modified organisations. Acquisition implies the take-over of another firm, and therefore it is necessary to take every aspect of firm into consideration. Only one aspect is covered here, and much work still remains to be done on investigating the impact of prior relations between the acquirer and the target. The main contribution of this paper is therefore to point out the fact that prior relationships between the actors matter, and knowledge transfers become less sticky subsequent to the acquisition. One can therefore put forth a new proposition that other areas of strategy may be less sticky as well, if they are based on prior gained experience. On the other hand, it is not a natural law that every market-based experience is transformable into a hierarchical setting! To give one example, although transfers become

less sticky in general, this reduction in stickiness is not an incentive to build up strong ties among the merged organisations.

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