

Untangling the Laundry List

General Mental Ability, the Big Five, and Context Related Variables
as Predictors for Expatriate Success

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“There is one way to understand another culture. Living it. Move into it, ask to be tolerated as a guest, learn the language. At some point, understanding may come. It will always be wordless. The moment you grasp what is foreign, you will use the urge to explain it. To explain a phenomenon is to distance yourself from it.”

Peter Høeg, Smillas Sense of Snow

Abstract

General Mental Ability, the Big Five, and several context specific variables are studied in regard to their relationship with two criteria of expatriate success, namely, adjustment and job performance. Interviews and standardized tests were conducted with a sample of 66 German and Austrian expatriates in South Korea. Results show no relationship with General Mental Ability for neither of the two criteria. Hypotheses for Conscientiousness and Emotional Stability were partially confirmed; Extraversion emerged to be negatively related to other-ratings of adjustment. Several context specific variables were found to be related to the criteria. Drawing from the study's results, recommendations for future studies in the expatriate domain are provided.

Zusammenfassung

General Mental Ability, die Big Five und mehrere kontextspezifische Variablen werden im Hinblick auf ihre Beziehung zu zwei Kriterien für den Erfolg von Auslandsentsendungen untersucht. Kriterien für den Erfolg sind die Anpassung und Arbeitsleistung der Auslandsentsendeten. Interviews und standardisierte Testverfahren wurden an einer Stichprobe von 66 in Südkorea tätigen Deutschen und Österreichern durchgeführt. Die Ergebnisse zeigen keinen relevanten Zusammenhang zwischen General Mental Ability und den Kriterien. Die Hypothesen für Gewissenhaftigkeit und Emotionale Stabilität wurden teilweise bestätigt. Ein negativer Zusammenhang ergab sich zwischen Extraversion und Fremdbeurteilung der Anpassung. Zusammenhänge mit den Kriterien und mehreren kontext-spezifischen Variablen wurden ebenfalls bestätigt. In Bezugnahme auf die Ergebnisse der Studie werden Empfehlungen für zukünftige Untersuchungen im Bereich von Auslandsentsendungen abgegeben.

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III Abbreviations & Statistical Symbols

α	Alpha: Internal consistency reliability of a variable (Cronbach's α)
AERA	American Educational Research Association
APA	American Psychological Association
β	Beta: Standardized regression coefficient
CEO	Chief Executive Officer
cf.	compare
e.g.	for example
GLOBE	Global Leadership and Organizational Behavior Effectiveness Research Program
GMA	General Mental Ability
i.e.	that is
N	number of members in the total sample size
n	number of members in a limited portion of the total sample
NCME	National Council on Measurement in Education
NEO-PI-R	Revised NEO Personality Inventory
r	Pearson product moment correlation coefficient
R	Multiple correlation of a single dependent variable, estimated from more than one independent variable
R^2	Squared multiple correlation
SD	Standard Deviation
WAIS	Wechsler Adult Intelligence Scale

1 Introduction

Despite reports of reductions due to an overall global economy slowdown, the number of international assignments is expected to continue to increase (PriceWaterhouseCoopers, 2005). Although there is considerable debate on the percentage of those assignments that fail (Harzing, 1995; Forster, 1997), there is broad consensus in that failures are costly. There is also some agreement, that failures can not only be defined as returning home early, but that it encompasses a broad array of aspects, ranging from low performance during the assignment and damage to overseas business relationships to personal dissatisfaction with the assignment by the expatriate or family (Dowling & Welch, 2004). For organizations, well-performing expatriates are especially important in light of increasing investments across borders, cross-border mergers, acquisitions, joint ventures, and alliances (Briscoe & Schuler, 2004), and the large amount of profit, that is made overseas. There is a lot at stake for expatriates and their families as well, taking into account the strains and personal consequences that can result from not adjusting well to a foreign environment (Deller, in press). Hence, any measure that validly predicts performance and adjustment of expatriates will be of high value for both, organizations and expatriates.

In the last decade, there has been a tremendous increase in research on personal and situational factors that contribute to expatriate performance and adjustment, with an emphasis on the latter. On the predictor side, the use of personality variables has finally made its way from the domestic to the international context. When it comes to cognitive ability measures, apparently, the assumption that, "... employees are from Venus and expatriates are from Mars" (Mol, Born, Willemsen, & van der Molen, 2005, p.592), still proves to hold. Taking these premises as starting points, this study intends to contribute to the expatriate literature in several ways: First, by using criteria-measures which clearly distinguish between expatriate adjustment and performance; second, by studying the impact of cognitive abilities on both criteria; third, by providing additional evidence for the usefulness of personality measures in predicting adjustment and performance of expatriates; and fourth, by analyzing several individual variables that are unique to the expatriate setting in terms of their influence on performance and adjustment.

2 Theoretical Background

In this part of the paper, the theoretical background of the study is explained. First, the setting in which the study was conducted, namely in the field of cross-cultural transitions, is

circumscribed. Second, the criteria to be applied in this study, namely *adjustment* and *job performance*, are presented. Third, the theoretical background of the applied predictors is depicted. Predictors encompass the constructs of *General Mental Ability* and the *Big Five* personality factors, as well as several context specific individual variables. Hypotheses are derived aligning predictors and criteria.

2.1 Cross-cultural transitions

The following section will briefly define the terms *expatriate* and *culture*, as these two are pivotal to the framework of this study. In addition, it will be explained why this study was conducted in South Korea.

2.1.1 Expatriates

Recent studies indicate that organizations are becoming more flexible in managing expatriation. Among other aspects, expatriation occurs in a broad span in terms of length of the assignment (Fenwick, 2004), as well as permanent moves and localizations of employees (PriceWaterhouseCoopers, 2005). Taking into account these changes, for this study we will refer to an *expatriate* as an employee of an organization, that is working in a country other than his/her own, with the prospect of at least a one-year assignment in that country. Nevertheless, no change occurred in that expatriates tend to work in highly complex jobs with a high degree of responsibility (Sinangil & Ones, 2001); “Perhaps the most important element that distinguishes expatriate jobs from other high complexity and high responsibility jobs is an added element of complexity by the intercultural environment in which these jobs are performed” (p.425). Therefore, we think it is worth saying some words on culture.

2.1.2 Culture

“The number of definitions of *culture* is notoriously large ...” (Hofstede & McCrae, 2004, p.58). As we will refer to the GLOBE (Global Leadership and Organizational Behavior Effectiveness) Research Program in distinguishing between cultural dimensions, we will also refer to their definition of culture: “For project GLOBE, culture is defined as *shared motives, values, beliefs, identities, and interpretations or meanings of significant events that results from common experiences of members of collectives that are transmitted across generations*” (House & Javidan, 2004, p.15). The complexity of expatriate jobs does not only stem from having to understand and accept practices and values that are different from one’s own personal experiences. Since culture is ultimately reflected in behavior, in order to be

successful in another culture one will also have to change one's own way of doing things to some extent. Again, this adds to the complexity of working as an expatriate.

In a major effort, project GLOBE recently developed a model of 10 distinct cultural clusters. The clusters are named as follows: Anglo, Latin Europe, Nordic Europe, Germanic Europe, Eastern Europe, Latin America, Middle East, Sub-Saharan Africa, Confucian Asia, and Southern Asia. These clusters vary along nine different cultural dimensions described in Figure 1. For each cluster, profiles of each of the cultural dimensions were developed. "These profiles can be thought of as unifying themes linking societal cultures together within distinct regions of the world" (Gupta & Hanges, 2004, p.178).

Figure 1. Cultural dimensions of Project GLOBE

1. *Uncertainty Avoidance* is defined as the extent to which members of an organization or society strive to avoid uncertainty by reliance on social norms, rituals, and bureaucratic practices to alleviate the unpredictability of future events
2. *Power Distance* is defined as the degree to which members of an organization or society expect and agree that power should be unequally shared.
3. *Collectivism I: Societal Collectivism* reflects the degree to which organizational and societal practices encourage and reward collective distribution of resources and collective action.
4. *Collectivism II: In-Group Collectivism* reflects the degree to which individuals express pride, loyalty and cohesiveness in their organization or families.
5. *Gender Egalitarianism* is the extent to which an organization or a society minimizes gender role differences and gender discrimination.
6. *Assertiveness* is the degree to which individuals in organizations or societies are assertive, confrontational, and aggressive in social relationships.
7. *Future Orientation* is the degree to which individuals in organizations engage in future-oriented behaviors such as planning, investing in the future, and delaying gratification.
8. *Performance Orientation* refers to the extent to which an organization or society encourages and rewards group members for performance improvement and excellence. This dimension includes the future oriented component of the dimension called Confucian Dynamism by Hofstede and Bond (1988).
9. *Humane Orientation* is the degree to which individuals in organizations or societies encourage and reward individuals for being fair, altruistic, friendly, generous, caring, and kind to others. This dimension is similar to the dimension labelled Kind Heartedness by Hofstede and Bond (1988).

(House, Mansour, Hanges, & Dorfman, 2002, p.5/6)

The concept of *cultural similarity*, or its opposite, *cultural distance*, has been frequently referred to in arguing that there are some cultures that are easier and some that are more difficult to adjust to (Hofstede, 1980; Jun & Gentry, 2005; Stahl & Caligiuri, 2005). Following this assumption, effects that ease or impede adjustment should prevail more clearly

when cultural difference between country of origin and country of assignment is great. Hence, in choosing the country in which the study would be conducted, one should ideally choose a country that is very different from the expatriates' home country.

Germany and Austria belong to the Germanic cluster, which "... shows high practices of performance orientation, uncertainty avoidance, future orientation, and assertiveness. This cluster is also characterized by relatively low values of institutional collectivism, in-group collectivism, gender egalitarianism, and humane orientation. Put differently, societies in the Germanic cluster rely on more masculine, assertive, and individualistic approaches, which are futuristic, well-defined, result-oriented, and often harsh" (Gupta, Hanges, & Dorfman, 2002, p.14).

In contrast, South Korea is part of the Confucian Asia cluster. Compared to the Germanic cluster, the Confucian Asia cluster has lower practices scores¹ of Assertiveness (Den Hartog, 2004), Future Orientation (Ashkanasy, Gupta, Mayfield, & Trevor-Roberts, 2004), and Uncertainty Avoidance (De Luque & Javidan, 2004). Practices scores in the Confucian Asian cluster are higher than in the Germanic cluster in Institutional and In-Group Collectivism (Gelfand, Bhawuk, Hisae Nishi, & Bechtold, 2004), Humane Orientation (Kabasakal & Bodur, 2004), Performance Orientation (Javidan, 2004), and Power Distance; although all societies seem to be similar in terms of practices of hierarchical control (Carl, Gupta, & Javidan, 2004). Relatively equal practices scores emerged in Gender Egalitarianism (Emrich, Denmark, & Den Hartog, 2004). Hence, the premise of being different to the Germanic culture is given.

The reason for limiting the study to expatriates working in South Korea is to control for potential culture-specific influences (Deller, 2000). Rather practical aspects for conducting the study in South Korea were the following: German companies are planning to increase their number of expatriates in Asian countries (Piterek, 2005). Among the Asian countries, South Korea is the third most important trading partner of Germany, following China and Japan (Statistisches Bundesamt, 2005). However, less bureaucratic hindrances, compared to China, and lower living expenses, compared to Japan, made South Korea a better overall choice for conducting the first of a series of studies with German expatriates.

¹ Project GLOBE differentiates between practices and value scores. Practices scores refer to ratings of "... *What Is*, or *What Are*, common behaviors, institutional practices, proscriptions and prescriptions" (House et al., 2002, p.5). In contrast, value scores refer to judgements of *What Should Be* (House et al., 2002).

2.2 Criteria

Reviewing the expatriate related literature, Ones and Viswesvaran (1997) state that “the problem of the criterion has been almost more retarding an issue in the expatriate literature (e.g., Benson, 1978) than it has been in most domestic (within culture) studies in industrial/organizational psychology (Campbell, Gasser, & Oswald, 1996; Viswesvaran, 1993)” (p.75). In the same article, the authors identify several problematic issues coming along with the “laundry list of criteria” (p.76) used to measure expatriate success:

First, the list includes content and process variables. That is, variables such as culture shock and acculturation describe a process and cannot be indicative of “success”. Second, criteria are traditionally used to serve mainly two purposes: (1) they are used to select and reject interventions (mainly selection and training interventions), and (2) they are used to evaluate overall effectiveness. Some of the criteria listed above (e.g., satisfaction) may be inappropriate for both purposes. Third, we would like to suggest that many of these measures are casually related to each other. What is lacking is a theoretical framework that links these constructs (Ones & Viswesvaran, 1997, p.76).

So as not to add to the laundry list of criteria, we have chosen the two criteria we find to be most crucial in measuring expatriate success: adjustment and job performance. Of the many other phenomena in the context of cross-cultural transitions that surely merit being studied in more detail, we explicitly exclude the following: *Adaptation*, because it describes the acculturation process in which the expatriate changes in response to environmental tasks which can result in reaction, withdrawal or adjustment (Berry & Sam, 1997; Sinangil & Ones, 2001). Likewise, *culture shock* and *acculturation* have been excluded from this study for being process variables. Another frequent criterion in expatriate settings is *completion of overseas assignment*. However, it has been widely proven to be related to adjustment (Aycan, 1997a; Aycan, 1997b; Shaffer & Harrison, 1998), which has already been included in this study. At the same time the completion of the assignment or *thoughts of returning home early*, may involve several aspects beyond the expatriates’ control, for example the adjustment of his/her spouse or family (Shaffer & Harrison, 1998). The two criteria of adjustment and job performance are described in the following section.

2.2.1 Adjustment

Black, Mendenhall, and Oddou (1991) point out several substantial differences between domestic and cross-cultural adjustment. They observe that adjustment in a domestic setting *does not* involve significant changes in the non-work environment, whereas moving to a foreign country *does* often involve changes in the non-work environment, in addition to changes in the job the individual performs and the corporate culture in which responsibilities are executed (Black, Gregersen, Mendenhall, & Stroh, 1999). Based on this distinction, the following theoretical discussion excludes research on adjustment in domestic settings.

Adjustment, for the purpose of research on international assignments, can be defined as "... the degree of psychological comfort the respondent feels regarding the new situation" (Gregersen & Black, 1990, p.463). Adjustment is described as a multi-faceted phenomenon (Aycan, 1997a; Black, 1990; Robie & Ryan, 1996). Black and colleagues named its constituent dimensions *work adjustment*, *interaction adjustment*, and *general adjustment* (Black, 1988; Black & Stephens, 1989; Black et al., 1999). Although the dimensions have been termed differently in the acculturation literature (interaction adjustment as *socio-cultural adjustment* and general adjustment as *psychological adjustment* [Searle & Ward, 1990]), there are two reasons to stick to the model of Black et al.: First, the described adjustment dimensions are conceptually similar to the proposed model of Black and colleagues (Aycan, 1997a). Second, this study refers to a working context and therefore the model proposed by Black et al. seems to be more appropriate. The three dimensions which go with it are defined as follows: *Work adjustment* describes the extent to which the expatriate feels psychological comfort with his/her new work role and working environment (Black, 1988; Black et al., 1999). *Interaction adjustment* refers to the degree to which the expatriate feels comfortable in interacting with host country nationals. Finally, *general adjustment* refers to adjustment regarding the general non-work environment, such as adjustment to food, transportation, health care, entertainment, and other issues (Black et al., 1999).

