

LEVERAGING EXPATRIATE KNOWLEDGE UPON REPATRIATION

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ABSTRACT

Given the growing interest in international knowledge creation and transfer, it is surprising that the expertise of repatriates has so seldom been considered in established knowledge management practices. Expatriates gain knowledge from their exposure to international markets and foreign business practices. Properly managed, this knowledge could contribute to the parent company's understanding of its foreign operations and thus increase its international knowledge base.

Drawing upon the literature of both expatriate management and knowledge management, the present paper investigates possibilities to manage expatriate knowledge upon repatriation. It identifies different areas of knowledge that are developed during expatriation and specifies factors that facilitate the transfer and application of this knowledge upon repatriation. Hypotheses have been tested in a large Dutch telecommunications company. The results of this study confirm the notion that expatriate assignments provide excellent opportunities for knowledge generation. Concerning the facilitators of knowledge application and transfer, the results underline the crucial role of acceptance and support. The value that is placed on the international experience of repatriates was found to have a positive effect on all knowledge management processes considered in the current research.

Key words: knowledge development, knowledge transfer, knowledge application, expatriate management, repatriation.

INTRODUCTION

Using expatriate assignments as vehicles for knowledge transfer is common practice in international business firms. Expatriates are often designated to fulfill the role of corporate missionaries who transfer knowledge (i.e., corporate policies, and procedures) from the home organization to foreign operations (cf. Downes and Thomas, 2000; Torbiorn, 1994). Though less obvious, valuable knowledge may also flow in the opposite direction. Expatriates gain knowledge from their exposure to international markets and foreign business practices. Properly managed, this knowledge could contribute to the parent company's understanding of its foreign operations and thus increase its international knowledge base. Pre-assignment training, travel, housing, and living expenses, they all make an expatriate assignment a very expensive expedition. While organizations usually aim at benefits within the expatriation phase, this paper focuses on possibilities to extend these benefits until after repatriation. More specifically, this paper investigates the role of learning in the expatriation phase and examines possibilities to manage expatriate knowledge upon repatriation. For this purpose, we draw upon the literature of both expatriate management and knowledge management and report the findings of an empirical study among repatriates of a large Dutch telecommunications company.

Connecting the repatriation phase with potential benefits may seem surprising given that repatriation research mainly emphasizes the threats organizations face when expatriates return to their home organization. Frequently reported repatriation problems include difficulties in adjusting to both the home culture and the home organization (e.g., Hammer, Hart and Rogan, 1998; Black, Gregersen and Mendenhall, 1992), reduced commitment to the home organization (e.g., Gregersen, 1992), and difficulties with career planning (e.g., Feldman and Thomas, 1992). Related threats for the organization are decreased performance (e.g., Gregersen and Black, 1995), high turnover rates among repatriates (e.g., Birdseye and Hill, 1995; Stroh, 1995), and reduced willingness of other employees to accept a foreign assignment (e.g., Stroh, Brett and Reilly, 1994).

So far, the role of expatriate knowledge has mainly been studied in the context of these repatriation problems. Black and his colleagues found that repatriates adjust better when they have the possibility to make use of their international knowledge (Black, Gregersen, Mendenhall and Stroh, 1998). Gregersen's (1992) study showed that value placed on repatriates' international experience increases their commitment to the parent company.

Commitment, in turn, was found to play a critical role in reducing repatriates' turnover. Overall, it is striking that empirical research considers the utilization and valuation of expatriates' knowledge mainly as a means to prevent repatriation problems. Conceiving of expatriate knowledge as a valuable asset in itself that might provide organizational opportunities instead of liabilities obviously requires a shift in perspective. To our knowledge, the only empirical study that emphasizes these organizational opportunities stems from Baughn (1991, 1995). In his research on work role transitions in reentry, he considers the application of expatriate learning as an important outcome of successful repatriation that benefits both, the repatriate and the organization.

Given the recent interest in organizational learning, it is surprising that the international expertise of repatriates has received so little attention. Expatriate assignments provide excellent opportunities to build up first-hand knowledge about foreign markets, customers, business practices, social networks, and the positioning of the company abroad (Baughn, 1995; Downes and Thomas, 1999). When integrated in the company's broader knowledge base upon repatriation, this expertise could help to increase organizational problem-solving capacities in the international arena.

When searching for organizational opportunities to benefit from repatriates' knowledge, we enter the discipline of knowledge management. Knowledge management has been described as the development and implementation of strategies and processes that enable an organization to generate, identify, transfer, store and ultimately use knowledge in a valuable way (McAdam and McCreedy, 1999; Weggeman, 1997; Wiig, 1997). Although the body of literature on knowledge management covers many different areas, research on knowledge management in an international business context is only starting to emerge (cf. Bresman, Brikinshaw and Nobel, 1999; Downes and Thomas, 2000; Simonin, 1999). The possibilities offered by the newest information technology can largely facilitate the process of information exchange and storage within a network of domestic and foreign operations. However, the most valuable information often tends to be rich in texture, nuance and subtleties and is, as a consequence, not easy to digitalize (Black et al., 1998). Expatriate assignments are useful means to deal with such high-textured and context-specific knowledge. Yet, in order to be of value to the whole organization, expatriate knowledge has to be properly managed. The present paper investigates two different aspects of managing expatriate knowledge within the repatriation phase. First, an organization could benefit from this expertise if repatriates can effectively use their knowledge again in their new jobs. In this sense we refer to the

application of knowledge. A second way to integrate repatriates' knowledge into the broader organizational knowledge base relates to the transfer of this expertise to future expatriates or other members of the organization.

