



Sustainable Talent Management as a Driver of Competitive Advantage Via a Learning Organization: A Causal Model of Knowledge Transfer

¹ Balqees A. Almessabi *, ² Laura L. Matherly, ³ Sheikha Shamma bint Sultan bin Khalifa Al Nahyan

¹Assistant Professor, Department of Management, College of Business, Zayed University

P. O. Box 144535

Abu Dhabi, United Arab Emirates

balqees.ahmed@zu.ac.ae

² Associate Professor

lauramatherly@yahoo.com

1. Abstract

Purpose: The purpose of this study is to empirically investigate the predictors of knowledge sharing between expatriates and nationals as a form of workplace learning. It highlights the need for incorporating the simultaneous effects of sender, receiver and organizational characteristics on knowledge transfer dyads and, ultimately, on job performance. In international labor markets where a large proportion of the managers are expatriates, this study introduces a modern approach to evaluating knowledge transfer in the development of sustainable talent management for national succession planning.

Design/methodology/approach: A quasi-experimental research design was conducted and surveys were collected from 252 expatriate and 198 national managers from 9 organizations in Abu Dhabi. Between group analyses involved paired t tests and a regression analysis of the standardized beta coefficients between groups.

Findings: The key antecedents of knowledge transfer were sender and receiver characteristics, which included motivation, ability, and dyad interactions. The results show that the higher the expatriate and national evaluate the other's ability, the higher the degree of knowledge transfer. The findings reveal that although both formal and informal interactions are important, informal interactions between genders in both the national and expatriate samples are significantly lower than formal interactions. Lastly, the study revealed that knowledge transfer is positively related to employee annual performance ratings.

Keywords: Knowledge Transfer, Knowledge Management, Knowledge Sharing, Talent Management, Performance, Expatriate and National.

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2. Introduction

Increasingly, numerous fields of research view the creation and transfer of knowledge as the basis for competitive advantage (Argote & Ingram, 2000; Gupta & Govindarajan, 2000; Harvey & Moeller, 2009; Hassan et al., Lane & Lubatkin, 1998; Mohiya, 2023; Pan & Wang, 2010; Simonin, 1999). The creation of new knowledge that leads to a competitive advantage stems from the notion that exposure to new ideas, experiences and practices, e.g., from other cultures and markets will improve knowledge transfer and organizational learning (Tallman & Fladmoe-Lindquist, 2002). This growing interest in knowledge transfer and management has led to the emergence of a distinct stream of research which focuses on the use of expatriate managers as an effective way to facilitate organizational learning (e.g., Berthoin Antal, 2001,

Bonache et al., 2001; Harvey & Moeller, 2009; Hocking et al., 2004; Pan & Wang, 2010; Riusala & Suutari, 2004; Shin et al., 2007; Thite et al., 2009; Tsang, 1999). Accordingly, it is important to identify the educational methods that will foster or inhibit learning in the workplace so that competencies and skill development of a native, modern workforce are built. This study is a response to the need for empirical evidence of the determinants of knowledge transfer in the United Arab Emirates (UAE).

Due to the strategic importance of organizational learning in a global economy, the UAE has invested heavily in education. Central to a vision of preparing citizens for a leadership role in a global economy, education, including higher education, is funded by the government for all the country's citizens. A primary mechanism used in organizations in the UAE for fostering the development of the national workforce is knowledge transfer through expatriate relationships. The percentage of expatriates in the UAE is 88.5% compared to 11.5% nationals (Global Media Insight, 2023).

In the field of organizational development, human process change interventions have explored how to improve an organization's culture and performance through talent management (Hassan et al., 2022; Hassan et al., 2023). Defined as succession management of human resources (Cheloha & Swain, 2005; Lewis and Heckman, 2006), talent management is a deliberate and systematic effort by organizations to encourage individual advancement and ensure the continuity of leadership, skilled and critical talents, in key positions (Rothwell, 2016). Planning and managing the acquisition, selection, and careers of leadership is the province of *strategic* human resource management (Ashton and Morton, 2005; Cheloha & Swain, 2005; Creelman, 2004).

For decades, the UAE has been developing talent management programs across organizations in the government and private sectors (Federal Authority for Human Resources, 2019). Knowledge transfer from skilled and highly experienced expatriates is a key factor in the success of these programs; specifically, in the leadership positions where the UAE government is strategically focused on succession planning talent programs to develop second and third generations of UAE national leaders. Thus, knowledge transfer is central to the government's plan to develop nationals for succession and talent management (Almessabi, 2017).

There is a clear need for empirical work to investigate the antecedents of knowledge transfer while incorporating the simultaneous effects of the characteristics of the sender, receiver, and organization (see Simonin, 1999; Szulanski, 1996). This research adds to the growing body of literature in workplace learning by proposing and testing a model that illuminates successful methods to facilitate knowledge transfer so that human resource professionals and executive management can take the necessary steps to ensure successful organizational learning. The challenge of developing human capital in a diverse international setting that can compete successfully in the 21st century global economy is addressed.