Mendenhall and Wiley (1994) differentiate two phases in which adjustment takes place, namely the anticipatory adjustment phase and the in-country adjustment phase. Anticipatory adjustment takes place before leaving for the foreign assignment to the degree that information about values, norms, and behavioral rules of the host culture are available to the expatriate. The dimensions of work, interaction, and general adjustment relate to in-country adjustment, respectively.

Caligiuri (2000a) states that cross-cultural adjustment is an internal, psychological, emotional state that should be measured from the perspective of the individual experiencing the foreign culture. Brewster (1995), however, argues that many studies claiming to measure adjustment as a state of psychological well-being frequently develop into measures of the extent to which expatriates have been able to adapt their behavior to the host environment. Actually, we consider it more appropriate to measure adjustment in subjective as well as in 'objective' terms. The subjective measure reflects the degree to which the expatriate feels comfortable in his/her new environment, while the 'objective' ratings measure the degree to which others (e.g., host nationals) perceive the expatriate to be adjusted which will obviously be a rating of adapted behavior. Subjective and objective ratings of an expatriates' adjustment might differ to quite a large degree. Black (1988), too, states that adjustment "... can be viewed as both a subjective and an objective concept. Subjectively, it is the degree of comfort the person feels in the new role and the degree to which he or she feels adjusted to the role requirements. Objectively, it is the degree to which the person has mastered the role requirements and is able to demonstrate that adjustment via his or her performance" (p.278). However, although adjustment and performance might be related to each other, adjustment is not only reflected in performance (cf. the three dimensional model). Also, there is more to performance than adjustment, as will be discussed later.

Aspects related to expatriate *job performance*, the second criteria in this study, are discussed in the following section, as "adjustment is not an end in itself, but rather a part of a process that allows the expatriate to be able to focus on and carry through the tasks of the job that he/she has been send to perform" (Sinangil & Ones, 2001, p.433).

2.2.2 Job Performance

Campbell and colleagues define performance as behaviors or actions that are relevant for the organization's goals and scaleable in terms of their level of proficiency (Campbell, McHenry, & Wise, 1990; Campbell, McCloy, Oppler, & Sager, 1993). Performance has to be distinguished from effectiveness, which, although it is an outcome of performance, can also be influenced in part by factors other than the individual's performance (Johnson, 2003). Viswesvaran and Ones (2000) state that it is clear "...that the structure of job performance can be conceptualized as a hierarchy with the general factor at the apex and various dimensions at the lower levels ..." (p.223), which can be further divided into subdimensions. Recent large-scale meta-analytic evidence supports this assertion (Viswesvaran, Schmidt, & Ones, 2005). Two of the relatively recent, most commonly cited models of job performance are Borman

and Motowidlo's model of task and contextual performance (Borman & Motowidlo, 1993), and Campbell's eight factor model (Campbell, 1990). Going back to the hierarchical structure of performance, task and contextual performance represents a greater hierarchical level than Campbell's eight factor model (Campbell, 1999). Despite the theoretical considerations of the underlying structure of performance, Viswesvaran et al. (2005) recently showed that there is indeed a general factor in job performance ratings accounting for 60% of the total variance after controlling for Halo and three other measurement errors.

Referring to different models of job performance described above, Sinangil and Ones (2001) state: "The eight dimensions of Campbell and Viswesvaran et al. are meant to apply across jobs, settings, and industries with specific content and aspects of each dimension varying across jobs" (p.433). Thus, it seems reasonable to draw from findings in the domestic job performance literature to study performance in the international context. "For expatriates, critical incidents will be different ... but the overall taxonomy and structure of the job performance domain will remain essentially unchanged" (Sinangil & Ones, 2001, p.433). For defining the measure of job performance in this study, we selected three studies proposing models of expatriate job performance, which all hold to the above statement: Arthur and Bennett (1997), Caligiuri (1997), and Ones and Viswesvaran (1997).

Arthur and Bennett (1997) used factor analytic measures in testing several models of expatriate performance. They concluded that an eight-factor solution, based on Campbell's job performance factors, provided the best relative fit for the international assignee data. However, in attempting to match the contents of their eight factors and those postulated by Campbell's theory, no perfect fit was obtained. In assessing the data, expatriates were asked to rate attributes according to their *contribution to effectiveness* of an international assignee. In fact, in this case one might conclude that predictors and actual performance categories are partially mis-assigned. Although it is right that the components of the eight factors may vary for different types of jobs, it is somewhat striking to find factors named *family situation*, *openness*, and *tolerance* in a model of international assignee job performance.

Caligiuri (1997) draws from Borman and Motowidlo's (1993) model of technical and contextual performance, splitting the contextual domain in prosocial performance (i.e., organizational commitment, motivation, carrying out additional task activities) and managerial performance (i.e., maintaining good working relationships among employees, training and developing subordinates, representing the organization to customers and the public). Caligiuri adds the dimension of *expatriate specific performance*, including behaviors

such as replacement planning, transferring information, language and cultural proficiency. However, correlating the different performance dimensions with data from 115 expatriates, 87 peers, and 82 leaders, intercorrelations between the dimensions were so high that their uniqueness is questioned by Caligiuri.

The model proposed by Ones and Viswesvaran (1997) largely draws from previous research on job performance in the domestic context conducted by the authors, and includes dimensions similar to those proposed by Campbell. The components are: 1. Productivity, 2. Quality, 3. Leadership, 4. Interpersonal relations, 5. Communication competence, 6. Administrative competence, 7. Effort and initiative, 8. Job knowledge, and 9. Compliance with/acceptance of authority.

There were three considerations for developing a new model of expatriate job performance. First, by including dimensions that appear in more than one of the models, a more profound theoretical basis should exist, compared to simply adopting one of the models. Second, factors that may be predictors but not aspects of performance itself should be excluded. And third, as mentioned above, critical incidents, but not the overall taxonomy of job performance changes when studying performance for a specific type of jobs. Therefore, a specific *expatriate performance dimension* should not be included in the model.

To develop the measure of job performance, the three models described above have been compared by five business psychology students, all working simultaneously on a research project examining expatriate success. Dimensions that were conceptually similar were grouped together, which was done independently by the five student raters. Again, in the following discussions, those dimensions relating to adjustment rather than performance were excluded. The resulting eight performance dimensions are:

1. *Task proficiency* refers to the quality in which the expatriate performs the technical tasks that are part of his/her core duties. Ones and Viswesvaran (1997) refer to this dimension as *Quality*; Caligiuri (1997) as *Technical Performance*.
2. *Job Knowledge* measures the technique- and culture-related knowledge that is important to carry out the expatriates' job (Ones & Viswesvaran, 1997). This dimension would be included in Caligiuri's (1997) technical performance dimension, too.

3. *Administrative Competence* refers to the expatriates' proficiency in coordinating activities among local units and between local unit and home office (Ones & Viswesvaran, 1997).
4. *Communication Competence* refers to the degree to which the expatriate gathers and shares information (Caligiuri, 1997; Ones & Viswesvaran, 1997)
5. *Leadership* refers to expatriates' performance in supporting and developing subordinates in the local unit (Ones & Viswesvaran, 1997).
6. *Effort and Initiative* measures the degree to which the expatriate engages in tasks additional to his/her core duties, and to which the expatriate persists under adverse conditions (Arthur & Bennett, 1997; Ones & Viswesvaran, 1997).
7. *Interpersonal Facilitation*, or *Interpersonal Relations* (Ones & Viswesvaran, 1997), refers to the degree to which the expatriate sponsors team work and peer performance in his/ her area of responsibility. It relates to the contextual/managerial dimension of Caligiuri's (1997) model.
8. Finally, *Integrity* refers to aspects such as punctuality or consistency of performance, or, as Ones and Viswesvaran (1997) put it "the extent to which counterproductive behaviors at work are avoided" (p.78). Caligiuri (1997) termed this factor *Personal Discipline*.

2.3 Predictors

The following section of this paper discusses predictors of expatriate performance and adjustment. Due to their outstanding theoretical and empirical importance, the main focus of the study will be on cognitive ability, namely *general mental ability*, and personality, namely the *Big Five*. Nevertheless, context specific factors, such as *language ability* or *previous international experience* are also presented. However, it should not be forgotten that technical expertise is crucial for carrying out the job one has been sent to do abroad (Sinangil & Ones, 2001). Technical expertise is also suggested to foster adjustment (Aycan, 1997b). The major advantage for organizations in using technical expertise for the selection of expatriates is that it can be determined on the basis of past performance. Past performance is already assessed regardless in periodic performance appraisals of many organizations. However, as Dowling and Welch (2004) state "... past performance may have little or no bearing on one's ability to achieve a task in a foreign cultural environment" (p.99). Since there is broad evidence that other aspects are valid predictors of performance in *any* job setting (Sinangil & Ones, 2001),

and since an increase in the validity of the selection tool will directly influence its utility (Hunter & Hunter, 1984), the selection of expatriates should not be *solely* based on technical expertise. In practice, however, technical expertise is the primary selection criterion for expatriates in most multinational organizations (Dowling & Welch, 2004; Harris & Brewster, 1999; Mendenhall & Oddou, 1985). Therefore, the aim of this study is to prove the importance of other predictors that add to the overall validity of a selection system in the expatriation context.

2.3.1 General Mental Ability

The term ‘ability’ refers to the power or capacity to act physically, mentally, financially, legally, or in some other way. “Cognitive ability refers specifically to mental qualification or capacity” (Ree, Carretta, & Steindl, 2001, p.220). It seems to be widely accepted that cognitive ability has a hierarchical structure, and the quantitative evidence that has accumulated across the last century (see Carroll, 1993) supports Spearman’s (1904) original hypothesis of a general factor (*g*) at the apex and more specific sources at the lower levels. In defining *g*, Colom and colleagues refer to Jensen (1998) as they state that “*g* is not a measure of specific knowledge, skills or strategies for problem solving. Rather, it reflects individual differences in information processing, that is the capacity and efficiency of the mental process by which knowledge and skills are acquired and used” (Colom, Rebollo, Palacios, Juan-Espinosa, & Kyllonen, 2004, p. 278).

The *g* factor, also referred to as general mental ability (GMA), emerges in all tests of mental ability. This general factor usually also accounts for more of the variance than do all of the specific factors combined (Ree, et al., 2001). In addition, when measured by different test batteries the emerging *g* factors are perfectly correlated (Johnson, Bouchard, Krueger, McGue, & Gottesman, 2004). “In short, the *g* continuum is a reliable, stable phenomenon in human populations” (Gottfredson, 2002, p.27).

In domestic settings, general mental ability (GMA) is the most valid single predictor of future job performance (Gottfredson, 2002), especially for those employees without previous job experience (Hunter & Hunter, 1984; Ree, Earles, & Teachout, 1994; Salgado et al., 2003; Schmidt & Hunter, 1998). The predictive validity of cognitive ability for job performance increases as a function of the cognitive complexity of job requirements, ranging from .27 for low complexity jobs to .61 for high complexity jobs (Hunter, 1986; Hunter &

Hunter, 1984). The same moderating influence of job complexity exists in samples studied in the European Community (Salgado et al., 2003).

The major causal impact of general mental ability on job performance is through learning, i.e. the acquisition of job knowledge (Hunter & Schmidt, 1996; Schmidt, Hunter, & Outerbridge, 1986). “People who are higher in GMA acquire more job knowledge and acquire it faster” (Schmidt & Hunter, 2004, p.170). However, there is also a direct impact of GMA on performance, as Hunter and Schmidt’s statement illustrates:

High ability workers are faster at cognitive operations on the job, are better able to prioritize between conflicting rules, are better able to adapt old procedures to altered situations, are better able to innovate to meet unexpected problems, and are better able to learn new procedures quickly as the job changes over time (1996, p.465).

Managerial positions are frequently ranked among the most complex jobs. Considering that expatriates usually occupy managerial positions, working in a different culture adds to the complexity of already complex jobs. Looking at the strong relationship of GMA and job performance in domestic settings, especially in complex jobs, it is surprising that research on the influence of GMA on expatriate job performance is scarce (Mol et al., 2005). To fill this gap we would like to test the following hypothesis:

Hypothesis 1a: General mental ability is positively related to expatriate performance.

Anderson, Lievens, van Dam, and Ryan (2004) state that GMA has been found to correlate strongly with divergent thinking abilities allowing these individuals to cope better with a changing work role and being more adaptive. Being transferred to a different country frequently involves a change in work roles and by nature a change in work environments.

Black et al. (1991) expect *perceptual skills* to be an important variable in international transitions, hereby referring to the domain of cognitive abilities (M. Mendenhall [personal communication, September 22, 2005]). In explaining their assumption, they point to the ease of misunderstandings and their serious consequences in cross-cultural settings. Endorsing their statement, we expect higher capacity and efficiency in acquiring/using knowledge and skills (higher GMA) to help in both daily interactions with host country nationals and adjusting to a new environment in non-work settings. Hence, theoretically arguing, GMA

influences all three dimensions of adjustment (work, interaction, and general adjustment). We therefore hypothesize that:

Hypothesis 1b: General mental ability is positively related to adjustment.

Due to its high predictive validity, GMA plays an outstandingly important role in the prediction of job performance (Schmidt & Hunter, 2000). However, there are other measures that can contribute to the overall validity of the selection process (Schmidt & Hunter, 1998). The increase in the validity of the selection process depends in part on the correlation between the added measure and GMA. “The smaller this correlation is, the larger is the increase in overall validity” (Schmidt & Hunter, 1998, p.265). Although there is large controversy about the link between personality and intelligence (Furnham, Forde, & Cotter, 1998), they “... are essentially uncorrelated” (Hough & Furnham, 2003, p.156). Therefore, the Big Five factors of personality are discussed appropriately in the following.