The objective of the present paper is twofold: First, to identify different areas of knowledge that are developed during expatriate assignments and second, to explore factors that facilitate the transfer and application of this knowledge after repatriation. A better understanding of these issues helps to specify an organizational environment that supports the efficacy of concrete knowledge management practices that might be established later on. The remaining of the paper is structured as follows. We will first present a categorization of expatriate knowledge and specify factors that are hypothesized to facilitate repatriates' knowledge application and transfer. We will then describe our research approach and report the results of an empirical study. The final section discusses the implications of the findings and offers suggestions for continuing this line of research.

FOUR AREAS OF EXPATRIATE KNOWLEDGE

An expatriate assignment is a learning experience that inevitably goes along with a considerable increase in knowledge (Boyacigiller, 1991). The identification of available expatriate knowledge within the organization is a prerequisite for examining possibilities to apply or transfer it (Weggeman, 1997). Thus, before being able to analyze how organizations could benefit from expatriate knowledge, we need to know, which areas of knowledge expatriates actually develop during a foreign assignment. Adler (1981) and Oddou and Mendenhall (1991) specified a number of competencies expatriates typically develop while working abroad, such as increased international orientation, interpersonal orientation and flexibility. Yet, apart from these competencies, we know little on the role of learning and the development of different knowledge areas during expatriation.

For specifying expatriate knowledge, a clear understanding of the elusive concept of knowledge is a prerequisite. For the present purpose, knowledge has been defined as information that is transformed and enriched by personal experience, attitudes and values and has decision-making and action-relevant meaning (see Huseman and Goodman, 1999). This definition includes both tacit know-how (e.g. competencies or expertise) as well as explicit information-based know-what (see Kogut and Zander, 1992). Both types of knowledge will be considered in the present research. The following two-dimensional matrix specifies areas of tacit and explicit knowledge that are likely to be developed during foreign assignments (see

Figure 1). The two dimensions we distinguish in this matrix are 'country specificity' (horizontal axis) and 'job relatedness' (vertical axis). These two dimensions are considered to be relevant for two reasons. First, the dimensions are broad enough to cover all relevant knowledge items and competencies that repatriates might bring home. Second, the specificity of knowledge and competencies (country-related or job-related) is expected to have an impact on the possibilities for re-application and transfer after repatriation.

Insert Figure 1

The upper left quadrant of Figure 1 comprises different aspects of job-related knowledge that are likely to be developed whenever employees work in a new position within the corporation. During their foreign assignment expatriates might increase their general understanding of products and services and improve their technical, functional, and operational knowledge. Items in this area of knowledge score high on job relatedness, yet low on country specificity. The items in the second, upper right quadrant of the matrix include the development of country-specific network knowledge. Professional contacts, knowledge about the interdependence between home and foreign operations and knowledge on foreign market players are considered to score high on both country specificity and the extent to which they are related to a particular job. Expatriates could also acquire country-specific knowledge that is more general in nature and not so much related to a particular job. These knowledge items are included in the third, lower right quadrant and comprise knowledge of business practices, economic conditions, the legal/political system and the national culture. The fourth quadrant, finally, includes items that score low on both country specificity and job relatedness. These more general competencies include knowledge with a strong behavioral component that enable a person to effectively deal with certain situations (see also Kogut and Zander, 1992). Among these competencies are adaptability, flexibility, international orientation, responsibility, and interpersonal sensitivity. Expatriates were found to improve these competencies due to additional responsibilities and the challenges of working together with people of different backgrounds in a foreign environment (Adler, 1981; Oddou and Mendenhall, 1991). In the empirical part of this paper, we will examine the development of these four knowledge areas during expatriate assignments.