Many countries in the Arab region have risen to the challenge of developing their populations' skills and knowledge, or human capital, in order to compete successfully in a global economy (Gonzalez et al., 2008). The challenge in developing a native, modern workforce with the skills and ability to assume key leadership roles in organizations is to understand which methods are most effective in order to develop the workforce quickly. With a rapidly changing economy, it has become increasingly important to determine the sender, receiver and organizational characteristics required to expedite knowledge transfer so that the methods and systems to facilitate development are implemented. The development of a learning organization creates a sustainable competitive advantage and, therefore, is a strategic weapon.

This research is aimed at gaining a deeper understanding of how knowledge is transferred, and the causal factors and the appropriate methods and solutions required to assist knowledge transfer and, ultimately, job performance. With more and more women entering management, this study aims to discover how gender interactions influence knowledge transfer at work. The challenge in building a model to fit the emerging Middle East region is identifying those variables that are most crucial to explaining knowledge transfer, thereby developing a comprehensive, yet parsimonious model that simultaneously reflects the most pertinent factors.

Theoretical Overview and Hypotheses

Organizations have invested significant resources in developing and building learning capability as strategic goal (Yang et al., 2004). Pedler et al. (1991) define the learning organization as one "that facilitates the learning of all of its members and continuously transforms itself in order to meet its strategic goals" (p. 1). In addition, Garvin (1993), describes a learning organization as "an organization skilled at creating,

acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights” (pp. 80). The perspective that knowledge is a process of applying expertise focuses on the flow of knowledge and the process of creating, sharing and distributing knowledge (Alavi & Leidner, 2001). Numerous other theoretical orientations have contributed to the growing body of information on knowledge transfer, e.g., communications, knowledge management, organizational behavior, sociology, psychology and strategic management. The study of sender/receiver characteristics with a focus on the dyad demonstrates that at the heart of knowledge transfer is a learning process that takes place when it comes to on specific, job- related knowledge with specific partners, i.e., in the context of the receiver/provider (seeker/sender) relationship (Cabrera et al., 2006; Eisenhardt & Santos, 2002; Inkpen, 2002; Minbaeva, 2007; Sales et al., 2010; Sheng-Hsun & Shio-Fen, 2010; Simonin, 2004; Szulanski, 1996; Szulanski & Cappetta, 2003).

Kogut and Zander’s (1992) knowledge-based view of the organization argues that firms are social communities that specialize in the creation and transfer of knowledge. Numerous predictors have been identified in the knowledge transfer process based on strategy and communication theory applied to the study of multinationals (Fang et al., 2010; Guo et al., 2020; Gupta & Govindarajan, 2000; Kang, Rhee & Kang, 2010; Park et al., 2022). In a review of the literature, Minbaeva, (2007) identified over 90 studies and similar to Eisenhardt and Santos (2002), conducted research on the characteristics of knowledge, senders and receivers and the relationships between senders and receivers. Minbaeva (2007) found that the characteristics of knowledge receivers had the strongest effect, followed by the relationships between senders and receivers and the characteristics of the sender.

While knowledge is defined as the data, information, rules, processes, intuition, experience and cognitive models developed by managers that guide their decision making and action (Kostova et al., 2004; Swift, & Hwang, 2013), knowledge transfer focuses on knowledge exchanges that result from formal or informal interactions which result in learning or new skills and their application to the workplace. It is the process through which one individual or unit is affected by the experience of another. Cohen and Levinthal (1990) and Simonin (2004) introduced absorptive capacity as the ability to recognize, assimilate and apply new external knowledge; Minbaeva et al., (2003) refer to absorptive capacity in terms of employees’ ability and motivation. Knowledge sharing occurs when information is coded, disseminated, transferred and applied among individuals and groups in an organization. The most common types of knowledge studied in the research on knowledge transfer in the organizational behavior and psychology fields are explicit and tacit knowledge. Explicit knowledge is the type of knowledge that can be codified or documented, such as written work procedures. As a consequence, explicit knowledge is more readily transferred. Tacit knowledge is more complex and embedded in the minds of individual members of an organization as it is manifested in behavior and perception. As a result, tacit knowledge is harder to transfer (Argote & Ingram, 2000; Levin & Cross, 2004; Nonaka & Takeuchi, 1995; Osterloh & Frey, 2000).