2.3.2 The Big Five

As Paunonen (1998) states, “there is some intuitive appeal that variables of personality are organized hierarchically, arranged according to the breadth of the behavior domains represented” (p.538). Recent, large scale primary and meta-analytic evidence supports the hierarchical structure of the personality domain and the existence of meaningful factors at a higher level than the Big Five (Markon, Krueger, & Watson, 2005). The Big Five, which will be referred to in this study, often are seen to be located right below the two broadest factors in the hierarchically organized model of personality (Digman, 1997). Although it has its critics (e.g., Block, 1995; McAdams, 1992), the Five Factor Model of Personality, also referred to as the Big Five, is widely accepted to provide a comprehensive taxonomy of personality and framework for related research. The Big Five are Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness - with some variation in naming the different factors (Goldberg, 1993). *Extraversion* includes traits such as talkativeness, high energy, and spontaneity on the one end, with silence, modesty, and reserve making up the opposite end of the factor (Goldberg, 1990, 1993). *Agreeableness* involves characteristics such as altruism, warmth, tolerance and trust (Goldman, 1990). Hostility, indifference to others, self-centeredness, spitefulness, and jealousy make up the opposite end of the Agreeableness dimension (Digman, 1990). *Conscientiousness*, also referred to as ‘Will to Achieve’ or ‘Will’ (Digman, 1990), is composed of traits like organization, thoroughness, and

reliability with their opposites being disorganization, carelessness, and undependability (Goldberg, 1992). *Openness*, also called 'Intellect' (Digman, 1990), is composed of traits such as imagination, curiosity, and creativity with its opposite composed by traits such as shallowness and imperceptiveness (Goldberg, 1993). *Emotional Stability*, or *Neuroticism* (Costa & McCrae, 1992), is composed of traits like self-reliance, durability, and poise with anxiety, timidity, and insecurity characterizing individuals that are scoring low in Emotional Stability (Goldberg, 1990).

Apart from the wide acceptance of the Five Factor model of personality, there are some other good reasons to use it as the basis for research in the personality domain: A large base of research already exists for this model (Schmit, Khim, & Robie, 2000), contributing to, and ensuring its validity (Rolland, 2002). Some of the related research findings are described in the following: The Five Factors have been shown to be relatively stable across different demographic variables such as age, education (Goldberg, Sweeney, Merenda, & Hughes 1998) and racial status (Hough, Oswald, & Ployhart, 2001). Concerning gender, some remarkable differences have been found on the factor as well as the facet level (Goldberg et al., 1998; Hough et al., 2001). However, summarizing previous US-American research results, Ones and Anderson (2002) state that only negligible to medium gender effects were found for most personality scales used in personnel selection. This conclusion was replicated with British data (Ones & Anderson, 2002). While there is substantial evidence for the Five-Factor structure of personality to be very similar across different cultures (McCrae 2001, 2002; Poortinga, van de Vijver, & van Hemert, 2002), its generality across different languages has only been supported for Conscientiousness (Peadboy & De Raad, 2002). However, all five factors of American English have been found to emerge in German (Ostendorf, 1990), which we find to be crucial when inferring hypotheses from US-American personality research for a study conducted with German speaking expatriates. One rather practical reason to refer to the Big Five taxonomy is that most of the existing personality tests are based on the assumptions of the Five Factor Model (Schmit et al., 2000).

In the 1990s several meta-analyses have been conducted linking personality traits with job performance (Barrick & Mount, 1991; Salgado, 1997; Tett, Jackson, & Rothstein, 1991). While Tett and colleagues found all five factors to notably correlate with job performance, these findings were neither replicated in the meta-analyses conducted by Barrick and Mount (1991) and Salgado (1997) nor confirmed by a second order meta-analysis summarizing the results of 15 prior meta-analytic studies investigating the relation between the Big Five and

job performance (Barrick, Mount, & Judge, 2001). Conscientiousness, however, is found to be a valid predictor of job performance across different measures and occupational groups (Barrick & Mount, 1991; Barrick et al. 2001; Hertz & Donovan, 2000; Salgado, 1997). Salgado (1997) also found Emotional Stability to be a valid predictor of job performance across occupational groups in the European Community.

Linking personality traits to job performance in specific occupational groups, non-zero relationships have been found in various studies for other Big Five factors than Conscientiousness and Emotional Stability. Extraversion relates to job performance in settings where interaction with others is an integral part of the job, such as in management (Barrick & Mount, 1991; Barrick et al., 2001; Salgado, 1997) and sales (Vinchur, Schippmann, Switzer, & Roth, 1998). Agreeableness predicts team work (Barrick et al., 2001) and, along with Conscientiousness and Emotional Stability, is found to have a stable relationship with the interpersonal facilitation aspect of job performance (Hertz & Donovan, 2000).

Drawing a conclusion from the above information, there is large evidence for the validity of several of the Big Five personality factors in predicting domestic job performance. Mol et al. (2005) recently conducted a meta-analysis on the prediction of expatriate job performance and found that predictive validities of the Big Five were similar to those reported in domestic settings. As will be described in the following section, there is a wide array of theoretical and empirical arguments to justify testing the influence of the Big Five on expatriate job performance.

Previous studies analysing the relationship between the Big Five and job performance in international assignments display a wide array of findings: Caligiuri (2000b) found a correlation of Conscientiousness (.34) with performance for US-American expatriates working in 25 different countries. Interviewing German expatriates in Korea, Deller (2000) found significant correlations of self-ratings of job performance with Conscientiousness (.27) and Extraversion (.26). Dalton and Wilson (2000) surveyed Arab expatriates in 11 different countries and found Agreeableness (.49) and Conscientiousness (.47) as being related to home-country supervisor ratings of job performance. However, the correlations did not emerge in host-country supervisor ratings. Surveying US-American missionaries working in Asia, Gross (2002) found no correlation between the Big Five and performance. Stierle, van Dick and Wagner (2002) conducted a study with German expatriates in 41 different countries and found significant correlations with Neuroticism (-.18), Extraversion (.34) Openness (.25), and Conscientiousness (.21). Except Caligiuri (2000b), who used the Hogan Personality

Inventory scale of Conscientiousness, and Deller (2000), who used the NEO-FFI, all studies relied on the NEO-PI-R in measuring the Big Five personality factors.

Two studies used a different approach in linking expatriate job performance to the Big Five, both conducted by Ones and Viswesvaran (1997; 1999). To identify factors important for success, Arthur and Bennett (1995) asked expatriates to rate the *perceived importance for success* of 54 international assignee attributes. A total of 27 out of 54 attributes were later identified to relate to one of the Big Five dimensions in a study conducted by Ones and Viswesvaran (1997). Three attributes were linked to more than one Big Five dimension.

In the second study, Ones and Viswesvaran (1999) used a policy capturing approach to rank the relative importance of the Big Five placed by managers selecting expatriates. Their results showed that Conscientiousness was perceived to be the most important personality dimension for expatriate job performance, while Emotional Stability and Agreeableness were also perceived to be important. By drawing from previous theoretical and empirical findings, the following hypotheses were derived:

Emotional Stability

As mentioned above, Emotional Stability was found to be a valid predictor of job performance across occupational groups in the European Community (Salgado, 1997). Since this study will include expatriates from European Union countries only, one can also expect to find a positive relationship between Emotional Stability and expatriate job performance. Apart from the empirical findings, being stable, resourceful, and relaxed (high Emotional Stability) is very likely to help in performing well, despite the additional strains of working in a different culture than one's own. Similarly, being anxious, hostile, and tense (low Emotional Stability) might have a large negative impact on job performance, especially when there are additional challenges of living in a different culture. Therefore, we expect that:

Hypothesis 2: Emotional Stability is positively related to overall expatriate job performance.

Extraversion

As mentioned above, Extraversion is found to be related to performance in those jobs involving frequent interpersonal interaction, as are managerial positions. In international settings, two studies with German speaking expatriates (Deller, 2000; Stierle et al., 2002) found Extraversion to be related to expatriate job performance. In both studies, it was not

controlled for type of job or position, which could have led to the general findings on expatriate performance and Extraversion. We would therefore like to test the following hypotheses:

Hypothesis 3a: Extraversion is positively related to overall job performance for expatriates holding a managerial position.

Openness

Openness was found to be related to expatriate job performance in a study conducted with German expatriates (Stierle et al., 2002). Bing and Lounsbury (2000) conducted a study with employees of two U.S.-based Japanese companies, both considered to be "... classical Japanese companies in their general business approach, employment practices, and socialization of employees" (Bing & Lounsbury, 2000, p.517). In this setting Openness emerged as a valid predictor of job performance among U.S. American employees.

In research focusing on domestic settings, Openness is frequently found to be positively related to training performance (Barrick & Mount, 1991; Salgado, 1997). One explanation is that individuals which are intellectual, curious, and imaginative (high in Openness) are more willing to engage in learning experiences (Barrick et al., 2001). Drawing from a different source, Le Pine, Colquitt, and Erez (2000) state that "open individuals are more willing to engage in the type of self-monitoring and assessment that is necessary for learning in changing contexts" (p.570).

Since an international assignment frequently involves changes in a person's work-setting, job related tasks, and role, it seems to suggest itself that expatriates willing to adopt new ideas and behaviors are more likely to achieve higher levels of job performance. Likewise, to be reflective and analytical (high in Openness) should help in learning from mistakes and adapting new behaviors. In conclusion, we assume that:

Hypothesis 4: Openness is positively related to expatriate overall job performance

Agreeableness

As mentioned above, Agreeableness predicts team work and the interpersonal facilitation aspect of job performance in domestic settings. In accordance with this assumption, Ones and Viswesvaran (1997) expect Agreeableness to predict interpersonal relations in expatriate settings. Dalton and Wilson (2000) tested the relationship of

Agreeableness and a non-specific performance measure. Their hypothesis was confirmed, although only with home country supervisor ratings, and not with host country ratings. Since host country supervisors should have many more opportunities to observe the expatriates' performance, we have limited our hypothesis to the 'interpersonal facilitation' aspect of performance. There is yet another reason for expecting a positive relationship for Agreeableness and the interpersonal facilitation dimension: Cooperative, trustful, and flexible (high Agreeableness) expatriates may have an advantage in team work and facilitating peer performance.

Hypothesis 5: Agreeableness is positively related to the performance dimension of interpersonal facilitation.

Conscientiousness

Apart from the empirical findings which point to a positive relationship between Conscientiousness and job performance in both domestic and international settings, there is a strong, frequently invoked argument: "Indeed, it is hard to conceive a job where it is beneficial to be careless, irresponsible, lazy, impulsive and low in achievement striving (low conscientiousness)" (Barrick et al., 2001, p.11). Moreover, less control is exerted on an employee working in a foreign subsidiary as compared to someone working in a corporate headquarter. This especially holds true for those expatriates which are the only foreigner in the host country's branch. Hence, being conscientious might be even more important for foreign than for local assignments. We therefore hypothesize that:

Hypothesis 6: Conscientiousness is positively related to overall expatriate job performance.

Surprisingly few studies exist on the influence of personality variables on adjustment. Of those that were conducted, even some of the frequently quoted studies (i.e., Parker & McEvoy, 1993) used measures of personality tests that are highly criticised such as the Myers-Briggs Type Indicator (MBTI), or self-made measures of certain personality scales (e.g., Tucker, Bonial, & Lahti, 2004; van Oudenhoven, van der Zee, & van Kooten, 2001). Nevertheless, there are several good reasons to expect some of the Big Five having an impact on expatriate adjustment.

Emotional Stability

Deller (2000), as well as Stierle et al. (2002) found Emotional Stability to be strongly related to expatriate adjustment. Interestingly, the relationship was even stronger when adjustment was rated by supervisors rather than by the expatriates themselves (Deller, 2000). The main reason why Emotional Stability is expected to be related to adjustment is explained by Ones and Viswesvaran (1997). “That is, individuals who are low on emotional stability are often unable to cope with stress, making them less likely to handle the daily strains of life and interactions in a foreign assignment”. Since we cannot think of a reason why this statement should exclude strains in the work environment, we expect that the following hypothesis will hold true:

Hypothesis 7: Emotional Stability is positively related to overall adjustment.

Extraversion

Deller (2000) found a .36 correlation for Extraversion and self-ratings of adjustment. Some contrasting findings are reported by Ward and colleagues: While Armes and Ward (1989) found Extraversion to be linked to depression (sample of Anglo-expatriates in Singapore), Searle and Ward (1990) found Extraversion to be conducive to psychological well being (sample of Malaysian and Singaporean students in New Zealand). The interaction of personality traits with culture specific characteristics of the host country is suggested as an explanation for these contrasting results (Searle & Ward, 1990). Because Deller’s study was conducted with German expatriates in South Korea as well, we expect similar findings in our study; there is no difference in the cultural setting. However, we would like to argue that being sociable, talkative, outgoing, and active (high in Extraversion) helps in interacting with host nationals. However, it will not have an impact on work and general adjustment. Hence, our hypothesis is that:

Hypothesis 8: Extraversion is positively related to interaction adjustment.

Openness

Caligiuri (2000a) argues that individuals scoring high on Openness should have “... few (if any) negative predisposing attitudes that may impair their ability to develop relationships with host nationals” (p.67). This argumentation was supported in Caligiuri’s study, finding a moderating influence of Openness on the relationship between *contact with*

host nationals and adjustment. Deller (2000) reports a direct positive relation between Openness and expatriate adjustment when measured with the Alienation Adjustment Scale.

Taking a theoretical approach, it seems self-evident that people which are curious, alert, and thoughtful (high Openness) reflect more upon their own values and behaviors, and therefore find it easier to accept differences in other cultures. Ones and Viswesvaran (1997) refer to the *Openness to experience* component of Openness (Costa & McCrae, 1992). They suggest that individuals scoring high in Openness to Experience may even enjoy experiencing new and unfamiliar activities, foods, etc. (Ones & Viswesvaran, 1997). Taking into regard all the arguments mentioned above, we expect that:

Hypothesis 9: Openness is positively related to overall adjustment.

Agreeableness

A positive relation between Agreeableness and supervisor ratings of adjustment is reported by Deller (2000). Gross (2002) reports a positive relationship of Agreeableness and socio-cultural adjustment. Gross defines socio-cultural adjustment as "... the degree of cultural *interaction* which includes one's interest in and willingness to learn about the culture and *interact* with host nationals [italics added]" (2002, p.46). It seems very likely that individuals being tolerant, polite, and warm (high Agreeableness) are willing to interact with host nationals. Moreover, they are probably more successful in interacting with host nationals than people being harsh, stubborn, and stingy (low Agreeableness). We therefore hypothesize that:

Hypothesis 10: Agreeableness is positively related to interaction adjustment.

Conscientiousness

Following Ones and Viswesvaran's (1997) research study, no relationship is expected to be found for Conscientiousness and adjustment.

As previously mentioned, there are several context specific variables which should be studied in relation to their impact on expatriate job performance and adjustment. These additional variables encompass another personality related aspect (Tolerance of Ambiguity), individual aspects (e.g., prior international experience, culture novelty, language proficiency),

as well as organizational variables (e.g., provision of cross-cultural training). The expected relationships with these variables are discussed in the following section.