TRANSFER AND APPLICATION OF EXPATRIATE KNOWLEDGE

The four areas of knowledge specified include both tacit and explicit knowledge. Tacit knowledge has been defined as non-verbalized or even non-verbalizable knowledge that is embedded in people's experiences (see Huseman and Goodman, 1998; Nonaka, 1991). As such, tacit knowledge can not exist outside an individual. In contrast to tacit knowledge, explicit knowledge can be specified either verbally or in writing and is therefore not necessarily person-bound (Hedlund, 1994). Nonaka and Takeuchi (1995) describe three ways of transferring explicit and tacit knowledge that are relevant for the present research: combination, socialization, and externalization. Combination is the most familiar form of knowledge transfer: the transfer of explicit knowledge. In case of repatriate knowledge, combination occurs when repatriates transmit data, such as country-specific facts and figures. Socialization refers to sharing tacit knowledge. This process of knowledge transfer is activated when repatriates get the opportunity to serve as role models for future expatriates. Here, learning occurs not only through explicit instructions but also through observation and imitation. Externalization describes the process of transforming tacit knowledge into explicit knowledge. Repatriates could externalize their tacit knowledge when making use of metaphors, analogies or images for sharing their experiences with other members of the organization. In whatever way the knowledge acquired abroad is transferred to others, the ultimate goal of this transfer is that knowledge will eventually be re-applied and thereby helps to increase the speed of organizational problem solving in the international context. With regard to application and transfer of knowledge two questions arise: (1) Which types of knowledge are most likely to be applied and transferred when expatriates return to their home organization and (2) which factors facilitate the transfer and application of this knowledge. Based on the work of Adler (1981, 1991) and Baughn (1991, 1995), one individual and three work-related factors are hypothesized to influence knowledge application and transfer: coping mode, role discretion, career logic, and perceived level of acceptance and support.

Types of Knowledge

Overall, it can be expected that it is rather difficult for repatriates to re-apply and transfer knowledge that scores high on country specificity. In order to prevent the organization from losing this country-specific knowledge, repatriates could, for instance, be appointed to jobs in the home organization that are related to the region of their foreign assignments. Furthermore,

repatriates could be encouraged to transfer their knowledge to other organizational members who deal with the same country. Such arrangements, however, are not assumed to be widespread in companies because repatriate knowledge has so far not been considered in established knowledge management practices. Compared to country-specific knowledge, it is expected that repatriates have, in general, more opportunity to apply and transfer technical/functional knowledge as well as general competencies. Since these areas of knowledge are relevant in a variety of work situations within a company, it is more likely to find opportunities for its application and transfer.

Hypothesis 1: Knowledge that scores low on country-specificity is more likely to be applied and transferred upon expatriates' return than country-specific knowledge.

Coping Mode

A repatriate's coping mode is the attitude that determines how a repatriate approaches re-entry and attempts to fit back into the home organization (Adler, 1981). Adler (1991) conceptualized three different coping modes: resocialization, alienation and pro-activeness. Resocialized repatriates tend to distance themselves from their foreign experience. They neither recognize nor use the knowledge and competencies that they acquired abroad. Instead, they try to fit back into the domestic corporate structure by acting like people who have never been away. Both during and after the foreign assignment resocialized repatriates have a strong home country orientation. As such, the resocialized coping mode precludes both the repatriate and the organization from gaining very much from the foreign assignment after repatriation.

Alienated expatriates tend to 'go native' while working abroad and adopt the values and lifestyle of the host culture. After they return they still feel very related to the foreign culture and tend to dissociate themselves from the home culture and home organization. Although they recognize that they have acquired new knowledge and developed competencies during their foreign assignment, they see no way in which they can use them upon return. Moreover, similar to resocialized repatriates, alienated repatriates contribute little to the home organization from their international experience.

Pro-active repatriates attempt to integrate their foreign and home country experiences as much as possible. They value their new knowledge and try to integrate it into their work. Proactive repatriates actively try to change themselves and their re-entry environment in order to fit best in. They have a strong orientation towards both the home and the foreign country. Their potential for contributing to the organization may be substantial, however, the home

organization still must decide to use the repatriate's potential contribution and not simply attempt to fit them back in.

It is reasoned here that the coping mode of repatriates plays a major role in the attempts to apply or transfer knowledge upon return. Repatriates with the resocialized coping mode seem to have closed the international chapter of their career. Alienated repatriates seem to have left their hearts abroad. Yet, pro-active repatriates try to combine the best of both worlds. Hence, repatriates' individual coping mode is assumed to affect knowledge application and transfer.

Hypothesis 2: Repatriates with a pro-active coping mode are more likely to apply and transfer expatriate knowledge than repatriates with a coping mode characterized by re-socialization or alienation.

Role Discretion

Role discretion has been defined as the degree to which a role provides substantial freedom, independence and autonomy to an individual in choosing work goals, means for achieving goals and patterns of interpersonal communication (Nicholson, 1995). When role discretion is low an employee has little opportunity to decide about what work is done, how it is done and when it is done. A high level of role discretion allows an employee to change the role to fit the individual. Role discretion is particularly important during the repatriation process since many managers returning from foreign assignments have held positions abroad that entailed significant discretion and autonomy (Gegersen, 1992). When these managers return to the home organization they often enter positions with much less role discretion. This is one of the issues that contribute to the problems that repatriates experience when they try to reestablish themselves in the home organization. Role discretion has been found to be positively related to adjustment and commitment of repatriates (Black and Gregersen, 1991; Black et al., 1998; Gregersen 1992). Moreover, Baughn (1991) found that repatriates' use of knowledge and skills acquired abroad is a function of the extent to which the new job provides for greater degrees of discretion. Theoretically this finding makes sense. When repatriates want to apply what they have learned abroad, they should have the freedom to incorporate new ideas, different ways of working and deviating points of view. In most cases repatriates get a job in the home organization that was previously held by an employee without a foreign assignment experience. If repatriates are to use and transfer the knowledge and competencies that they gained abroad, they should have some latitude in deciding what to do and how to do it. Based

on this argument, role discretion is hypothesized to facilitate knowledge application and transfer.