This section first reviews research on senders and receivers with a focus on the important characteristics that increase or inhibit knowledge transfer. These variables, including motivation, ability, interactions and job security are then proposed to affect knowledge transfer between expatriates and nationals in a causal model. Second, the research on organizational characteristics groups the literature into three areas that affect the effectiveness of knowledge transfer: the nature of the job (whether it is tacit, requiring innovation and creativity versus being more routine and codifiable), management support, and the reward system. Last, the nature of gender interactions in the Emirati culture is discussed with an eye toward how these interactions impact working relationships. *Receivers and Senders*

The motivation and learning intent of the individual is often cited as the major determinant of knowledge transfer (e.g., Argote et al., 2003; Filley et al., 1976; Minbaeva, 2007; Simonin, 2004). Moreover, studies of strategic alliances have found that, even though a strong rationale for collaborating between strategic partners may exist, this does not necessarily correspond to high learning motivate on and hence, knowledge transfer (Inkpen, 2002; Mowery et al., 1996; Pucik, 1988). Based on this research, a hypothesis regarding the receiver is:

Hypothesis 1: Receiver motivation will be positively related to knowledge transfer.

Previous research on absorptive capacity (e.g., Cohen & Levinthal, 1990; Kang & Kim, 2010; Minbaeva et al., 2003; Szulanski, 1996) discuss the receiver’s ability to recognize the value of new information as well as assimilate and apply that information. Therefore, the following hypothesis is proposed.

Hypothesis 2: Receiver ability will be positively related to knowledge transfer.

Compared to the more arm's length, cross-border relationships such as those in multinationals between corporate headquarters and subsidiaries, expatriate relationships have been shown to be a more effective means of transferring knowledge because there are more opportunities for interactions that result in knowledge transfer. Building on Blau's (1964) social exchange theory, Hassan et al. (2022) hypothesized that interactions between individuals involves a cost-benefit analysis where senders and receivers evaluate the risks and opportunities associated with reciprocity. The research concluded that when different nationalities perceive a win-win situation, they are more likely to have strong knowledge sharing relationships.

In a similar vein, Makela (2007) describes expatriate relationships as having a "higher level of trust and multiplexity, driven by shared experience, physical proximity, and prolonged face-to-face interaction," and that this results in effective knowledge transfer. Expatriation is ideally suited to transferring knowledge that is increasingly complex and is best learned from either interactions or observation (Athanassiou & Nigh, 2000; Bonache & Brewster, 2001; Byosiore et al., 2010; Eisenhardt & Santos, 2002; Makela, 2007; Sun & Hong, 2022; Szulanski & Cappetta, 2003), which demonstrates that strong social networks and intensive interaction are essential when transferring tacit knowledge. Based on this logic, the following hypothesis is proposed.

Hypothesis 3: Receiver interactions will be positively related to knowledge transfer.

Kang and Kim (2010) in a study of dyads demonstrate that an important part of the recipient's motivation is the perceived expertise of the colleague or sender. Further, Szulanski and Cappetta (2003) theorize that the effectiveness of knowledge exchange depends on *both* the disposition and ability of the source and recipient. Although the disposition, i.e., motivation, of the sender is less researched than the receiver, there is evidence to support the importance of the sender's willingness and ability to share knowledge (Husted & Michailova, 2002; Michailova & Husted, 2003; Minbaeva, 2007; Minbaeva & Michailova, 2004). The following hypotheses concerning the sender are:

Hypothesis 4: Sender motivation will be positively related to knowledge transfer.

Hypothesis 5: Sender ability will be positively related to knowledge transfer.

Based on the rationale provided by Blau (1964) and Hassan et al. (2022) regarding the reciprocity involved in interactions between individuals, the following hypothesis is offered regarding the sender:

Hypothesis 6: Sender interactions will be positively related to knowledge transfer.

While experienced expatriate managers can facilitate the transfer of knowledge, skills and practices, the process is not without problems or barriers (Smith, 2007). Knowledge does not necessarily flow without friction and employees may be concerned about what they may gain or lose by exchanging knowledge (Sheng-Hsun & Shiou-Fen, 2010). When jobs are competitive, partners may become protective of their knowledge and the more protective the sender is, the less knowledge transfer will occur. In a discussion of the challenges between international and national oil companies, Smith (2007) points out that nationals may be concerned that expatriates will take away their jobs. Husted and Michailova (2002) describe knowledge senders' hostility toward sharing knowledge as a function of a desire to protect individual competitive advantage. Protectiveness is an intended state of filtering information that may be difficult to notice or measure (Simonin, 1999). As a consequence, this study hypothesizes:

Hypothesis 7: Sender job security will be negatively related to knowledge transfer.

Organizational Characteristics

In general, the degree of knowledge transfer is subject not only to sender and receiver characteristics but also to organizational constraints such as the characteristics of the knowledge or the nature of the work (Eisenhardt & Santos, 2002; Inkpen, 2002; Minbaeva, 2007; Sheng-Hsun & Shiou-Fen, 2010; Simonin, 2004; Szulanski, 1996; Szulanski & Cappetta, 2003). For example, Riusala and Smale (2007) found that the type of knowledge and organizational factors were even more important than the relationship between the expatriate and partner in multinational corporations. If the particular information is easily communicated codified, and is non- ambiguous, it is more transferable and likely to be absorbed and applied by learners (Simonin, 2004).