2.3.3 *Tolerance of Ambiguity*

Tolerance of Ambiguity can be defined as "...the tendency to perceive ambiguous situations as desirable" (Budner, 1962, p.29), whereas Intolerance of Ambiguity refers to "...the tendency to perceive (i.e. interpret) ambiguous situations as sources of threat" (Budner, 1962, p.29). Although there is some disagreement in how far individuals scoring high in Tolerance of Ambiguity actually actively seek out ambiguous situations, there are other researchers confirming Budner's definition (e.g., Mac Donald, 1970). Ambiguous situations are characterized by novelty, complexity, or insolubility. Likewise, when the cues helping an individual to interpret a situation are either not familiar, numerous, or contradictory, the situation is characterized by ambiguity (Budner, 1962). This description matches situations expatriates are likely to face during their stay abroad fairly well. Therefore, it seems logical that people who feel threatened by ambiguous situations have a harder time with both aspects of adjustment: First, in feeling psychological comfort, and second, in adjusting their behavior to a new and complex setting.

Arthur and Bennett (1995) factor-analyzed 54 attributes perceived to contribute to expatriate performance. Tolerance of Ambiguity was related to the Flexibility/Adaptability factor of expatriate success. Deller (2000) found Tolerance of Ambiguity to be correlated with the criterion of adjustment when measured with the Alienation Adjustment Scale (.25). In their meta-analytic study, Mol et al. (2005) found a positive relationship between Tolerance of Ambiguity and expatriate job performance. Concluding, theoretical and empirical findings suggest that Tolerance of Ambiguity is important for our understanding of expatriate adjustment. We therefore expect that:

Hypothesis 11: Tolerance of Ambiguity is positively related to overall adjustment.

There is one important aspect that has to be considered when using measures of Tolerance of Ambiguity, especially, since this study is ultimately intended to contribute to the development of a valid measure for the *selection* of expatriates. Ones and Viswesvaran (1997) asked industrial psychologists to select the personality-based constructs of the attributes identified by Arthur and Bennett (1995), and link them to the Big Five personality factors. Here, Tolerance of Ambiguity was theoretically linked to Openness to Experience. Empirical

results of Deller (2000), suggest Tolerance of Ambiguity to be negatively related to Neuroticism (-.36) and Achievement Striving (-.36). It was positively related to Openness (.22) and Flexibility (.55). Remembering the hierarchical structure of personality, and looking at the findings on the relationship between Tolerance of Ambiguity and the Big Five, Tolerance of Ambiguity should be a rather narrow trait of personality. Using narrow traits automatically alerts one to be wary of problems involving bandwidth and fidelity.

“Essentially, the debate on bandwidth-fidelity, as it has been used in the context of personality assessment for personnel selection purposes, is whether broadly defined traits are better in predicting job performance as well as in explaining behaviors, than narrowly defined personality traits” (Ones & Viswesvaran, 1996, p.610). Continuing, Ones and Viswesvaran note that there are two considerations when choosing the appropriate breadth of traits: the phenomenon that is to be predicted and “... whether the narrower constellation of traits, although postulated to be conceptually distinct, can be operationally defined so as to be conceptually and empirically distinct” (p.610). Looking at the definition of Tolerance of Ambiguity the problem seems to lie in the empirical differentiation rather than the conceptual distinction. Since there is a strong theoretical connection between the concepts of Tolerance of Ambiguity and expatriate adjustment, we believe that it is worth testing its applicability as a selection tool. To justify its usage, we will proceed to test whether Tolerance of Ambiguity is empirically distinguishable from the Big Five personality factors.

2.3.4 Context Specific Individual Variables

In the following section, several context specific variables are proposed to relate to expatriate performance and adjustment.

Prior international experience

Living and working in an international context leads to strains due to a new environment and new role demands, which are discussed extensively in the literature on culture shock (i.e., Torbiörn, 1982). Through previous international experience, psychological processes such as problem appraisal and coping strategies are available to the individual (Berry & Sam, 1997). This should ease the expatriates' adjustment to the new assignment. Likewise, Black (1988) and Caligiuri (2000a) found previous international experience to be related to work adjustment.

Since the acquired problem appraisal abilities and coping strategies should not exclusively be applicable to the work environment, but also to non-work settings and interactions with members of a different culture, we hypothesize that:

Hypothesis 12: Prior international experience is positively related to overall adjustment.

Culture novelty

The argument for expecting a relationship between *culture novelty* and expatriate adjustment resembles the one of prior international experience. It should be easier to adjust to a culture that one was exposed to before. Cultural similarity of the home and host countries' cultures are found to be positively related to adjustment (Bhaskar-Shrinivas, Shaffer, & Luk, 2005; Palthe, 2004; Van Vianen, De Pater, Kristof-Brown, & Johnson, 2004). Hence, expatriates who have previous working experience in cultures of the same GLOBE cluster should have an advantage in adjusting to their new setting.

Hypothesis 13: Previous international assignments in other Confucian Asian countries have a positive relation overall adjustment.

Cross-cultural training

Cross-cultural training aims at enabling "... the individual to learn both content and skills that will facilitate effective cross-cultural interaction by reducing misunderstandings and inappropriate behaviors" (Black & Mendenhall, 1990, p.120). Conducting meta-analyses on the effectiveness of cross-cultural training, Deshpande and Viswesvaran (1992) as well as Morris and Robie (2001) found cross-cultural training to be positively related to adjustment and performance of expatriate managers. They also found that cross-cultural trainings aiming at improving the perceptions and self-confidence of managers did not vary across settings. Hence, we hypothesize across all different types of trainings, which will certainly be found in the sample studied, that:

Hypothesis 14a: Participation in cross-cultural trainings is positively related to expatriate overall job performance.

Hypothesis 14b: Participation in cross-cultural trainings is positively related to overall adjustment.

Length of time working in Korea

“Job experience leads to the acquisition of skills, techniques, methods, psychomotor habits, and so forth, that directly produce improvements in performance capabilities independent of increases in job knowledge” (Schmidt et al., 1986, p.436). In predicting job performance across more than 300 studies, Hunter and Hunter (1984) found the mean predictive validity of *experience* to be .18. The longer the expatriate stays in his/her current assignment, the more opportunities he/she has to learn. We therefore hypothesize that:

Hypothesis 15a: Length of time spent working in the current position in Korea is positively related to job performance.

Expatriates who have been in their current international assignment longer were shown to rate themselves higher on general adjustment than those being in their current assignment for a shorter amount of time (Van Vianen et al., 2004). Likewise, Caligiuri (2000a) and James, Hunsley, Navara, and Alles (2004) found the length of the assignment to be related to adjustment. The more time an expatriate spends in the foreign country, the more opportunities he/she has to learn about the local work procedures, cultural rules and values. At the same time he/she has more time to adapt his/her behavior. Therefore it is very likely that:

Hypothesis 15 b: Length of time spent working in the host country is positively related to overall adjustment.

Language Proficiency

A relatively large part of studies in the intercultural field stems from research in the field of cross-cultural communication (e.g., Bennett, 1993; Hammer, Gudykunst, & Wiseman, 1978). As Aryee (1997) states, it is not surprising that communication theorists underline the importance of fluency in the host country’s language as a prerequisite for cross-cultural effectiveness. This being said, researchers from other domains have continued to find positive relationships between foreign language skills and cross-cultural adjustment (e.g., Caligiuri, 2000a; Kraimer & Wayne, 2004).

Being able to communicate in the local language should reduce uncertainty. First, because one can ask for help and become independent from translators in work and non-work situations. Second, the more proficient one becomes in another language, the more one can exchange information with host nationals, again reducing uncertainty. Thus, we expect that:

Hypothesis 16: Language proficiency is positively related to overall adjustment.

Extent of organizational support

Logistical support from the home office is suggested to be positively associated with the degree of adjustment (Black et al., 1991), primarily because it reduces the stressors of arranging housing, schooling, healthcare, etc. (Bhaskar-Shrinivas et al., 2005). Most often, the department responsible for logistic support in cross-cultural transitions is *Human Resources*. Since logistical support is usually provided for non-work related aspects of the international assignment, as described above, we suggest that:

Hypothesis 17a: Satisfaction with regard to the Human Resources department (or the department responsible for logistical support, respectively) is positively related to general adjustment.

Studying sources of support for expatriates, Kraimer, Wayne, and Jaworski (2001) found organizational support to be related to adjustment. One aspect of organizational support in their framework is to provide the expatriate with relevant information and assistance in order to reduce his/her stress and help him/her make sense of the work environment. Colleagues and supervisors in the home office should be partial providers of this information. Communication with the home office should furthermore be helpful to reduce stress and adjust to the new work role. Therefore,

Hypothesis 17b: Satisfaction with contact to host countries supervisor and colleagues is positively related to work adjustment.

Worries about repatriation

Several authors underline the importance of well-managed repatriation (Lazarova & Caligiuri, 2001; Tung, 1998). It is noteworthy that the majority of expatriates in a study conducted by Tung and Arthur Andersen (Tung, 1998) had serious concerns about their

repatriation. Data on British expatriates suggests that their concerns are not unfounded, and that indeed management of repatriation is an enormous problem in many organizations (Forster, 1997).

To our knowledge, no study has been conducted thus far examining the influence of expectations concerning repatriation on current expatriate performance. However, Kraimer and Wayne (2004) found lack of promotion expectations to be negatively related to expatriate adjustment and commitment to the foreign facility. One could tentatively argue that concerns about repatriation have an impact on the expatriates' job performance. Expectations of drawbacks in career prospects or financial benefits (which are two commonly reported aspects in repatriation) could significantly impair the expatriates' motivation and thereby influence his/her performance. Following this argumentation we will test the following hypothesis:

Hypothesis 18: High ratings of worries about repatriation are negatively related to job performance.

Favorableness of the spouse's opinion

It is widely proven that support and adjustment of the spouse is important for the expatriates' adjustment (e.g., Black & Stephens, 1989; Caliguiri, Hyland, Joshi, & Bross, 1998; James et al., 2004; Kraimer et al., 2001). The underlying idea is that spousal support functions as a coping mechanism. The spouse not only provides information and assistance, but is also a continuing source of affection and affirmation (Kraimer et al., 2001). As one part of spousal support, Black and Stephens (1989) regard the favorableness of the pre-departure opinion of the spouse to be related to the expatriate's adjustment; mainly because a positive pre-departure opinion should impact the spouse's efforts to adjust. As an equally positive relationship is expected to be found in this study, we predict that:

Hypothesis 19: Favorableness of the spouses' opinion will be positively related to overall adjustment.

3 Method

The following part describes the methodological aspects of this study. First, the present sample is described. Second, the measures for both independent and dependent variables applied in this study are explained. Third, data analysis procedures are outlined.

3.1 Research Participants

To recruit participants for the study, emails were sent to German speaking expatriates (Germans and Austrians) working in South Korea. The email addresses were mainly obtained through the membership list of the German-Korean Chamber of Commerce. Other sources were German corporate headquarters providing the names of their expatriates in South Korea, an internet platform for professional contacts, and the snow-ball system. Of the 135 expatriates contacted via email, 66 agreed to take part in the study, resulting in a response rate of 48.9%. Of the rest of the contacted expatriates, 37% either refused to take part or did not respond to our emails, 11.1% of the emails could not be delivered, and 3% of the expatriates were no longer in South Korea.

The average age of participants was 42 (ranging from 26 to 66 years), 88% of the sample were male. Eighty two percent were married or reported to have a significant other, and 92.6% of these individuals were accompanied by their partners. In all aspects, participants of this study resemble a typical expatriate sample (cf. Dowling & Welch, 2004; PriceWaterhouseCoopers, 2005). Of the total sample, 56.1% had children living with them in Korea; only one expatriate reported to have children staying in their home country². The highest educational level of the expatriates surveyed was divided into: 14% having a high school degree, 57% holding a diploma or equivalent university degree, 18% having a doctoral degree, and 11% having had other kinds of professional training or education.

The average time spent working in Korea at the time of the interview was three years (with a minimum of one month and a maximum of 12 years), while the average tenure with their current employer was 11 years (minimum seven month; maximum 41 years); accounting for quite a heterogeneous sample in these two aspects. Of the interviewees, 30% were CEOs of local subsidiaries, 55% held a managerial position, and 15% were skilled workers. Although the majority (75.8%) were employed on a fixed-term contract we found a tendency to deviate from the traditional expatriate contract, resulting in indefinite, or continuously prolonged contracts, or in hiring on local conditions. Likewise, 13% of the expatriates were

² *Children* refers to individuals under the age of 18 which is when children legally become adults in Germany.

employed especially for the assignment in South Korea and had no previous experience with their current employer.

3.2 Measures

All of the measures were applied in German. Note that in the German schools' grading system, '1' is the best grade, '6' the worst. Therefore, '1' is assigned to the positive, '5' to the negative extreme of the scales for those questions that are not standardized test items. This is why scales in our study will be found reversed coded, when compared to studies which have been conducted in the US. For purposes of analysis, scales are later translated to the US format (5 = positive extreme; 1 = negative extreme).

3.2.1 Independent Variables

A structured interview-guideline was developed to assess demographics as well as previous international experience, language abilities, cross-cultural training related aspects, organizational support, and family related issues, and repatriation prospects. Additionally, the standardized psychometrical instruments described in the following were used to assess predictors.

Wonderlic Personnel Test

“For cognitive ability, the highest-order factor (*g*) usually accounts for more of the variance than do all of the specific factors combined” (Ree et al., 2001, p.220). We therefore chose a test measuring *g* in choosing the test to measure cognitive ability. At the same time, ease of administration was an important criterion when choosing the test.

The Wonderlic Personnel Test is a 50-item, timed (12 minutes), paper-pencil test of general mental ability. Items include disarranged sentences, number series, analysis of geometric figures, and story problems with questions increasing in difficulty (Wonderlic, 2002). Scores range from 0 to 50. Reported reliabilities are typically around the .90s (Murphy, 1985) being impressively high. Extensive evidence of construct and concurrent validity is reported in the test manual. The correlation between Wonderlic and the Wechsler Adult Intelligence Scale (WAIS) - probably the best known and most widely used individually administered test of general intellectual ability in the USA (Johnson & Bouchard, 2005) - is .93 (Dodrill, 1981). The correlation between Wonderlic and WAIS-R is .92 (Hawkins, Faraone, Pepple, Seidman, & Tsuang, 1990). The German version of the Wonderlic used in this study is equivalent to the American English 1996 version form A.

NEO-PI-R

The NEO-PI-R is a multidimensional personality questionnaire assessing the Big Five factors of personality (Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness) and their 30 facets. Each facet is assessed by eight items resulting in 48 items per Big Five dimension and 240 items in total (Ostendorf & Angleitner, 2004). Items are rated on a 5-point Likert-scale (from 'strongly disagree' to 'strongly agree'). A supplemental item assesses whether the person has tried to answer all questions honestly and correctly on the same Likert-scale. Two additional items assess whether all questions have been answered and, whether all questions have been marked correctly. These two items are answered with 'yes' or 'no'. The German version of the revised NEO-PI-R is a translation of the original questionnaire of Costa and McCrae (1992). The NEO-PI-R is available as self-rating and other-rating measure. For this study, the self-rating form was used.