Hypothesis 3: Role discretion in the job upon return is positively related to application and transfer of knowledge that repatriates acquired during their foreign assignments.

Career Logic

Careers are often organized around specific areas of competence (Baughn, 1991). As such, a career can be considered as an evolving sequence of a person's work experience over time characterized by a relatively unique set of issues, themes and tasks (Greenhaus and Callanan, 1994). Career logic deals with the extent to which the job upon return represents a logical career step after the foreign assignment. This is the case when there is a clear relationship between two job requirements in terms of responsibilities, knowledge and skills (Feldman and Thomas, 1992). Usually, organizations spend a considerable amount of time and effort on the selection and training of expatriates. Once the expatriates return there is much less attention for what a next career step could be (Allen and Alvarez, 1998). As a result, repatriates often have difficulties in finding a position upon return that is in line with their career path. Many repatriates even consider their foreign assignments to have a negative impact on their careers (Forster, 1994; Hammer, Hart and Rogan, 1998). For the present research, it can be assumed that the more the new job is in line with the foreign assignment, the more a repatriate can re-apply and transfer knowledge gained abroad.

Hypothesis 4: Career logic in the job upon return is positively related to application and transfer of knowledge that repatriates acquired abroad.

Perceived Level of Acceptance and Support

The last factor deals with the organizational acceptance that repatriates experience and the support that they receive to apply and transfer what they learned abroad. When repatriates experience a high level of acceptance and support, they will feel that their international experience and perspectives are truly valued in their new work environment. Many expatriates return to a domestic situation in which their international experience is considered a liability instead of an asset (Harvey, 1989). Yet, other expatriates come back to a situation in which they do get the recognition they feel they deserve. Gergensen (1992) found a positive relationship between the valuation of international experience and repatriates' commitment to

the parent company. Baughn's (1991) results show that the use of the knowledge acquired abroad is a function of the extent to which such learning is specifically valued in the role of the employee's return assignment. This discussion leads to the final hypothesis:

Hypothesis 5: The level of acceptance and support that repatriates experience in the job upon return is positively related to application and transfer of knowledge that repatriates gained abroad.

RESEARCH SETTING AND METHODOLOGY

The empirical research has been executed at KPN, the largest telecom operator in the Netherlands. In 1989, this formerly state-owned organization was given an autonomous status. In 1994, it was privatized and introduced to the Dutch stock market. KPN's first major international move was its participation in the international strategic alliance Unisource in 1992 (with Swedish Telia and Swiss PTT; now dissolved). Since then, KPN has also acquired shareholder positions in local telecommunication companies in the Czech Republic, Ukraine, Hungary, Ireland, Belgium, and recently Germany. Moreover, KPN has expanded its activities to non-European emerging markets where it focuses mainly on Southeast Asia with, for example, a foreign office and a participation in Indonesia. Next to financial investments, KPN aims to participate in the local management of these foreign operations. This policy implies the use of foreign assignments for purposes of management control and transfer of expertise.

Until recently, KPN could be typified as a multidomestic organization (Adler, 1991). All international business operations were coordinated by 'KPN International.' As a result, domestic and international activities were hardly integrated. KPN's foreign operations functioned rather independently and focussed on their own national markets. Recently, KPN has initiated some far-reaching organizational changes by placing all foreign participations under their corresponding (until then national) business units. With the new organizational structure KPN hopes to better integrate its national and international business operations.

In 1990, KPN sent out its first expatriates. Now, the total number of employees that has been sent out on an expatriate contract amounts to approximately 700. Currently, 120-130 KPN expatriates work on foreign assignments, with the largest groups located in the Czech Republic, Ireland and Indonesia. During the first few years of involvement in international business, no expatriate management policies existed at KPN. In fact, the first expatriates were more or less 'out of sight and out of mind' and their re-entry into the home organization was

often troublesome. Over the years however, KPN developed policies with respect to selection procedures, preparation for foreign assignments, expatriate contracts, performance evaluations during the foreign assignment and also with respect to repatriation. As a result of these developments, it is impossible to compare foreign assignments during the early years of KPN's international expansion with those of more recent years.

KPN finds itself now on the threshold of becoming a more internationally integrated organization. In this situation, issues of international knowledge management are gaining importance while concrete measures to manage this knowledge are not yet taken. Application and transfer of expatriate knowledge, although desired, is thus not likely to take place in a structured way. Its occurrence rather depends on individual and work-related conditions. This makes the present case especially suitable for the current research that aims to gain insights into basic facilitators of knowledge application and transfer in the repatriation phase.