Numerous studies have demonstrated that characteristics of the knowledge, such as tacitness, are associated with knowledge transfer (Alavi & Leidner, 2001; Kogut & Zander, 1992; Nonaka & Konno, 1998; Riusala & Smale, 2007; Simonin, 1999; Simonin, 2004; Szulanski, 1996; Zander & Kogut, 1995). Codifiable or explicit knowledge refers to routine work that has precedents and formal procedures that are written

down whereas tacitness refers to more creative work that requires innovation, intuition and judgment. Explicit knowledge is more easily captured, communicated, and indexed and can be codified into internal documents, policies and procedures.

For example, Zander and Kogut (1995) found that a higher degree of tacitness is associated with a lower speed of transfer because tacit knowledge is more difficult to articulate. In the same vein, Simonin (1999) found that complexity is negatively related to knowledge transfer. Based on experience, tacit knowledge and know-how exists in an employee's mind and is not contained in manuals. Tacit knowledge involves creativity and therefore, the more creative the nature of the work, the more important knowledge transfer is between expatriates and nationals.

Since codifiable knowledge is more easily transferred in positions where most of the work is explicit and documented in written procedures, employees can be successful when they are familiar with the procedures. In these more routine positions, expatriate/national exchanges may not be as important as knowledge of the written documents if the procedures are well documented. In this type of position, the incumbent can be successful by consulting the written procedures for the correct process or decision. Hence, more codifiable work is predicted to be associated with less knowledge transfer between expatriates and nationals. Similarly, a higher degree of creativity is required of more complex, unproven work that is not codifiable, and is predicted to be associated with higher levels of knowledge transfer.

Hypothesis 8: The nature of the work will be positively related to knowledge transfer.

Szulanski (1996) demonstrated that when barriers such as a barren organizational context and a climate of arduous relationships exist, they affect intra-firm knowledge transfer. As management is central to organizational reward systems, their support of diverse opinions, open communication, and knowledge exchange is an important determinant of knowledge exchange. In addition, whether management encourages critical review of work processes with a view toward learning and improvement is expected to affect the level of knowledge transfer. As a result, it is hypothesized that:

Hypothesis 9: Management support will be positively related to knowledge transfer.

Knowledge transfer depends on inducements, whether the organization rewards learning (Subramanian & Soh, 2009), and especially, management's support of collaboration and open communication. Based on Pucik's (1988) work with strategic alliances, two types of learning capacity are proposed: the actual reward system and a clear learning agenda that must be communicated to relevant parties. Reward systems can be reflected in career advancement, performance appraisals, and other forms of formal and informal recognition. In a study of three types of learning capacity, i.e., resource based, incentive based and cognitive based. Simonin (2004) found that incentives with clear connections between the reward system and information sharing with a well communicated learning agenda had the most significant effect across samples. Therefore, the following hypothesis is tested:

Hypothesis 10: Rewards will be positively related to knowledge transfer.

Knowledge Transfer and Performance

Much of the research on knowledge transfer uses effectiveness or speed of transfer as a dependent variable. Inherent in these studies is the assumption knowledge transfer results in higher individual, team, and ultimately, organizational performance. Argote and Ingram (2000) demonstrate that knowledge transfer results in changes in performance at the individual level and Lane et al. (2001) show that this increase in performance has a positive effect at the organizational level. It is important to determine not only whether knowledge transfer has occurred, but also whether it has resulted in improved performance.

Hypothesis 11: Knowledge transfer will be positively related to individual job performance.

Gender Interactions

Social capital literature argues that knowledge transfer, especially tacit knowledge, flows according to social networks (Kang, Kim & Bock, 2010; Lambooy, 2010; Rogers, 1995). Social network theory has been used in the study of diffusion of innovations and suggests that communication patterns directly influence the flow and adoption of information (Rogers, 1995). Ridgeway and Correll (2004) define gender beliefs as the widely held cultural beliefs that define how men and women are expected to behave and gender acts as a fundamental principle for organizing all social relations, including those in the workplace.