Internal consistencies of the five factors in the German version range from .87 (Agreeableness) to .92 (Neuroticism) (average .90). Cronbach's alpha of the facets is .73, being slightly higher than the alpha of the original version (.70) (Muck, 2004).

AT-14

Kischkel (1984) developed a scale of Tolerance of Ambiguity in German, largely drawing from the Rydell-Rosen scale (Rydell & Rosen, 1966). The items of Kischkel's scale, however, are predominantly framed in a work setting.

AT-14 is a 14-item scale measuring Tolerance of Ambiguity on a paper-pencil basis (Kischkel, 1984). Items are rated on a 5-point Likert-scale (from 'absolutely correct/applicable' to 'absolutely not correct/not applicable') and include statements such as "For everything there is a right and wrong" ("Für alles gibt es ein richtig und ein falsch") or "Working on a task, I don't like it when there is some confusion about who in particular is responsible for what" (Ich habe es nicht gern, wenn bei einer Arbeit Unklarheit darüber herrscht, wer im einzelnen wofür verantwortlich ist").

The reported internal consistency is .76 (K-R 20). No gender related differences have been found. Small but divergent results emerged regarding age and scores in Tolerance of Ambiguity. Noteworthy differences are found regarding world view and political conviction. Those with a more conservative conviction tend to score lower in Tolerance of Ambiguity (Kischkel, 1984).

3.2.2 *Dependent Variables*

In the following, measures of the dependent variables of adjustment and job performance are presented.

Adjustment measure

The adjustment measure for this study was designed following the three dimensional model of Black and colleagues (Black et al., 1999). Each dimension was assessed with one item. Items were phrased as, for example, “Compared to the average German working in Korea that you know: How well did you adjust to work processes and procedures in Korea?” („Verglichen mit dem Durchschnitt der in Korea arbeitenden Deutschen die Sie kennen: Wie gut haben Sie sich an die Arbeitsabläufe in Korea angepasst?“). One item was added to measure overall adjustment, resulting in a 4-item measure of adjustment (see Appendix A1 for the self-ratings, Appendix A2 for the other-rating measure, and Appendix A3 for the English version of the adjustment rating).

The four adjustment questions were termed slightly differently for other-ratings. Items were framed as, for example, “Compared to the average German working in Korea that you know: How well did the expatriate adjust to work processes and procedures?” (“Im Vergleich zu dem Durchschnitt der in Korea lebenden Deutschen die Sie kennen, wie gut hat sich der Expatriate an die Arbeitsabläufe angepasst?“).

Alienation Adjustment Scale

Middleton (1963) studied the effects of race and education on the following dimensions of alienation: self-ratings of powerlessness, meaninglessness, normlessness, cultural estrangement, social estrangement, and estrangement. Ruben and Kealey (1979) modified Middleton’s alienation-adjustment index for using it as an indicator of adjustment in cross-cultural settings. The Alienation Adjustment Scale contains the same dimensions as Middleton’s index, with one item assessing one dimension. Deller (2000) translated the study into German, and slightly modified the frame of reference of the items to measure adjustment in an expatriate sample. Stierle et al. (2002) reported a reliability of .60 (Cronbach’s alpha) using five items from Deller’s translated version. For this study, we used Deller’s translation, splitting up the last item into two separate items. Thus, we differentiate between personal and family long run goals, resulting in a 7-item measure (Appendix B). Items of the Alienation Adjustment Scale are dichotomous; answered with *yes* and *no*.

Performance Measure

The model of expatriate performance described above was translated into a 17-item questionnaire (see Appendix C1 for the self-ratings, Appendix C2 for the other-rating measure, and Appendix C3 for the English version of the performance rating). All items were rated on a 5-point Likert scale. For those items where it seemed helpful, behavioral anchors were given for both the extreme and the neutral ratings. The item “How self-sufficient is the expatriate?” (“Wie eigenständig arbeitet der Expatriate?”), for example, was anchored 1 = “The expatriate doesn’t need guidance to work well”, 3 = “The expatriate usually performs better, when some guidance is provided”, 5 = “The expatriate doesn’t work well without guidance” (1 = “Der Expatriate braucht keine Anleitung um gut zu arbeiten”, 3 = “Der Expatriate arbeitet normalerweise besser, wenn Anleitung gegeben wird.”, 5 = “Der Expatriate arbeitet ohne Anleitung nicht gut”). Like the adjustment measure, performance items were slightly rephrased to fit self-ratings; “How self-sufficient are you?”, with the respective anchors of 1 = “I don’t need guidance to work well”, 3 = “I usually work better when some guidance is provided”, and 5 = “I don’t work well without guidance”. In the case that the person rating the expatriates’ performance and adjustment wasn’t fluent in German, an English version of the related questions was prepared using the *back translation method* (Brislin, 1980).

3.3 Procedure

After agreeing on taking part in the study, expatriates received a link to fill out the Occupational Personality Questionnaire (SHL, 2001) online, prior to the actual interview. The automatic analysis of the OPQ32 online-version enabled us to feedback the results directly following the interview. This was thought to be one immediate incentive to taking part in the study.

During the interview, demographics, previous international experience, language abilities, aspects of cross-cultural training, organizational support, family situation, and repatriation were assessed on the basis of a structured interview-guideline. Following the interview part, the Alienation Adjustment Scale (Ruben & Kealey, 1979), AT-14 (Kischkel, 1984), Wonderlic Personnel Test (Wonderlic Inc., 2002), and NEO-PI-R (Costa & McCrae, 1992; Ostendorf & Angleitner, 2004) were administered. Subsequently, participants rated their adjustment and performance. Ultimately, interviewees were asked to name someone other than themselves who was sufficiently knowledgeable and could rate their adjustment and performance. If they agreed on doing so, *other-ratings* were obtained either by emailing

the questionnaire to the named person, handing over the questions to the named person, or having the expatriates themselves give the questions to the named person. Although we first intended to limit other-ratings to ratings by supervisors, difficulties in obtaining such ratings led us to accepting peer and subordinate ratings as well. In order to discourage expatriates from looking at the others' ratings, questionnaires were faxed or turned in directly to the interviewer. Anonymity was guaranteed to both, expatriates and raters, especially in terms of data that could be of interest to their employer.

4 Results

Null Hypothesis Significance Testing

The following section presents the study results. We do not report statistical significance tests for any of the analyses conducted. Instead, this study reports point estimates of effect sizes and surrounding confidence intervals in accordance with more up-to-date statistical standards (see Wilkinson and the Task Force on Statistical Inference, 1999, as well as Schmidt's [1996] statement that "... for analysis of individual studies, the appropriate statistics are point estimates of effect sizes and confidence intervals around these point estimates" [p.116]). Many influential statisticians have since postulated the abandonment of null hypothesis significance testing as it has severely retarded growth of cumulative knowledge in the social sciences (see, for example, Cohen, 1994; Schmidt, 1992, 1996; Schmidt & Hunter, 1997).

Correction for Measurement Error

Schmidt and Hunter (1996) consider failure to properly attend to measurement error as the second worst methodological practice as it retards the process of the development of cumulative knowledge in psychology (the worst being null hypothesis significance testing). Reliable formulas for correcting observed study results for attenuation due to measurement error and restriction of range have been available for several decades and are well accepted in the psychological sciences. Therefore, when possible, data were corrected for range restriction in the predictors and unreliability in the criteria.

Restriction of Range

Restriction of range occurs, when a variable is restricted by the sampling procedure (Cohen, Cohen, West, & Aiken, 2003) or selective exclusion of participants for reasons such as systematic subject mortality. The ultimate goal of this study is to predict job performance

and adjustment abroad. The ideal applicant pool of interest in this study is therefore not a sample of already selected expatriates but a sample of potential applicants to be sent abroad. It is also important to recall that the sample of this study is again restricted because participation was completely voluntarily and on the interest of the individual expatriates. “The crucial pieces of information needed for range restriction corrections are the predictor standard deviation in the restricted sample ... and the predictor standard deviation for the applicant pool of interest” (Sackett & Ostgaard, 1994, p.680). The standard deviations for the applicant pool of interest, i.e., norm group data, were only available for NEO-PI-R and Wonderlic. Corrections for range restriction were computed using Thorndike’s Case 2 formula (see Sackett & Yang, 2000).

“The true score correlations indicate the degree of relationship between measures being correlated, if the study were able to measure variables without measurement error” (Sinangil & Ones, 1997, p.191). However, performance ratings in this study do not show perfect reliability. Schmidt and Hunter (1996) state that when correcting for unreliability in ratings, interrater reliabilities are more appropriate than coefficient alphas. The meta-analytical mean interrater reliability of supervisory ratings of overall job performance is .52 (Viswesvaran, Ones, & Schmidt, 1996; Rothstein, 1990). Therefore, we used this value in correcting for criterion unreliability.

Ratings

Variance in multi-source performance ratings is found to be more strongly associated with the individual rater than with the rater’s hierarchical level (Fecteau & Craig, 2001; Mount, Judge, Scullen, Sytsma, & Hezlett, 1998). By meta-analyzing correlations of peer and supervisor ratings, Viswesvaran, Schmidt, and Ones (2002) found complete construct-level convergence of peer and supervisor ratings for six out of nine performance dimensions. Following both findings, we consider it to be appropriate to use the meta-analytical interrater reliability for supervisor ratings in this study, although other-ratings are not solely obtained from supervisors, but also from peers and subordinates.

Since items assessing adjustment are termed in the same way as performance items, the .52 value was used to correct other-ratings of adjustment as well.

Self-ratings are not corrected for unreliability. The pivotal idea that ratings from different sources are more reliable than from a single source does not work for self-ratings, because multiple “selves” do not exist.

Research on the cross-cultural equivalence of job performance ratings shows, that there is a culture specific variance in ratings of job performance (Ployhart, Wiechmann, Schmitt, Sacco, & Rogg, 2003). To ensure that variance in the ratings of this study would not be due to cultural origin of the raters, Cohen's d was computed to compare performance and adjustment ratings of Korean and German observers. There is almost no difference in performance ratings between German and Korean raters in this study (Cohen's $d = .03$). However, there is a clear difference between German and Korean ratings of adjustment (Cohen's $d = .86$). The positive d value reflects that higher ratings of adjustment were given by German raters. Unfortunately, we do not know, whether this difference is due to a systematic effect or to the small sample size (5 of the other-raters were Korean).

It is conventional to follow Nunnally (1978) and regard reliabilities of $\alpha \geq .70$ as satisfactory. Unfortunately, as can be seen in table 1, a few reliabilities of criteria and predictors are lower than $\alpha = .70$. As for the criteria of other-ratings, this was dealt with by correcting for unreliability. As for the predictors, low reliabilities systematically attenuate correlations. Consequently, correlations with predictors of low reliability should be larger, if we had used a better, i.e., more reliable, predictor.

In the following section, results for adjustment and performance criteria will be presented. As mentioned above, point estimates, i.e., correlations, and confidence intervals around them, are used for interpreting the results. Point estimates with confidence intervals *not* including zero are marked in bold numbers in all following tables. In judging the effect sizes, we will follow the practical convention and consider correlations around .20 as small, those around .50 as moderate, and those of .80 and above as large (Cohen, 1988). Wherever the confidence interval does include zero, the correlations are not statistically significant.

4.1 Results based on Adjustment Criteria

Overall Adjustment

Means of overall adjustment reflect that both expatriates and others see the participants of this study to be well adjusted (self-ratings for overall adjustment mean = 4.16; mean for other ratings = 4.44 on a 5-point Likert-scale). Standard deviations for both measures are rather small ($SD = .57$ for self- and $SD = .51$ for other-ratings of overall adjustment) as can be seen in table 1.

Table 1. *Descriptive statistics of the variables included in the study*

Variable	N of Items	Reliability	<i>n</i>	Mean	Standard Deviation
<i>Criteria</i>					
Overall job performance self-rating ^a	17	.70	64	4.17	.29
Interpersonal facilitation self-rating ^a	2	.62	58	3.99	.66
Overall job performance other-rating ^a	17	.84	26	4.40	.43
Interpersonal facilitation other-rating ^a	2	.72	24	4.33	.60
Overall adjustment self-rating ^a	4	.74	65	4.16	.57
Work adjustment self-rating ^b	1		63	4.25	.72
Interaction adjustment self-rating ^b	1		65	4.05	.76
General adjustment self-rating ^b	1		65	4.22	.82
Overall adjustment other-rating ^a	3	.60	25	4.44	.51
Work adjustment other-rating ^b	1		25	4.40	.65
Interaction adjustment other-rating ^b	1		25	4.32	.69
General adjustment other-rating ^b	1		25	4.60	.71
Alienation Adjustment Scale ^a	7	.50	65	1.69	.20
<i>Predictors</i>					
GMA ^c	50	.93	62	30.89	5.58
Emotional Stability ^a	48	.81	64	1.13	.76
Extraversion ^a	48	.77	64	-.02	.88
Openness ^a	48	.63	64	-.12	.74
Agreeableness ^a	48	.79	64	-.31	.98
Conscientiousness ^a	48	.84	64	.43	.84
Tolerance of Ambiguity ^a	14	.65	65	.32	.45
Prior international experience ^{b, d}	1		64	1.40	1.52
Culture novelty ^{b, e}	1		66	.21	.54
Cross-cultural training ^b	1		65	1.40	.49
Length of stay ^{b, f}	1		64	35.85	34.76
Language proficiency ^b	1		65	.91	.88
Support Human Resources ^b	1		49	3.51	1.06
Support colleagues/supervisor ^a	2	.75	37	4.13	.89
Worries about repatriation ^b	1		62	1.87	1.32
Favorableness of spouse ^b	1		47	3.91	.86

^a Reliability is reported as Cronbach's alpha

^b No reliability is for this single item variable

^c Reliability is reported as Kuder-Richardson 20 (KR-20)

^d Number of previous international assignments

^e Number of Confucian Asian countries expatriates have worked in before

^f In months

As can be seen in table 2 the hypothesis on the relationship between GMA and adjustment (hypothesis 1b) could not be confirmed. The same holds true for the hypothesis on relationship between Openness and adjustment (hypothesis 9). Hypothesis 7, however, has been partially confirmed: Emotional Stability shows a large ($r = .81$) correlation with other-ratings of adjustment; the 95% confidence interval clearly excludes zero.

Of the context related individual variables expected to be related to adjustment, no relationship was found for Tolerance of Ambiguity (hypothesis 11), prior international experience (hypothesis 12), culture novelty (hypothesis 13) and favorableness of the spouses' opinion towards the assignment (hypothesis 19).