Sample and Data Collection

The sample for the current research was drawn from KPN's pool of expatriates who returned to the headquarters in the Netherlands after their foreign assignments. Only those repatriates were included in the sample who had (1) returned from foreign assignments within the last three years, (2) spent more than twelve months abroad, and (3) stayed at least four months at the headquarters in the Netherlands upon return. Ninety-two KPN repatriates met these requirements.

Data were collected by means of a structured questionnaire. Questionnaire packets including cover letters, questionnaires and stamped, addressed return envelopes were sent directly to the home addresses of the respondents. Next to closed questions, the questionnaire also included an open question that assessed repatriates' ideas about how their knowledge could benefit the company. The questionnaire packets also included a small present, an inflatable globe, to draw extra attention to the research. As was stated in the cover letter, this present was meant to remind the repatriates of the time that they traveled the world to fulfill their company duties. Ninety-two questionnaires were sent out in April 2000. Follow-up phone calls were made 10 days after the questionnaire packets had been sent out. In total, 72 questionnaires (78%) were returned. The exclusion of eight cases with missing data resulted in a sample of 64 repatriates. This yields an effective response rate of 70%.

Variables

Knowledge development. This variable was measured by asking the respondents to rate on a 5-point Likert scale the extent to which they had developed or improved specific areas of knowledge during expatriation (see Figure 1). For the analysis, the country-specific knowledge items (general country knowledge and country-specific network knowledge) were grouped together, so that we could distinguish the following scales: 'development of country-specific knowledge' (coefficient alpha: 0.78), 'development of technical/functional knowledge' (coefficient alpha: 0.63), and 'development of competencies' (coefficient alpha: 0.82). The items of the latter scale were adapted from the KPN competency set (1999). Each of the six competencies (see Figure 1) was measured with three items.

Knowledge application and transfer. For all knowledge items included in the four areas of expatriate knowledge (see Figures 1) respondents were asked to indicate the extent to which they had applied and transferred this knowledge in their job upon return on a 5-point Likert scale. For the testing of hypotheses, the country-specific knowledge items were again grouped together. This resulted in the following two scales: 'application and transfer of country-specific knowledge' (coefficient alpha: 0.95), and 'application and transfer of technical/functional knowledge' (coefficient alpha: 0.83). For the subcategory of competencies (see Figure 1) we had to make a slight adaptation. In this context, it is difficult to speak of application and transfer of knowledge due to the behavioral and intangible nature of competencies. Respondents were, therefore, asked to indicate on a 5-point Likert scale to what extent each field of competence (see Figure 1) was essential in their job upon return. Together these items formed the scale 'importance of competencies in job upon return' (coefficient alpha: 0.81).

Adler's coping mode. Based on Adler's work on coping modes (1981, 1991), three scenarios were formulated that describe the repatriates' way of fitting back into the home organization. Respondents were requested to read these scenarios and to choose the one that characterized their repatriation experience best. Alienated and resocialized repatriates were combined (see Hypothesis 2) and received the code 1, while proactive repatriates received code 2.

Role discretion. For the assessment of role discretion a five-item scale developed by Nicholson and West (1988) was utilized. These items assess freedom with respect to work targets, work methods, priority setting, colleagues and (in-)dependence of the superior.

Repatriates were asked to rate the extent to which these characteristics applied to their job upon return on a 5-point Likert scale. The coefficient alpha of this scale was 0.90.

Career logic. The measurement of career logic after repatriation was based on Baughn's five-item scale of role transfer (Baughn, 1991). Repatriates had to indicate the extent to which the job upon return was a logical career step and in line with their previous job. After the removal of one item that was found to have a weak scale correlation, the coefficient alpha of this scale was 0.62.

Acceptance and support. Four items were developed based on Baughn (1991) to assess the extent to which the repatriates' international experience was appreciated in their job upon return. Respondents were asked to indicate the level of acceptance and support on a 5-point Likert scale. The coefficient alpha for this scale was 0.87.

In addition to these variables, an open-ended question investigated the ideas of repatriates about ways how the organization could make better use of their international knowledge base. This question was meant to explore possibilities for a more sophisticated management of repatriate knowledge.

RESULTS

Sample Description

Of the 64 respondents, all but six were male. All respondents had the Dutch nationality. The average number of years with KPN before expatriation was 11.7 years. At the start of their foreign assignments the respondents' age ranged from 26 to 56 years, with a mean age of 40.3. Three thirds of the respondents have been on a foreign assignment only once. A group of 12 respondents (19%) have been sent out twice and only 3 respondents (5%) have been sent out three times. The sample included repatriates from nineteen different countries, with Indonesia (20%) and the Czech Republic (10%) as the most important host countries in terms of the number of expatriates. The duration of foreign assignments ranged from 12 months to 10 years, with an average of 2 years and 2 months. The longest assignment was clearly an outlier. Ninety-seven percent of the foreign assignments lasted five years or shorter. In accordance with our sample restrictions (see Sample and Data Collection), the time since return from the foreign assignment varied between 4 months and 3 years. The average time since return was 1 year and 7 months.