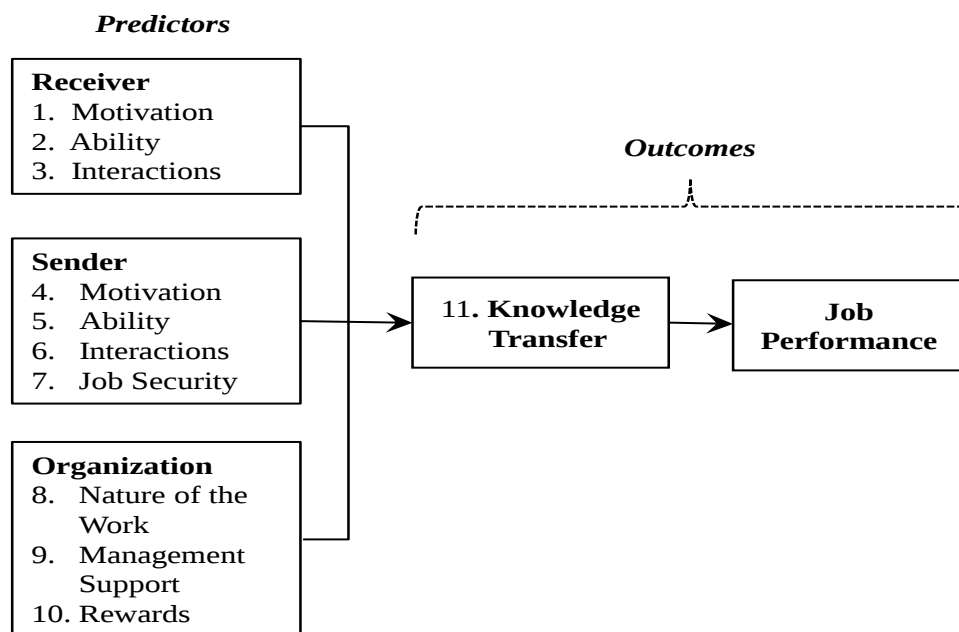
Rooted in the culture of the national workforce, the genders in Emirati families often are segregated from interacting outside their immediate family until they enter the workforce. As more and more women

become educated in the UAE. Based on preliminary in- depth interviews, participants in this research indicated that the interaction between the genders in the national population was primarily formal and that informal interactions, such as taking lunch or coffee breaks, did not occur. Informally, nationals felt most comfortable interacting with the same gender.

Hypothesis 12: There are more one to one interactions between genders on a formal basis than on an informal basis for nationals and expatriates.

Building on the commonality of previous research, the model in Figure 1 represents a parsimonious, yet complete design for analyzing the joint effect of the major determinants of the extent of knowledge transfer. The model shown in Figure 1 organizes the factors into three categories, sender, receiver and organizational characteristics. These three categories, which predict knowledge transfer, are derived from research conducted in other parts of the world as well as important factors unique to the UAE that are hypothesized to influence knowledge transfer. The model contrasts learning facilitators, e.g., sender and receiver motivation, and learning inhibitors, e.g., lack of management support in expatriate collaborations in the knowledge sharing process.

Figure 1: Causal Model of Knowledge Transfer



3. Methods

The sample of the study consisted of 477 managers and staff from 9 organizations in Abu Dhabi who agreed to participate in the study as part of a joint University senior internship and capstone program at Zayed University. A quasi-experimental, cross sectional field survey design was employed as it is the most workable for studies of organizations and does not require randomization of subjects (Nicholas & Katz, 1985). The companies represent five major and diverse industries: energy, government, commercial airline, real estate development, and media and entertainment.

The overall response rate was 64% (477/745). To protect confidentiality, the number of responses from each company is not reported; however, the sample groups ranged from 24 to 94 participants. The average age of the respondents was 32 with an average of 6 years' service in their current organization. The majority of respondents were officers, managers, supervisors, or holders of other senior positions (81%). There were 32% from Human Resources, 21% from Finance, 10% from Strategy, 9% from Information Technology and 7% from Marketing. Gender (male=52%; female=48%) and origin (national=47%; expatriate=53%) were similarly represented thus resulting in a sample that is appropriate to examine gender and national/expatriate interactions in knowledge transfer.

The instruments used in this study were developed from a pool of items that was generated from a review of the literature and interviews with 15 managers and employees from 3 organizations who addressed the

issue of how knowledge was managed and transferred in their company. The results were content analyzed into common categories and a questionnaire was developed and pilot tested. Most variables used a five-point Likert-scale format with response categories ranging from 'strongly disagree' to 'strongly agree'.

4. Definition of Terms

A sender/expatriate is an employee hired by a UAE organization from another country for specific skills. The receiver/national is an employee who is a native of the UAE.

Knowledge transfer is the degree to which nationals and expatriates work together and share knowledge to develop the nationals' skills in critical thinking, problem solving and the improvement of work processes. Motivation is defined as whether respondents view knowledge transfer as vital to competitive advantage and their willingness to share and receive knowledge; that is, do they actively seek out opportunities and encourage each other to share knowledge? Ability is how nationals and expatriates rate the other's job competency, willingness to share knowledge, critical thinking, and involvement on the job, trust worthiness and problem-solving ability, i.e., perceptions of each other's ability. Dyad interactions are the amount of interactions between nationals and expatriates, both formal and informal, including whether their work stations are physically close.

Job security refers to the job security of the expatriates and is rated by perceptions from both the expatriates and nationals as to whether they think that expatriates would like more job security and therefore, share more information.