Partial support was found for the influence of cross-cultural training participation on adjustment (hypothesis 14b). Rating the adjustment of expatriates, others perceived those expatriates who had participated in cross-cultural training to be clearly better adjusted ($r = .71$). Partial support was also found for the relation of length of time working in Korea (hypothesis 15b) and language proficiency (hypothesis 16). Both aspects have a positive impact on self-ratings of adjustment, showing small to medium correlations.

Table 2. *Correlates of overall adjustment ratings*

Variable	Self-ratings				Other-ratings ^a			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
GMA ^b	61	.01	-.31	.32	25	.36	-.30	.94
Emotional Stability ^b	64	.17	-.15	.48	25	.81	.29	1.00
Openness ^b	64	.23	-.09	.52	25	.22	-.43	.91
Tolerance of Ambiguity	65	.22	-.01	.47	25	.17	-.37	.69
Prior international experience	64	.01	-.24	.01	25	.04	-.44	-.04
Culture novelty	65	-.04	-.28	.21	25	.07	-.49	.62
Cross-cultural training	65	.03	-.22	.27	25	.71	.30	1.00
Length of time in Korea	64	.37	.16	.58	25	.01	-.55	.56
Language proficiency	65	.46	.26	.65	25	.32	-.21	.84
Favorableness of spouse	47	.13	-.16	.41	20	-.16	-.77	.46

^a Correlations are corrected for unreliability in the criterion

^b Correlations are corrected for range restriction in the predictor

Uncorrected correlations can be found in appendix D

Table 3 shows correlations of the variables hypothesized to relate to adjustment measured by the Alienation Adjustment Scale. Here, Emotional Stability (hypothesis 7) shows a correlation of $r = .47$, which is lower than the correlation with the adjustment measure above, but still of medium size. Contrary to the findings displayed above, Tolerance of Ambiguity (hypothesis 11) does correlate with overall adjustment when measured by the Alienation Adjustment Scale ($r = .31$). Equally, cross-cultural training (hypothesis 14b) is related to adjustment when measured by the Alienation Adjustment Scale, again contrary to the results on self-ratings of adjustment shown above. Other than hypothesized, and contrary to the findings above, there is no noteworthy correlation between language proficiency (hypothesis 16) and Alienation Adjustment. All other results are similar to those with the adjustment measure reported above: Length of time working in Korea (hypothesis 15b) relates positively to ratings on the Alienation Adjustment Scale, GMA, Openness, prior international experience, culture novelty, and favorableness of the spouses' opinion do not have remarkable correlations with the criterion of adjustment.

Table 3. *Correlates of the Alienation Adjustment Scale*

Variable	Alienation Adjustment Scale			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper
GMA ^a	61	-.18	-.48	.13
Emotional Stability ^a	64	.53	.29	.73
Openness ^a	64	.22	-.10	.51
Tolerance of Ambiguity	65	.31	.09	.53
Prior international experience	65	-.33	-.55	-.11
Culture novelty	65	-.16	-.40	.08
Cross-cultural training	65	.30	.08	.52
Length of time in Korea	64	.45	.25	.65
Language proficiency	65	.13	-.11	.39
Favorableness of spouse	47	.01	-.28	.30

^a Correlations are corrected for range restriction in the predictor
Uncorrected correlations can be found in appendix E

Interaction Adjustment

Hypothesis 8 suggested a positive correlation of Extraversion and interaction adjustment. As can be seen in table 4, contrary to the predicted relationship, Extraversion was found to be *negatively* related to other-ratings of adjustment. Therefore, hypothesis 8 was not confirmed. The confidence interval around the correlation between Extraversion and other-ratings of interaction adjustment is very large, ranging from the lower bound of -1.00 to the upper bound of -.03. Point estimates are the best predictors of the real effect size. But, if confidence intervals show a broad range, we cannot have large trust in the point estimate; especially when the lower bound of the confidence interval clearly differs from the point estimate. This is the case for the correlation of Extraversion and other-ratings of interaction adjustment.

In correlating Agreeableness and interaction adjustment ratings, no noteworthy correlation emerged with self-ratings. With other-ratings, the confidence interval of the moderate correlation of $r = .43$ does include zero. Consequently, hypothesis 10, which predicted a positive relationship between Agreeableness and interaction adjustment, was not confirmed.

Table 4. *Correlates of interaction adjustment ratings*

Variable	Self-ratings				Other-ratings ^a			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
Extraversion ^b	64	-.03	-.32	.27	25	-.59	-1.00	-.03
Agreeableness ^b	64	.15	-.10	.39	25	.43	-.07	.93

^a Correlations are corrected for unreliability in the criterion

^b Correlations are corrected for range restriction in the predictor
Uncorrected correlations can be found in appendix F

General Adjustment

Hypothesis 17a suggested a positive relationship between support from Human Resources and general adjustment. The expected relation did not emerge as can be seen in table 5.

Table 5. *Correlates of general adjustment ratings*

Variable	Self-ratings				Other-ratings ^a			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
HR support	49	-.10	-.38	.18	20	.40	-.17	.97

^aCorrelations are corrected for unreliability in the criterion
Uncorrected correlations can be found in appendix G

Work Adjustment

Organizational support as provided by colleagues and supervisors from the home country (hypothesis 17b) was expected to be positively related to work adjustment. Interestingly, 50 of the 66 expatriates said that they were still in contact with colleagues from the home country but only 39 said so for supervisors in the home country. However, the hypotheses were not confirmed as can be seen in table 6.

Table 6. *Correlates of work adjustment ratings*

Variable	Self-ratings				Other-ratings ^a			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
Support colleagues/supervisor	52	-.13	-.40	.14	22	.13	-.46	.72

^aCorrelations are corrected for unreliability in the criterion
Uncorrected correlations can be found in appendix H

4.2 Results based on Performance Criteria

As can be seen in table 1, the means of self-ratings of overall performance (4.17) and of other-ratings (4.40) were quite high on a five-point scale. At the same time, standard deviations are rather small ($SD = .43$ for other ratings; $SD = .29$ for self-ratings). This results in a skewed distribution of performance ratings.

As can be seen in table 7, only one correlation emerged that excludes zero in the 95% confidence interval in self- and other-ratings of performance: Hypothesis 6 has been partially confirmed, in that Conscientiousness is positively related with self-ratings of performance showing a medium $r = .30$ correlation. This relation did not emerge in other-ratings of performance.

All other hypothesized relationships with performance and GMA (hypothesis 1a), Openness (hypothesis 4), participation in cross-cultural training (hypothesis 14a), length of time spent working in Korea (hypothesis 15a), and worries about repatriation (hypothesis 18), have not been confirmed. A small correlation ($r = .29$) emerged for Emotional Stability and self-ratings of performance; a medium sized correlation ($r = .53$) for other-ratings of performance. In both cases, however, the 95% confidence interval includes zero. Therefore, hypothesis 2, suggesting a positive relation of Emotional Stability and performance, was not confirmed.

Table 7. *Correlates of overall job performance ratings*

Variable	Self-ratings				Other-ratings ^a			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
GMA ^b	60	.11	-.21	.41	26	.37	-.27	.94
Emotional Stability ^b	63	.29	-.03	.57	26	.53	-.12	1.00
Openness ^b	63	.03	-.30	.35	26	.07	-.61	.76
Conscientiousness ^b	63	.30	.04	.55	26	.15	-.46	.74
Cross-cultural training	64	.15	-.09	.40	26	.32	-.20	.85
Length of stay	64	-.02	-.26	.23	26	.15	-.39	.68
Worries about repatriation	61	-.07	-.32	.18	25	-.12	-.67	.43

^a Correlations are corrected for unreliability in the criterion

^b Correlations are corrected for range restriction in the predictor

Uncorrected correlations can be found in appendix I

Hypothesis 5 suggested a positive relationship between Agreeableness and the interpersonal facilitation dimension of performance. This hypothesis was not confirmed, as can be seen in table 8.

Table 8. *Correlates of the interpersonal facilitation dimension of performance*

Variable	Self-ratings				Other-ratings ^a			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
Agreeableness ^b	62	-.02	-.27	.23	26	-.15	-.69	.39

^a Correlations are corrected for unreliability in the criterion

^b Correlations are corrected for range restriction in the predictor

Uncorrected correlations can be found in appendix J

Hypothesis 3 suggested Extraversion to be positively related to job performance for expatriates holding managerial positions. To test this hypothesis, all cases of expatriates working in non-managerial positions were excluded, resulting in a sample of 55 expatriates for self-ratings, and 25 for other-ratings, respectively. This hypothesis could not be confirmed as can be seen in table 9.

Table 9. *Correlation of Extraversion and performance in managerial positions*

Variable	Self-ratings				Other-ratings ^a			
	n	r	95% CI for r		n	r	95% CI for r	
			Lower	Upper			Lower	Upper
Extraversion ^b	55	.12	-.19	.42	25	-.19	-.80	.45

^a Correlations are corrected for unreliability in the criterion

^b Correlations are corrected for range restriction in the predictor

Uncorrected correlations can be found in appendix K

4.3 Intercorrelations of Criteria

Intercorrelations of Adjustment Measures

Table 10 shows the intercorrelations for self-ratings of adjustment, other-ratings of adjustment, and Alienation Adjustment. Due to space considerations, the complete table including confidence intervals can be found in appendix L.

All self-ratings of adjustment correlate quite high with the overall adjustment measure (from $r = .71$ for work adjustment to $r = .82$ for general adjustment). This is not very surprising as the three single-item-scales are part of the overall measure. The intercorrelations between the three self-ratings of the dimensions of work, interaction, and general adjustment are all of medium size. Intercorrelations of other-ratings have a similar pattern. All three dimensions correlate high with the overall measure. For other-ratings equally, the three single-item measures are part of the overall adjustment scale.

Table 10. *Intercorrelation of adjustment measures*

Variable	1	2	3	4	5	6	7	8	9
1. Overall adjustment self-rating	1	.71	.72	.82	.31	.28	.31	.25	.16
(n)	(65)	(63)	(65)	(65)	(65)	(25)	(25)	(25)	(25)
2. Work adjustment self-rating		1	.30	.39	.14	.25	.20	.17	.18
(n)		(63)	(63)	(62)	(63)	(25)	(25)	(25)	(25)
3. Interaction adjustment self-rating			1	.46	.31	.31	.32	.15	.22
(n)			(65)	(65)	(65)	(25)	(25)	(25)	(25)
4. General adjustment self-rating				1	.16	-.02	-.04	.05	-.05
(n)				(65)	(65)	(25)	(25)	(25)	(25)
5. Alienation Adjustment Scale					1	.22	.36	.06	.08
(n)					(65)	(25)	(25)	(25)	(25)
6. Overall adjustment other-rating						1	.80	.73	.71
(n)						(25)	(25)	(25)	(25)
7. Work adjustment other-rating							1	.45	.37
(n)							(25)	(25)	(25)
8. Interaction adjustment other-rating								1	.19
(n)								(25)	(25)
9. General adjustment other-rating									1
(n)									(25)

Correlations in bold exclude zero in the 95% Confidence Interval. Full table in Appendix L

The three dimensions also correlate to a medium degree with each other. The exception is the correlation between interaction and general adjustment, which is rather small ($r = .19$; 95% confidence interval includes zero). No remarkable correlations emerged between self-ratings and other-ratings of any of the adjustment measures.

Three correlations for adjustment ratings and Alienation Adjustment Scale emerged that does not include zero in the 95% confidence interval. Alienation Adjustment Scale correlated with self-ratings of overall adjustment ($r = .31$) and interaction adjustment ($r = .31$), as well as other-ratings of work adjustment ($r = .36$).

Intercorrelations of performance measures

Due to space considerations, tables of the intercorrelations of performance ratings are reported in appendices M1-M3. Seven of the eight performance dimensions show small ($r = .24$ for administrative competence) to moderate ($r = .70$ for leadership) correlations with overall performance, and do not include zero in their 95% confidence interval when rated by the expatriates themselves. Only self-ratings of the integrity dimension ($r = .11$) do not show noteworthy correlations with the overall measure of performance.

All other-ratings show moderate to large correlations with the overall measure ranging from $r = .58$ for job knowledge and overall performance, to $r = .88$ for effort and initiative and overall performance. All correlations of other-ratings of the dimensions and the overall measure do not include zero in their 95% confidence intervals. Note that in both cases, of self- and other-ratings, the overall ratings were a composite of the single dimensions.

Correlations of performance and adjustment measures

As can be seen in table 11, self-ratings of performance correlate with self-ratings of adjustment ($r = .38$) and show a smaller correlation with the Alienation Adjustment Scale ($r = .24$). Likewise, performance other-ratings correlate moderately with other-ratings of adjustment. *All* correlations between self-ratings and other-ratings of performance include zero in the 95% confidence interval.

Table 11. *Intercorrelations of main criteria*

Variable	1	2	3	4	5	
1. Performance self-rating	1	.33	.38	.33	.24	
95% CI for <i>r</i>	Lower bound	1	-.02	.17	-.03	.01
	Upper bound	1	.68	.59	.69	.47
	(<i>n</i>)	(64)	(26)	(64)	(25)	(64)
2. Performance other-rating		1	-.01	.52	-.02	
95% CI for <i>r</i>	Lower bound	1	-.40	.23	-.37	
	Upper bound	1	.38	.81	.41	
	(<i>n</i>)	(26)	(26)	(25)	(26)	
3. Adjustment self-rating			1	.28	.31	
95% CI for <i>r</i>	Lower bound		1	-.09	.09	
	Upper bound		1	.65	.53	
	(<i>n</i>)		(65)	(25)	(65)	
4. Adjustment other-rating				1	.22	
95% CI for <i>r</i>	Lower bound			1	-.16	
	Upper bound			1	.60	
	(<i>n</i>)			(25)	(25)	
5. Alienation Adjustment Scale					1	
95% CI for <i>r</i>	Lower bound				1	
	Upper bound				1	
	(<i>n</i>)				(65)	

4.4 Tolerance of Ambiguity and the Big Five

Above is was argued that proving Tolerance of Ambiguity to be empirically distinguishable from the Big Five is important to justify its usage. As can be seen in table 12, Tolerance of Ambiguity shows two moderate correlations with Big Five factors: A positive correlation with Emotional Stability and a negative relation with Conscientiousness, both correlations do not include zero in their 95% confidence intervals. Comparing these confidence intervals with those of correlational data from Deller (2000)³ there is substantial agreement (Appendix N). Even though point estimates for these relationships differ in the two studies, the overlap of confidence intervals does not allow us to conclude that the effect sizes obtained truly differ.

Table 12. *Correlation matrix of Tolerance of Ambiguity and Big Five*

Variable	<i>n</i>	Tolerance of Ambiguity		
		<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper
Emotional Stability	64	.43	.23	.63
Extraversion	64	.19	-.05	.43
Openness	64	.16	-.08	.40
Agreeableness	64	-.06	-.30	.19
Conscientiousness	64	-.34	-.56	-.13

³ Deller assessed the Big Five (using the NEO-FFI) and Tolerance of Ambiguity in a very similar sample of German expatriates in Korea.