Knowledge Development, Transfer and Application

Correlations and descriptive statistics for the variables of interest are displayed in Table 1. All predefined areas of expatriate knowledge (see Figure 1) were developed or developed further during the foreign assignment. Respondents indicated that they especially increased their competence base and their country-specific knowledge, while the area of technical/functional knowledge was developed to a lesser extent during the foreign assignments. This might be due to the fact that expatriates already enter their foreign assignment with a certain amount of technical/functional knowledge, so that improvements in this area are likely to be smaller.

Insert Table 1

Not surprisingly, respondents had developed more knowledge abroad than they could re-apply or transfer at home. The largest gap between development on the one hand and application and transfer on the other hand was found for country-specific knowledge ($t=15.56$; $p\#.001$; $N=64$). The difference was somewhat smaller but still highly significant for technical/functional knowledge ($t=7.94$; $p\#.001$; $N=64$). The results of the correlation analyses (see Table 1) provide additional insights into the relation between the development of knowledge during expatriation and its application and transfer in the repatriation phase. The more technical/functional knowledge had been developed, the more likely it was that this knowledge could be applied and transferred upon return. A comparable relationship could not be found for the area of country-specific knowledge and general competencies. The amount of knowledge developed in these areas was unrelated to its use upon return.

Overall, repatriates indicated that they experienced few possibilities to apply and transfer their country-specific knowledge in their job upon return. Consistent with Hypothesis 1, we found job-related knowledge that scores low on country-specificity (i.e., technical/functional knowledge) to be more easily applied and transferred upon expatriates' return than country-specific knowledge ($t=3.67$; $p\#.001$; $N=64$). For the area of competencies developed abroad, we did not assess application and transfer but the perceived importance of these competencies in the job upon return. It is thus difficult to directly compare the use of these competencies to the other knowledge areas. Competencies score low on both job-relatedness and country-specificity and can thus be useful in a variety of situations. Our results indicate that five out of the six competencies developed abroad played an important role in

repatriates' jobs upon return. Only the increased international orientation of repatriates was found to be less important.

Concerning the application and transfer of country-specific knowledge a remark on the distribution of responses has to be made. More than half of our respondents (55%) reported to have little or no opportunity to apply or transfer the country-specific knowledge they had acquired abroad. This means that the distribution of this variable is skewed (skewness quotient: 2.39). In the context of the present research, we had to consider this skewness as part of the results. Available methods of data transformation (cf. Hair, Anderson, Tatham and Black, 1998) that help to approach a normal distribution were therefore not considered useful in this context. In order to increase the reliability of results, we used non-parametric analyses (Spearman's Rho) when exploring the association between application and transfer of country-specific knowledge and other variables of our study. A regression analysis that was originally planned for testing Hypotheses 2-4 seemed not indicated given this skewed distribution of values.

Facilitators of Knowledge Application and Transfer

Four potential facilitators of knowledge application and transfer in the repatriation phase were examined: the individual coping mode of the repatriate as well as three work-related characteristics, i.e., role discretion, career logic and perceived level of acceptance and support. Forty-eight percent of repatriates indicated that the pro-active coping mode characterized their situation best, while the remaining 52% described their coping mode as alienated or re-socialized. Table 1 indicates that repatriates experienced on average a considerable amount of role discretion in their job upon return. Yet, they usually did not consider their job to be logical career step. Moreover, respondents perceived on average rather low level of acceptance and support for their international experience in their work situation upon return.

The results of the correlation analysis (see Table 1) show that neither repatriates' coping mode nor their role discretion are significantly related to application or transfer of country-specific or technical/functional knowledge gained abroad. Both variables, however, do affect the extent to which developed competencies are perceived as essential in the job upon return. Career logic with respect to the job upon repatriation is positively related to application and transfer of technical/functional knowledge and to the importance of competencies developed abroad. The perceived level of acceptance and support, finally, facilitates the use of all areas of expatriate knowledge: transfer and application of country-specific knowledge,

technical/functional knowledge and also the importance of developed competencies in the job upon return. An extreme group analysis comparing the upper and lower third of respondents in terms of knowledge transfer/application and use of competencies, confirms the result of the correlation analysis. The level of acceptance and support for repatriates' international experience differs significantly between these extreme groups (see Table 2). Coping mode, role discretion and career logic had no influence on knowledge application and transfer, but on the use of competencies gained abroad.

Insert Table 2

Overall, our results provide strong support for Hypothesis 5. The level of acceptance and support that repatriates experience influences significantly the degree to which they can make use of technical/functional knowledge, country-specific knowledge and general competencies gained abroad. Hypotheses 2-4 could only partly be confirmed. Coping mode (Hypothesis 2), role discretion (Hypothesis 3), and career logic (Hypothesis 4) were related to the importance of competencies gained abroad, yet not to the application and transfer of country-specific knowledge or technical/functional knowledge.