Nature of the work is the extent to which the work is routine (explicit) or requires creativity (tacit), i.e., are the information and procedures needed to perform the job recorded or are decisions nonroutine. Rewards refers to whether knowledge transfer is rewarded in terms of career advancement, performance appraisal, and recognition. Management support is defined as management that supports open communication and, learning and knowledge transfer and is open to diverse opinions, accepts failure as part of the creative process and encourages the review of processes.

Performance is the rating the respondent received on his or her last formal performance appraisal report, e.g., outstanding, or exceeding, meeting and not meeting expectations.

Gender interactions expatriates formal relate to the daily, face-to-face interactions and discussions with female expatriates on work issues. Gender interactions expatriates informal are informal interactions with female expatriates, such as meeting for breaks. Gender interactions nationals formal relate to the daily, face to face interactions and discussions with female nationals on work issues. Gender interactions nationals informal are informal interactions with female nationals, such as meeting for breaks.

Additionally, four versions of the survey were needed for each of the following groups: Expat Men, National Men, Expat Women and National Women. Some of the questions were the same for each group, e.g., nature of the work. Where appropriate, the questions were reworded to fit the group. For example, on knowledge transfer, the wording of a question to an expat is "I work with Nationals to improve work processes," and the same item given to a national is worded "I work with Expats to improve work processes." For gender issues, items also had to be adapted. To illustrate, a survey statement to the men is "Daily, I have face to face interactions with female Expats in my department," and the same item to women is "Daily I have face to face interactions with male Expats in my department."

To establish the content validity of the measurement instrument, the items were reviewed for clarity, appropriateness and content validity by a group of experienced managers in the field (middle and upper-level managers considered experts in knowledge transfer) and researchers from Zayed University (knowledge transfer faculty experts as well as student researchers). These items were pilot tested on a group of over 10 senior managers, researchers, and students. To eliminate a positive or negative response bias, items were randomly reverse worded. To reduce the risk of common method bias, performance level was defined as the result of the rating the respondent received from his or her annual performance review.

The instrument development and initial data collection took place in spring, 2010. Four Zayed University students in the College of Business participated in the research, collecting the data from their internship site. Based on the pilot test, the four-page survey took about 30 minutes to complete. Due to the length of the survey, the decision was made to administer the survey in person by either the students or faculty supervisor when possible to generate interest, assure confidentiality and improve the response rate. After obtaining approval from senior management, a letter was emailed to the administrators in the appropriate departments. Participants were assured that their responses would be confidential and only aggregate level data would be reported to the organization.

Additional organizations were contacted and the survey was reviewed with senior management, e.g., the Vice President of Operations or Human Resources. In some cases, the items were judged to be too sensitive to ask and deleted from the survey. For the most part, these items were part of the job security variable. In all companies, the survey was edited to adapt the terminology to the company's culture, e.g., annual

TABLE 1
Means, Standard Deviations, and Correlations^a

Variables	Mean	s.d.	1	2	3	4	5	6	7	8
1 Motivation	4.1	.6	(.86)							
2 Ability	3.6	.6	.23**	(.87)						
3 Interactions	3.9	.6	.53**	.27**	(.83)					
4 Job Security	3.2	1.0	.01	.08	.02	(.68)				
5 Nature of the Work	2.9	.6	.03	-.13	.03	-.04	(.59)			
6 Rewards	3.4	.7	.20**	.27**	.15**	-.04	-.17**	(.83)		
7 Management	3.9	.6	.39**	.33**	.32**	.00	-.23**	.44**	(.92)	
8 Knowledge Transfer	3.8	.7	.62**	.36**	.59**	-.02	.05	.22**	.48**	(.90)

^a n = 477. Numbers in parentheses on the diagonal are the Cronbach's alpha coefficients of the composite scales.

*p<.05

**p<.01

performance review ratings.

5. Analysis and Findings

As shown in Table 1, motivation had the highest overall mean (4.1), while nature of the work had the lowest mean (2.9). Standard deviations ranged from .6 to 1.0 and the correlations in are reported in Table 1. Cronbach's alpha coefficients were computed as a measure of internal consistency and are listed in Table 1. Moderate and acceptable levels of reliability were achieved for most of the variables (r ranged from .59 to .92; Nunnally & Bernstein, 1994), indicating high inter-correlations among variable items. The lowest coefficient was, .59, for the nature of the work factor. The questions assessing nature of the work and creativity had the highest percentage of reverse-scored questions, which could indicate the respondents had difficulty interpreting the items, which lowered the reliability of the scale.

The results of the regression analysis are shown in Table 2.

TABLE 2
Results of Regression Analysis for Knowledge Transfer^a

Predictor	Hypothesis	All Model 1	Expats Model 2	Nationals Model 3
Intercept		.00	.00	.00
Motivation	1, 4	.36**	-.06	.34**
Ability	2, 5	.13**	.29**	.37**
Interactions	3, 6	.30**	.45**	.09
Nature of the Work	8	.03	.02	.04
Management	9	-.02	-.02	-.02
Rewards	10	.21**	.28**	.19**
R ²		.54	.56	.53
Adjusted R ²		.53	.55	.51
F		91.90**	51.94**	35.60**
n		477	252	198

^aStandardized regression coefficients are shown.