Regressing Tolerance of Ambiguity on the Big Five, it appears that the multiple correlation of the Big Five with Tolerance of Ambiguity is large ($R = .59$) but not unity. A large part of variance in Tolerance of Ambiguity is explained by the Big Five ($R^2 = .34$), as can be seen in table 13. However, there is a substantial part of specific variance that remains unexplained.

Table 13. *Simultaneous regression analysis for tolerance of ambiguity*

Independent Variables	B	β
Emotional Stability	3.28	.41
Extraversion	1.18	.17
Openness	1.29	.16
Agreeableness	.10	.02
Conscientiousness	-2.35	-.33

$R = .59$, $R^2 = .34$, Adjusted $R^2 = .297$

N = 64

Predictors

A noteworthy characteristic of this sample appears when comparing results in the predictors with the norm group, by computing u-values. As can be seen in table 14, with the exception of Agreeableness, differences between the present sample and the general population are practically significant. Apparently, expatriates in this sample are more emotionally stable, more extraverted, more open, and more conscientious than the general population.

Table 14. *U-values of NEO-PI-R and Wonderlic*

Variables	Normgroup <i>SD</i>	Expatriate sample <i>SD</i>	<i>u-values</i>
Emotional Stability ^a	23.56	17.53	1.34
Extraversion ^a	19.87	16.63	1.20
Openness ^a	19.36	14.39	1.35
Agreeableness ^a	16.97	16.86	1.01
Conscientiousness ^a	20.11	17.57	1.14
Wonderlic ^b	5.58	7	1.26

N = 64

^a Normgroup *s.d.* as reported in Ostendorf and Angleitner (2004)

^b Normgroup *s.d.* as reported in Wonderlic (2002)

5 Discussion

The results of our study lend some support to the notion that personality variables, and context specific individual variables are related to expatriate adjustment and performance. Each hypothesis is discussed below, relative to the findings in this study.

5.1 Discussion of Results

General Mental Ability

The most unexpected finding of this study is that *no* noteworthy correlations emerged with GMA, either for adjustment or for or job performance. This is very surprising in the light of the importance of GMA in the domestic context and of previous findings by Deller (2000) in the expatriate context. There are several factors that might have led to these results: The German version of the Wonderlic Personnel Test is an imperfect translation of the English version, and proper procedures for the translation of psychological tests (c.f. Standards of Educational and Psychological Testing, AERA, APA, NCME, 1999) have not been fully followed (e.g., retranslation). For instance, several proverbs that participants are asked to compare in two tasks are translated literally and as such have no meaning in German. In two items, words were mistakenly inverted, resulting in up to 29% of the respondents giving the same incorrect answers. Here, the question is whether the German version of the Wonderlic does indeed measure GMA as good as the English one, or whether aspects such as fantasy or concentration did influence results stronger than they should. Concentration may also have influenced results in that interviews were not conducted under the same and non-disturbing conditions. In any case, a very fruitful area for future research would be the development of a valid, but short measure of GMA in German.

Another aspect that might have influenced the results with GMA stems from method effects. For the self-ratings of the criteria expatriates may have drawn inferences from the cognitive ability test to ratings of performance and adjustment. Consequently, to provide a consistent image, those expatriates that perceived themselves as high in cognitive ability may have rated their performance higher than appropriate.

This leads to the next noteworthy factor to be discussed. Bandura (1997) defines self-efficacy as the “belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p.3). Chen, Casper, and Cortina (2001) found self-efficacy to be a mediator of the cognitive ability-performance relationship. It could be the case that self-efficacy does have a strong mediating influence on expatriate job performance.

Especially, as Gist and Mitchell (1992) found, individuals with high self-efficacy deal more effectively with difficulties and tend to be more persistent in the face of failure.

Emotional Stability

Emotional Stability showed a positive relationship with other-ratings of adjustment, and the Alienation Adjustment Scale in this study. Self-ratings of adjustment showed a positive tendency ($r = .17$), but the confidence interval slightly included zero. Comments of the expatriates during the interviews confirmed research findings that underline the importance of spouse and/or family support for expatriate adjustment (Black & Stephens, 1989; Caligiuri et al. 1998; James et al., 2004) As suggested by Caligiuri (2000b), it could be that "... personality is only one small part in an expatriate's stress coping mechanism" (p.82) and that aspects such as social support play a more important role.

Emotional Stability did not emerge as a correlate of expatriate job performance. Although the emerging correlations indicate that further investigation could be fruitful, their confidence intervals did not exclude zero in this study. As mentioned above, findings of Salgado (1997) indicate Emotional Stability to be a valid predictor of job performance across occupational groups in the European Union. Apart from these findings, one could argue that in many globally acting companies, processes and procedures are largely standardized and do not differ significantly, regardless of which country the subsidiary is located in. Therefore, additional strains in the work environment may not be as large, and being able to cope with stress without becoming upset or rattled may not be as important as expected.

Finally, comparing this sample to the normative group, the *u*-value for Emotional Stability (table 14) is among the highest. This may confirm the notion that emotionally stable individuals are more willing to accept an international assignment in the first place (Ones & Viswesvaran, 1997).

Extraversion

Although the hypotheses on Extraversion (positive relation with interaction adjustment and with overall performance for expatriates holding managerial positions) have not been supported, there is a finding that deserves further elaboration. Although they did not exclude zero in the 95% confidence interval, it is noteworthy that *all* correlations of Extraversion and adjustment ratings point in a negative direction. This stands in contrast to findings of Deller (2000), where a small but positive correlation emerged for Extraversion and self-ratings of adjustment. However, in Deller's study, Extraversion was conceptualized differently (NEO-

FFI) and adjustment was assessed with a smaller number of items; results are therefore not fully comparable.

No meaningful relation emerged correlating Extraversion with performance ratings for those expatriates holding a managerial position. This contradicts findings with the same two variables in domestic settings, and meta-analytical results for overall performance in expatriate settings (Mol et al., 2005). Again, it is noteworthy that correlations with other-ratings were negative; stated differently self-ratings of performance were the only positive correlation with Extraversion.

The results in terms of small correlations could be due to sampling error and low statistical power. The negative direction of the correlations could also be culture-bound. As the expression of traits is unique to a specific culture (McCrae, 2001), behaviors associated with high Extraversion being German may not be appropriate in Korea. Taking a closer look at the subscales of Extraversion, those that show the relatively largest negative correlations with adjustment and performance are Activity, Assertiveness, and Excitement Seeking (in that order). Studying these personality facets, their behavioral manifestation, and their effect on the Confucian Asian individual may shed more light on the findings described above.

Openness

None of the Openness-related hypotheses was confirmed. Apparently, Openness does not relate to performance in any direction; small positive correlations were found for adjustment, but they did include zero in the 95% confidence interval. As far as performance is concerned, this (non-)finding is in line with meta-analytical results on expatriate job performance (Mol et al., 2005). Divergent results are reported for Openness in relation to adjustment. Sinangil and Ones (1997) report a small positive correlation; Deller (2000) also reports a small correlation, but only when adjustment is measured with the Alienation Adjustment Scale.

Openness is the personality factor in which the sample of this study differs most from the normative group. One may conclude that once people accepted an international assignment (and looking at table 14, Openness seems to be related to accepting such an assignment) it matters relatively less whether a person is open or not.

Agreeableness

No correlation emerged for the hypothesized relations of Agreeableness with interaction adjustment and the interpersonal facilitation dimension of job performance. To our

knowledge, so far no results are reported on the specific dimensions of adjustment and their relation to Agreeableness in expatriate settings. However, it contradicts previous findings for overall adjustment (Deller, 2000), and overall expatriate job performance (Mol et al. 2005), and it also contradicts the assumptions drawn from domestic findings. The reason may lie in methodological problems. The interpersonal facilitation dimension of performance was measured with only two items. This ‘scale’ shows a satisfactory reliability ($\alpha = .72$) for other-ratings. For self-ratings the reliability is not satisfactory ($\alpha = .62$), which is especially disruptive, because self-ratings are not corrected for unreliability. Interaction adjustment was measured with one item only. Therefore, we can not compute its reliability at all. Unreliability of measures weakens the relation between two variables (Shadish, Cook, and Campbell, 2002). Thus, larger correlations between the measures of Agreeableness and the interpersonal facilitation dimension of performance may emerge when a more reliable measure of the criteria is used. Since there is evidence that different dimensions of performance are predicted by different personality variables (e.g., Mount, Barrick, & Stewart, 1998), it seems valuable to pursue this line of research. However, future research should measure the criteria with multiple-item instruments.

In addition to methodological arguments, there is one other point to bring up that may have influenced results. Of the total 66 expatriates taking part in the study, 20 were CEO of the local subsidiary, and 35 held managerial positions. At least for the CEOs, it is questionable as to how much of their daily routine actually involves behaviors that relate to the interpersonal facilitation dimension of performance, as conceptualized in this study. This involves the degree to which the expatriate sponsor’s team work and peer performance in his/her area of responsibility. By nature, CEOs do not have true peers and may have to execute decisions that are not made in agreement with other members of the organization.

Conscientiousness

Conscientiousness was suggested to have a positive relationship with job performance. Surprisingly, this was only confirmed for self- but not for other-ratings of performance. At first glance, this finding seems to be counterintuitive. Looking at it a second time, there may be an explanation to it. The meta-analytical effect-size of correlations between Conscientiousness and job performance ranges from .20 to .23 depending on the occupational group (Barrick & Mount, 1991). The differing sizes of the correlations found in our study ($r = .34$ for self-ratings and $r = .15$ for other-ratings) could be due to sampling error. Low statistical power could be the reason why the confidence interval of the other-rating

correlation includes zero. Schmidt and Hunter (1997) state that "... it is equal to one minus the statistical power to detect the existing deviation of the population effect size from zero" (p.41), hereby referring to the possibility of Type II errors. Power analysis revealed that the chance of a Type II error, given the sample size of $n = 26$ for other-ratings of performance in our study, is 84%. "This level of accuracy is so low that it could be achieved just by flipping a (unbiased) coin!" (Schmidt & Hunter, 1997, p.40). This statement reveals that the described findings are actually not very surprising.

Tolerance of Ambiguity

Opposed to what was hypothesized, no correlation emerged with Tolerance of Ambiguity and adjustment excluding zero in the 95% confidence interval. A small correlation emerged with Tolerance of Ambiguity and the Alienation Adjustment Scale, which resembles the results of Deller (2000) with the same measures. In discussing these findings, some theoretical considerations have to be made.

Tolerance of Ambiguity is a construct that frequently turns up in the expatriate literature (e.g., Arthur & Bennett, 1995; Deller, 1997, 2000; Ronen, 1989). Remembering its definition, it seems to be self-evident that people who find it easy to deal with ambiguous situations find it easier to adjust to and perform in cross-cultural settings. Going beyond what seems to be obvious, one can start to wonder, how Tolerance of Ambiguity made its way to the cross-cultural context. As reported in Mac Donald (1970) and Rydell (1966), the origins of Tolerance of Ambiguity reach back to the conceptualizations of the authoritarian syndrome (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Frenkel-Brunswik, 1949, 1951) and prejudice (Allport, 1954). Based upon these theories, the first studies on Tolerance of Ambiguity tested it in relation to describing oneself as conventional (Budner, 1962), dogmatism, church attendance (Mac Donald, 1970), and conservatism (Kischkel, 1984). In our opinion, there is a gap between these first studies defining the *construct* of Tolerance of Ambiguity and its *application* in cross-cultural settings. Future research needs further elaboration on the theory underlying Tolerance of Ambiguity before it is translated into a measure and used as a predictor for cross-cultural adjustment.

Variance in Tolerance of Ambiguity can be explained by the Big Five to a substantial degree (table 13). There are valid, standardized measures of the Big Five that are frequently used in personnel selection and development. Whereas, information on construct- and external validity does not exist for measures of Tolerance of Ambiguity (i.e., AT-14) applied in occupational settings. From a practical point of view, it is therefore questionable whether it is

worthwhile applying an additional measure assessing Tolerance of Ambiguity, considering the limited amount of time one has in real world settings.

Context specific individual variables

Prior international experience was measured adding the numbers of countries the expatriate had worked in prior to the current international assignment. However, what might also be important is the length of time spent in the other countries. This was not measured in this study. Yet another important factor was not measured for, coping mechanisms may not only be acquired in work settings. For example, studying or spending a high school year abroad may provide just as many opportunities to reflect upon problems associated with cultural adjustment. Previous international experience in this study, however, was limited to international work experiences. Both aspects could have affected the relation of prior international experience and adjustment, and led to the negligible correlation.

Culture novelty did not appear to be related to adjustment either. These results may be due to the small sample size: only ten expatriates have had previous assignments in Confucian Asian countries, four of them in two different countries. However, this could also question the assumption that there is culture specific difficulty in adjusting to a new country.

Cross-cultural training did not relate to performance and self-ratings of adjustment, but to other-ratings of adjustment and results of the Alienation Adjustment Scale. As for performance, again, it is possible that companies' work policies and procedures are standardized to a large degree, and therefore country or regional culture has little impact on job performance. Most of the expatriates interviewed were employed by German organizations. In addition, the majority of the other-raters were Germans. Depending on the organization's and rater's individual approach, it may be that performance behaviors considered to be 'typically German' were seen as being more positive. If so, cross-cultural impact does not have an impact on job performance.

The divergent results for adjustment could lie in the different perspectives on adjustment. As mentioned above, from the expatriate's perspective, adjustment refers to psychological comfort with being in the different country. For an observer however, adjustment may be reflected in the adaptation of certain behaviors. Although cross-cultural training prior to the start of the assignment may help in becoming aware of different manners and values, and therefore will make it easier to adapt one's own behavior, it may not be of much help with feelings of psychological comfort during the assignment. Training,

mentoring, or coaching *during* the assignment may be of much higher importance for self-ratings of adjustment.

Length of time working in Korea did not emerge as being related to performance, contradicting meta-analytical findings suggesting that expatriates that have been on the assignment for a longer time period outperform the new arrivals (Mol et al., 2005). This may be due to a similar effect, as described by Hunter and Schmidt (1996). They state that

differences in experience are very important among the newly hired: The correlation between experience and performance ratings is .49 for those who had been there for 0-3 years. This correlation drops rapidly to a low of .15 for those who had been there 12 years and up (p.458).

A similar effect could occur in expatriate settings. The amount of time working in Korea may be important during the first years. At a certain point, routine may set in for all expatriates and differences in tenure become less important than previously. One interesting idea for future research in this domain would be to investigate the influence of experience on expatriate performance among individuals that are all above a relatively high cut-off with regard to time spent in their host country (e.g., five years).