We will end this section with respondents' suggestions of how their organization could make better use of expatriate knowledge. Eighty-three percent of the respondents answered this open-ended question. The high response indicates not only that respondents have many suggestions for improving knowledge transfer and application, it also shows that most repatriates still feel involved with this topic. The following categories of suggestions were mentioned most frequently:

- integrate the knowledge in the career path of repatriates (N=18)
- stimulate the transfer of knowledge to new expatriates (N=12)
- use repatriates' expertise for advising management in strategic decisions concerning the region of the foreign assignment (N=12)
- send repatriates out for a new foreign assignment in the same region (N=9)
- have a good debriefing of repatriates and store the information in a database or a knowledge pool (N=8)

DISCUSSION AND CONCLUSION

This paper identified different areas of knowledge developed during expatriate assignments and explored factors that facilitate the transfer and application of this knowledge after repatriation. Overall, the study confirmed the notion that expatriates acquire a considerable amount of knowledge and competencies during their foreign assignments (see also Baughn, 1995; Boyacigiller, 1991; Downes and Thomas, 1999). Expatriates not only extend their competence base abroad (see Adler, 1981; Oddou and Mendenhall, 1991) but also increase their country-specific and technical/functional knowledge. For interpreting our results concerning application and transfer of this knowledge, the characteristics of the research setting have to be taken into account. The current research has been executed in a multidomestic corporation that is on the threshold of becoming more internationally integrated. Multidomestic corporations usually place little value on foreign experiences so that repatriates derive little or no benefit from their international learning (Adler, 1991). It is thus not astonishing that respondents in the present study perceived little opportunities for applying or transferring their country-specific knowledge. From the answers to our open question it can be concluded that this is not due to a lack of motivation. Repatriates rather lack the necessary infrastructure, as within KPN no structural mechanisms have been established to facilitate the application or transfer of country-specific knowledge. KPN's recent structural change might increase organizational attention for effective deployment and utilization of this expertise. The fact that our research team got the opportunity to study knowledge application and transfer of repatriates, indicates already a growing awareness for issues of knowledge integration.

Concerning the facilitators of knowledge application and transfer, the results of the present study underline the crucial role of acceptance and support (see also Baughn, 1995). Knowledge can only be transferred and applied when the environment communicates interest in this knowledge and readiness to learn. Evidence was also found for the positive effects of career logic on the use of technical/functional knowledge and general competencies. Although it is not always easy to fit a foreign assignment into a career path, the results of this research show that this effort is worthwhile. In order to facilitate the application and transfer of country-specific knowledge, however, career logic seems not to be sufficient. For this area of knowledge, reapplication and transfer of knowledge has to be stimulated actively by appropriate knowledge management tools. The coping mode of repatriates was found to influence knowledge transfer and application to a much lesser extent than expected. It only

affects the area of general competencies. Repatriates with a pro-active coping mode perceive more opportunities to integrate their competencies in their new job than resocialized or alienated repatriates. Although supported by empirical results of Baughn (1991, 1995), the hypothesized relationship between role discretion and application and transfer of knowledge could not be confirmed in the present study. Role discretion was only found to facilitate the use of competencies in the new job. This finding might be explained by the general nature of competencies. The other three areas of knowledge are country-specific, job-related or both. It is possible that even when discretion is high, such specific knowledge will not be applied or transferred unless the work environment requires or stimulates it. Competencies, such as adaptability, stress tolerance, and responsibility are important in any job and any environment. For competencies it becomes then important whether the repatriate has the freedom and autonomy to use them.

This study has been a first attempt to explore knowledge application and transfer in the repatriation phase. As such, it has several limitations that should be noted. The sample of repatriates participating in the study was drawn from a single company. The findings of this study may therefore not be generalizable to other settings. For example, acceptance and support may play a less important role for organizations with a longer history of internationalization. Future research could extend the present findings by including repatriates from different organizations or industries. With larger and more heterogeneous research samples, knowledge generation, application and transfer of repatriates could be compared between different companies, industries, and levels of internationalization.

Some remarks have to be made concerning the measurement of variables in the present study. Knowledge development was measured by asking respondents whether they had improved certain areas of knowledge. Here, it needs to be kept in mind that the extent of improvement does not indicate to what degree an individual masters a certain area of knowledge. Next, information on development as well as application and transfer of knowledge was solely based on evaluations of repatriates. Ideally, future research would combine self-evaluations by repatriates with evaluations by colleagues and superiors. Such a design would also help to reduce common method bias. In the present study, repatriates provided data on all variables in question through a common method of data collection. This might have caused an overestimation of relationships between variables. Therefore, the results of the present study should be considered as preliminary until confirmed by research with multiple data collection methods or multiple data sources.