*p < .05

**p < .01

Hypotheses 1 & 4: Sender and receiver motivation were found to be positively related to knowledge transfer in the correlation matrix in Table 2 ($r = .59, p \leq .01$). However, in the regression analysis, motivation was only a significant predictor of knowledge transfer for nationals (receivers), and not expatriates (senders).

Hypotheses 2 & 5: Both hypotheses were supported by the analysis. The higher senders and receivers rate each other's ability, the higher the degree of knowledge transfer ($r = .70$ at $p \leq .01$). In addition, the standardized regression coefficients indicate that for nationals, the rating of the expatriates' ability is the most important predictor of knowledge transfer.

Hypotheses 3 & 6: There was a strong, significant correlation between interactions and knowledge transfer ($r = .59, p \leq .01$) for the both groups. The regression analysis showed a strong, positive relationship between expatriate interactions and knowledge transfer but the standardized regression coefficient for nationals was not significant. Therefore, hypotheses 1 and 2 were supported for nationals and hypotheses 5 and 6 are supported for expatriates. The results indicate that a perception of each other's ability is a significant predictor of knowledge transfer for both groups. A high degree of face-to-face interactions between groups is associated with knowledge transfer for expatriates but not nationals. Similarly, if nationals are motivated to learn and seek information, knowledge sharing will occur but expatriate motivation is not associated with knowledge sharing.

Hypothesis 7: Based on 180 out of 252 respondents, the job security was not found to be a significant predictor of knowledge transfer.

Hypothesis 8: The correlation and regression analyses indicate that the nature of the work was not a significant predictor of knowledge transfer. However, in a post hoc analysis, when the sample group was divided into administrative jobs versus management or senior leadership, there was a significant correlation, $r = .62, p \leq .01$.

Hypothesis 9: Management support was not a significant predictor of knowledge transfer in the regression analysis (see Table 2). However, it was significantly correlated with motivation, ability and interactions so management support has an important and indirect effect on knowledge sharing (see Table 1).

Hypothesis 10: The higher the rewards for learning, the higher the level of knowledge transfer for both expatriates and nationals. The standardized regression coefficient in the expatriate model was $.28, p \leq .01$, and for the national model was $.19, p \leq .01$.

In summary, an examination of the standardized beta coefficients indicates that the important predictors of knowledge transfer for expatriates are (in order of importance) interactions ($.45, p \leq .01$), ability ($.29, p < .01$), and rewards ($.28, p \leq .01$). For nationals, the most important predictors are interactions ($.37, p \leq .01$), motivation ($.34, p \leq .01$), and rewards ($.19, p \leq .01$). There was no difference in knowledge transfer levels among organizations or departments.

Hypothesis 11: Based on the 327 respondents who disclosed their review from their most recent performance evaluation, there is a significant correlation between knowledge transfer and performance ($r = .18, p \leq .01$).

Hypothesis 12: There were more one to-one interactions between genders on a formal basis than on an informal basis for nationals and expatriates. Tested with a paired t- test, the results show that for expatriates, formal gender interactions were significantly more than informal gender interactions (4.3 vs. 3.1 ; $t = 20.15$; $p \leq .001$). Likewise, formal gender interactions between nationals are significantly higher than informal interactions (4.0 vs. 3.0 ; $t = 17.23$; $p \leq .001$).

6. Discussion and Implications

Regarding sender characteristics, dyad interactions are the most important contributor to knowledge sharing. If they frequently interact, they are more likely to share their experience and improve the problem-solving skills of the national as well as improve work processes. In general, if expatriates and nationals perceive each other to be competent and involved in their job with critical thinking and problem-solving ability, knowledge transfer occurs. Consistent with previous research, our results showed that if rewards (e.g., recognition, performance appraisal, and career advancement) are linked to knowledge transfer, knowledge sharing is more likely to occur. Interestingly, motivation is an important predictor of knowledge transfer for nationals but not for expatriates and interaction is a prerequisite for knowledge transfer for expatriates but not nationals. Therefore, if nationals believe that knowledge transfer is vital to competitive advantage and they actively seek opportunities to share, encourage and learn from expatriates, more

knowledge transfer will result.

The statements about job security referred to the expatriates' job security and job security is not a significant predictor of knowledge transfer. An explanation for this finding is that expatriates may have been reluctant to acknowledge that they are insecure about their job or they do not want to share information. When possible, surveys were returned directly to the researchers to assure the participants of confidentiality, but post hoc interviews and anecdotal evidence indicated that some expatriates were not willing to indicate that they had job insecurity even when they did. In fact, the job security variable was the variable that had the most missing data either because the individual respondent did not fill it in or the questions were deleted by management from the entire sample. Interestingly, the average rating on this variable was 3.4 and 3.1, for nationals and expatriates, respectively, which was significant ($z = 2.5$; $p < .05$). Therefore, future studies should take care to design the measure of job security so that respondents believe the data is confidential.

The nature of the work was not related to knowledge transfer. This variable had a low internal consistency which in the end could have contributed to the non-significant finding. Since nature of the work is consistently demonstrated in previous research to be an important predictor of knowledge transfer, the cause of the nonsignificant finding may be due to a Type II Error (not a Type I Error). That is, the null hypothesis that there is no relationship was accepted when it was false (Lind et al., 2010).

Regarding organizational characteristics, important prerequisites to knowledge transfer are that management not only encourage collaboration between dyads but also rewards creativity, experimentation, open communication, and review of work processes. Likewise, when sharing and learning are linked to career advancement, performance appraisal and key performance indicators, a higher level of transfer will result. In summary, about half the variance in knowledge transfer can be explained by the direct effects of sender and receiver motivation, perceptions of each other's abilities, dyad interactions and organizational rewards.

Knowledge transfer should not be an end in itself. Knowledge transfer between dyads that results in excellent performance is vital to building a learning organization, as well as succession planning, talent management, and overall organization talent sustainability. The high performers in these organizations are those who shared or learned the most from their expatriate/national partners. This significant finding is important because knowledge transfer that doesn't result in improved individual performance will not benefit the department or, in the end, the organization.

The high number of formal interactions between the genders illustrates a significant cultural shift from a predominantly gender-segregated culture to one that interacts in a formal work setting. At the same time, this study demonstrates that informal one-to-one informal interactions between genders are not occurring as much as formal interactions. To the extent that significant knowledge transfer occurs during informal interactions, these findings indicate a loss of knowledge exchange between men and women for both expatriates and nationals.

This research develops and tests a model that analyzes the effects of the sender's and receiver's motivation and ability, their interactions (including gender-specific interactions and job security), as well as organizational characteristics (including the nature of the work and rewards/inducements in the context of where knowledge transfer takes place). The empirical results provide strong evidence that successful knowledge transfer is a function of the characteristics of senders and receivers. Organizations whose employees are willing to both absorb and share knowledge and are rewarded for doing so achieve higher knowledge transfer, which ultimately predicts superior job performance. In essence, collaborative exchange among employees enhances individual performance and consequently, departmental and organizational performance.

Knowledge sharing benefits organizations by saving time, improving management, increasing participation, enhancing communication as well as, developing and sustaining talent management, reducing problem-solving time, better serving customers, and providing better measurement and accountability (Alavi & Leidner, 1999). Employees who develop skills by finding, acquiring, sharing and applying knowledge will help the organization become more efficient and effective. Collaborative partnerships between expatriates and nationals can result in the development of new competencies when both partners are motivated and have the opportunity to interact. Furthermore, the context in which knowledge transfer takes place is important to consider in establishing rewards to facilitate learning in order to build high performing organizations.

Knowledge transfer will increase if senders and receivers are given wide access to formal and informal

communication channels. However, as more and more nationals gain experience, a significant loss of knowledge will occur in an organization because more experienced managers are reluctant to interact informally with the other gender.

7. Limitations

Subsequent research should consider the applicability of these results to other organizations and industries to verify if the findings are generalizable. Though performance was measured through a different source, the other measures were assessed through the same survey, so the possibility of common method variance must be considered when interpreting the results of the analysis. The unit of analysis in this study was the dyad, i.e., the sender and receiver. Knowledge transfer can occur at the dyad, group or organizational level. Future research at the team, department and organizational level would illuminate the impact of knowledge transfer at additional levels of analysis. For example, what is the optimum level or ratio of nationals to expatriates at an organization's top management level to optimize knowledge transfer? The present study is cross-sectional and exploratory.

Conclusion

A significant portion of valuable knowledge in organizations is embedded in individuals. Organizations can significantly improve knowledge transfer and learning capabilities by leveraging the skills of experienced employees and making sure that information that is held by experts is widely shared. The more tacit, difficult and strategic the knowledge is, the more important it is that management structures the work to increase the frequency of repeated contact with the knowledge sources.

The difference in informal interactions between the genders, coupled with the high importance attributed to interactions, suggests that management can encourage knowledge exchange by developing teams to structure interactions between genders and situating genders in close proximity of each other in the work environment.

Organizations can significantly improve knowledge transfer and learning capabilities by leveraging the skills across genders and nationalities. By providing structure to employee interactions so that knowledge is exhibited, applied and integrated in the work setting, management can explicitly create opportunities for employees to share expertise with each other. Organizations that utilize employees' collective knowledge and expertise with innovative and creative human resource management practices are more likely to be effective and create a sustainable competitive advantage.

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