A final remark concerns the cross-sectional design of the present study that limited the scope of our results. More sophisticated examinations of knowledge management processes over time could reveal insights in cause-effect relations and thus increase our understanding of factors that influence the integration of repatriates' knowledge in the company's broader knowledge base. For advancing our understanding of these processes, it would be valuable to examine the extent of knowledge application and transfer in relation to actual knowledge management practices. On this basis, different approaches to leveraging expatriate knowledge upon repatriation could be specified and evaluated.

We hope that our paper has succeeded in directing more attention to the opportunities that repatriates' expertise can provide for their home organization. Awareness of these opportunities might induce organizations to establish an infrastructure that improves the generation of knowledge during expatriation and its application and transfer upon return. A first step in this direction is to encourage expatriates to get actively involved in knowledge acquisition during their foreign assignment and to make an inventory of their areas of expertise upon return. Valuable suggestions of our respondents for establishing a knowledge management infrastructure were already reported in the Results section. Here, some extensions will be made based on the work of Nonaka and Takeuchi (1995) that are specifically related to the transfer of country-specific knowledge. Combination of explicit knowledge can be facilitated by a database in which lessons learned, best practices and important information with respect to countries and the company's activities there are gathered and stored. Socialization of new expatriates could take place by involving repatriates in coaching or mentoring systems. An effective vehicle for externalization of tacit knowledge involves dialogue, in this case, dialogue between repatriates and other members of the home organization. Repatriates could, for instance, become temporary advisors for managers dealing with the region of their foreign assignment. Organizations could schedule meetings or organize seminars in which the dynamics of dialogue give rise to new understandings of the organizations international activities. Such knowledge management practices could create the climate of acceptance and support that we found to be so crucial for repatriates' knowledge application and transfer.

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FIGURE 1: AREAS OF EXPATRIATE KNOWLEDGE

Job Related	High	TECHNICAL / FUNCTIONAL KNOWLEDGE <ul style="list-style-type: none"> • Knowledge of different products and services • Technical knowledge • Greater understanding of different functional areas • Ideas regarding how business operations might be improved 	COUNTRY-SPECIFIC NETWORK KNOWLEDGE <ul style="list-style-type: none"> • Knowledge about market-players including buyers, suppliers, competitors and customers • Development of professional contacts • Knowledge about the interdependence between home and local company
	Low	GENERAL COMPETENCIES <ul style="list-style-type: none"> • Adaptability • Flexibility • International orientation • Stress tolerance • Responsibility • Interpersonal sensitivity 	GENERAL COUNTRY KNOWL. <ul style="list-style-type: none"> • Knowledge of the business practices of the country • Knowledge of the economic situation • Knowledge of the legal/political situation • Knowledge of the culture
		Low	High
		Country specific	

TABLE 1: DESCRIPTIVES AND CORRELATIONS

	Mean	sd	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
<i>Knowledge Development</i>												
1. Dev. tech./funct. knowledge ¹	3.28	0.82	1.00									
2. Dev. country-spec. knowledge ¹	4.05	0.61	.34*	1.00								
3. Dev. competencies ¹	4.27	0.50	.37**	.51***	1.00							
<i>Facilitators</i>												
4. Coping mode ²	1.48	0.50	.14	-.11	-.09	1.00						
5. Role discretion ¹	3.61	0.98	.03	-.07	-.07	.42***	1.00					
6. Career logic ¹	2.89	1.01	.23	-.05	.03	.45***	.40***	1.00				
7. Accep. & support ¹	2.41	0.98	.17	.08	.13	.58***	.36**	.64***	1.00			
<i>Use of Knowledge</i>												
8. Applicat. & transfer funct/techn. know. ¹	2.39	0.75	.35*	.08	.05	.22	.14	.34**	.50***	1.00		
9. Applicat. & transfer country-spec. know. ²	2.07	0.89	.09	.22	.16	.18	.14	.22	.59***	.71***	1.00	
10. Import. competencies in job upon return ¹	3.66	0.82	-.02	.10	.13	.35**	.42***	.39**	.42***	.34**	.36**	1.00

N = 64

* p#.05; ** p#.01; *** p#.001

¹ Pearson correlation.

² Spearman's Rho.

TABLE 2: EXTREME GROUP COMPARISON

	Application & transfer technical/functional knowledge			Application & transfer country-spec. knowledge			Importance of competencies		
	Low (N=21)	High (N=20)	Difference	Low (N=21)	High (N=19)	Difference	Low (N=20)	High (N=19)	Difference
Coping mode ¹	1.4	1.6	n.s.	1.3	1.6	n.s.	1.3	1.7	*
Role discretion ²	3.6	3.7	n.s.	3.4	3.7	n.s.	2.9	4.0	***
Career logic ²	2.7	3.1	n.s.	2.6	3.3	n.s.	2.4	3.3	**
Acceptance & support ²	1.9	2.8	***	1.7	3.2	***	2.0	3.1	***

* p#.05; ** p#.01; *** p#.001.

¹ Chi-square test.

² Independent sample t-test.