As for the hypothesis in regard to in country-tenure and adjustment, it proved to be true that the longer expatriates have been on their assignment, the higher they rated themselves on the adjustment measure and on the Alienation Adjustment Scale. Literally no relationship ($r = .01$) emerged with other-ratings of adjustment. Concerning the self-ratings, this finding is in line with Torbiörn's (1982) model of a U-curve-shaped adjustment process, and with findings, again of Torbiörn that show an increase of satisfaction in the host country over time. However, feelings of psychological comfort with being in a different country, as reflected in self-ratings of adjustment, may not necessarily relate to adaptation of behavior and therefore to other-ratings of adjustment. This assumption may be clarified by the following example: In the course of the adjustment process, an expatriate in Seoul can get used to drinking coffee at Starbucks, have his/her children in a German school, and make friends almost exclusively with Germans. The individual may become well-adjusted to the described situation and feel psychologically comfortable, despite the cultural differences that definitely exist between Germany and Korea, besides Starbucks. However, other-raters may not judge this individual to be well-adjusted. Hence, adaptation of behavior might depend on

variables other than time spent in the host country. This might explain the (almost) zero correlation with other-ratings of adjustment.

Language proficiency showed a moderate correlation with self-ratings of adjustment, which partially confirmed the postulated hypothesis. Only a rather small correlation emerged with language ability and other-ratings of adjustment; its confidence interval included zero. The correlation resembles previous findings on language ability and adjustment (e.g., Caligiuri, 2000a), although the ' r ' is somewhat higher in our study than it was in Caligiuri's study. As argued in formulating the hypothesis, by being able to communicate in the host country's language should increase the expatriate's possibilities to exchange information with host country nationals and reduce stress in everyday life situations. Caligiuri's study focused on American expatriates working abroad and expatriates of different nationalities located in the US. English is *the* language of international business. It is therefore very likely that expatriates sent to the US were already able to communicate in English prior to their departure. Likewise, for expatriates outside the US, it is more likely to encounter colleagues that speak English than it is to encounter colleagues that speak German. This might be one reason why the effect of language proficiency on self-ratings of adjustment turned out to be larger in the present sample.

The contrasting findings between self- and other-ratings of adjustment in this case may be explained by different perspectives on adjustment. As mentioned previously, from the expatriate's perspective, adjustment is defined as feelings of psychological comfort; but from the observer's perspective it is defined as adaptation of behavior. The increase in scope of action may be more important to the inner state of psychological comfort than to adaptation of behaviors.

Support of Human Resources was confirmed as being related to general adjustment. Here, methodological problems are of concern because general adjustment was measured with one item only. Apart from that, the home country's Human Resources department might be of importance in the very beginning of the assignment, when issues such as finding an apartment or children's schooling arrangements must be resolved. During the course of the assignment, the potential of the Human Resource department to influence general adjustment may therefore be minimal in practice. Future research could explicitly ask for the support of Human Resources during different stages of the assignment.

Support of home country supervisor and colleagues was expected to be related to work adjustment. There are two factors that may explain why this hypothesis was not confirmed. First, to adjust to the work setting, support from host country colleagues or a supervisor (if

present) is probably of much higher importance than support from the home country. Support of the host country's organizational members should be assessed in future studies. Second, due to organizational structures, for instance with reporting lines to Asian Pacific headquarters instead of reporting lines to the home country, many expatriates are not necessarily in contact with supervisors and colleagues in their home country. Similarly, information that could help them in making sense of their work in Korea can be better provided from regional headquarters than from the home country.

Worries about repatriation showed infinitesimal correlations with self-ratings and very small with other ratings of performance. Several factors may have affected this relationship. It may be that expatriates have more worries about their repatriation towards the end of the assignment, and that at this point insecure future prospects negatively impact performance. However, whether the expatriates were near or far from repatriation was not controlled for. Age might have an influence of worries about repatriation in two ways: first, those expatriates that expect to retire after their assignment won't show great worries. Second, older employees that only have a few years left to work may be relatively more worried than younger expatriates facing repatriation. Both aspects should be controlled for in future studies. Additionally, comments during the interviews indicated that there are a noteworthy number of expatriates that do not consider returning to their home country at all. This again might have biased results.

Favorableness of the spouses' opinion did not have a noteworthy impact on adjustment. At first glance, this might seem a surprising finding. This is especially true when taking into account frequent comments of the expatriates during the interviews, which confirmed the results of previous studies in that support of spouse and family are very important for the expatriates' adjustment. There are several considerations that may explain why only negligible correlations emerged between adjustment and pre-departure opinion of the spouse. First, the spouse's opinion was not assessed by asking the spouse her-/himself, but by asking the expatriate. This might have biased answers. Second, social desirability might have had an effect on rating this item; it seems rather undesirable to depart on an assignment although the partner was strongly rejecting it. Third, it might truly be the case that those potential expatriates whose partners reject to depart abroad do not accept the assignment, and that therefore variance in the item was restricted. Consistent with this assumption, only two expatriates rated their spouse's pre-departure opinion as 'disapproving'. Finally fourth, the pre-departure opinion of the spouse may not be as important as the actual attitude which one has while in the host country. Future research should take on a multi-facet approach to the

spouse's motivations and attitudes if possible, assessing them by asking the spouses themselves.

Alienation Adjustment Scale

The Alienation Adjustment Scale of has extremely low reliability ($\alpha = .50$). This could be a hint that the scale does not measure a single construct but is multi-factorial. As described above, Ruben and Kealey (1979) indeed propose that the Alienation Adjustment Scale assesses six different dimensions. It could be that the proposed dimensions (powerlessness, meaninglessness, normlessness, cultural estrangement, social estrangement, and estrangement) cannot be integrated into a single-factor measure. The item-questions of the scale range from; *a*) "In my experience in this country, I find I am not that much interested in cultural activities that most people in this country seem to like" (Ruben & Kealey, 1979, p.46) measuring cultural estrangement, to *b*) "I haven't really enjoyed much of the work I have had to do since I arrived, but I believe that it is nonetheless important to do in order to insure that my personal and family's long run goals are realized" (Ruben & Kealey, 1979, p.46), supposed to measure estrangement from work. Looking at these items, the notion that the scale is indeed multi-factorial seems very likely. Similarly, correlations with other adjustment measures shown in Table 4 draw a very inconsistent picture of what the Alienation Adjustment Scale might actually measure.

Another factor that might be comprehensible when looking at the items is that expatriates often had difficulties with the negative format of the questions, and did not know whether to answer with *yes* or *no* to reject a statement. Especially in the case of the latter item mentioned above, expatriates often felt that it assesses two different aspects (enjoyment of work and realizing goals) although personal and family goals were separate items in this study. In conclusion, results from the Alienation Adjustment Scale have to be treated with great care and have a very problematic character.

Adjustment Ratings

The large intercorrelations between the dimensions of work, interaction, and general adjustment in both types of ratings could be a further motivation to investigate whether the dimensions are truly independent factors. However, as they were assessed with single items only, no secure statement can be made from the present data. Factor analysis should be applied with a larger sample and a multi-item measure to confirm the three-dimensional model.

The fact that self-and other-ratings of adjustment do not appear to be correlated may indicate that adjustment from the individual's perspective and from an observer's perspective indeed refer to different aspects of the adjustment framework (i.e., psychological comfort with being in the different country for the individual and adaptation of behavior for observers). Furthermore, as far as other-ratings are concerned, future studies should try to predominantly use ratings from host country nationals. Host country nationals should be the best source to judge on adaptation of behaviors.

The high mean and small variance of adjustment ratings could be due to sampling error in that only those expatriates agreed to take part in the study that are very well adjusted. The generalizability of the results to other samples or the overall expatriate population is therefore questionable.

Performance Ratings

Viswesvaran, Schmidt, and Ones (2005) state that "... because the same abilities and traits (e.g., general cognitive ability and conscientiousness) [are] likely to contribute to performance on most or all dimensions of job performance, performance dimensions would be expected to be positively correlated ..." (p.109). Referring to this statement, the intercorrelations of the performance dimensions in self-ratings seem to be rather small. Intercorrelations of the dimensions in other-ratings are larger, compared to those in self-ratings. This could be due to the fact that halo error has a stronger influence on other-ratings than on self-ratings of performance. However, to date there has been no direct test of this hypothesis and this question can unfortunately not be answered with the current data set.

The standard deviation of other-ratings of overall job performance ($SD = .43$) is larger than the standard deviation of self-ratings ($SD = .29$). This is in line with findings of Fecteau and Craig (2001) in that "... self raters were far less discriminating in their ratings than raters in the other three groups. Stated another way, self raters perceive fewer differences among themselves than peer, supervisor, or subordinate raters" (p.225). Nevertheless, although there are differences in the size of standard deviations, variance in the present study is very small in both self- and other ratings of performance. At the same time, the distribution is crooked towards very positive ratings as the mean of self-ratings of overall performance is 4.17 and of other-ratings 4.40 on a five-item scale. This distribution could be due to sampling error, similar to the case of adjustment ratings. Maybe only those expatriates that are high performers agreed to take part in the study.

At least for self-ratings, a number of problems associated with common method bias could have influenced results. Participants could have had implicit theories on the relation between for instance the Wonderlic and performance ratings. This could have led to artifactual covariation in the correlation based on the implicit theories of the individual (Podsakoff, McKenzie, Lee, & Podsakoff, 2003). The tendency of respondents to try to maintain consistency may also have biased results. Expatriates may have rated themselves similarly in all items to give a consistent of their performance and adjustment.

A final effect that may have occurred and led to the small variance in self-ratings is that "... face to face interviews tend to induce more socially desirable responding and lower accuracy than computer-administered questionnaires or paper-pencil questionnaires" (Podsakoff et al., 2003, p. 885). Findings of the meta-analytical investigation of Richman, Kiesler, Weisband, and Drasgow (1999) underline this statement.

One serious limitation for the other-ratings is reflected in the differences of *d*-values of Korean and German raters. Although 360° appraisals are seen more frequently in Korean human resource management, Confucian values remain important and strong (Bae & Rowley, 2001). Inherent in the Korean culture, criticizing ones superior may be very uncommon (Deller, 2000). Thus, performance evaluations from Germans and Koreans may vary due to cultural influences that are difficult to estimate.

Correlations of performance and adjustment measures

In our study, self-ratings of performance correlated with self-ratings of adjustment. The same picture emerged for other-ratings. At the same time, self-and other ratings did not prove to be related to any of the overall ratings.

It has been frequently suggested that adjustment and performance are related to each other (e.g., Sinangil & Ones, 2001). This could be an explanation of the intercorrelations between the respective ratings. However, it could also be due to the very similar design of adjustment and performance items. Or, it could be related to the context of items in that adjustment and performance were assessed following right after another in the very end of the interview. The frame of reference for both expatriates and others may therefore have been very similar for adjustment and performance items.

5.2 Limitations of the Study

Apart from the limitations described in discussing individual aspects of the study above, there are some general limitations. These are described in the following section.

The main limitation, especially for drawing inferences on job performance, stems from the small number of other-ratings obtained. Although, performance evaluations from others are *often unattainable* in expatriate research (Mol et al., 2005) this is not very comforting in light of the fact that self-assessments appear to have no validity in operational settings when job performance is concerned (Hunter & Hunter, 1984).

The second limitation concerning job performance ratings is that performance evaluations may be very different according to the role of the expatriate in the foreign subsidiary. For instance, drawing on the categorization of Harzing (2001) an expatriate who is sent abroad to exert control on the local subsidiary (or picture an extreme case, to reduce the number of employees) may receive very different performance ratings than an expatriate who has been sent abroad for personnel development purposes. This study, however, did not control for larger aspects of organizational contexts, which could be the relation between local subsidiary and headquarters as just described.

Yet another possible effect that may have attenuated results is *transient mood state*. According to Podsakoff et al. (2003), transient mood states "... may produce artifactual covariance in self-report measures because the person responds to questions about both the predictor and criterion variable while in a particular mood" (p.883). Torbiörn (1982) suggests the process of adjustment in another country occurs in a U-shaped curve. Depending on the phase of the u-curve the expatriate experiences curiosity and fascination, disturbing feelings of disorientation and helplessness, or satisfaction with his/her current situation. The phase of disorientation and helplessness, also termed as *culture shock* (Torbiörn, 1982), may have an especially negative impact on performance. However, this phase may not only have an impact on performance and adjustment ratings, but also on several predictors such as 'worries about repatriation' or retrospective ratings of the spouse's pre-departure opinion.

Because the course of the u-curve is not equal for all expatriates, either in time or in slope, it is somewhat difficult to control for it. Nevertheless, future research should ideally think of ways to integrate the u-curve concept into the research design.

Finally, the last limitation to mention lies in the generalizability of the results. This study was limited to German and Austrian expatriates in Korea. Findings may be related to the cultural setting and therefore may not to be generalized to hold in other expatriate environments, as in the case of French expatriates in Latin America, for example.

5.3 Outlook

The number of expatriates is likely to increase in the future (PriceWaterhouseCoopers, 2005). At the same time, there are changes in the workforce that do not spare the expatriate

domain. Aspects such as dual-career couples or borderless careers (Roberts, Kossek, & Ozeki, 1998) will impact the expatriate workforce and researchers will have to keep up with these changes. In addition to the changing framework in which these studies are conducted, there are two aspects (besides General Mental Ability) that we think are promising areas of investigation and have not received enough attention yet.

First, motivation is suggested to have a moderating or mediating effect on job performance (e.g., Barrick, Stewart & Piotrowski, 2002). Future research should study motivational aspects that could explain why individuals take on international assignments, and what motivates them to perform and adjust to international settings. The desirability of location (Dowling & Welch, 2004), for instance, may be an interesting aspect in terms of external motivation.

And second, the “highest validities for predicting overall job performance using predictors from the personality domain are found for compound personality variables” (Ones, Viswesvaran, & Dilchert, 2005, p.395). It could be fruitful to study compound traits in expatriate settings. In that line, integrity tests could be an interesting area of study, taking into account that expatriates frequently work far away from the control of their corporate headquarters. Likewise, using a scale to assess core self-evaluations could be a better predictor of job performance than measures of the Big Five (Bono & Judge, 2003; Judge & Bono, 2001).

5.4 Conclusion

This study lends support to the notion that the two Big Five factors of Conscientiousness and Emotional Stability can be used for predicting expatriate adjustment and performance. It also raises concern to frivolously using constructs, i.e., Tolerance of Ambiguity, that at first sight seem to be promising in the expatriate context, but actually still need further theoretical elaboration. As for the lack of findings in regard to General Mental Ability, the study hopefully encourages further research on the development of a short measure of GMA in German and to study its predictive validity in the expatriate context. Furthermore, findings on the importance of context specific variables, such as language ability and length of the assignment, underline that the work of Human Resources departments should not stop at selecting those to be sent abroad, but needs to include carefully designed support measures throughout the whole endurance of the assignment.

This study explicitly used adjustment and performance as the two criteria of expatriate success, and clearly distinguished between these two constructs. At the same time, it suggests

that one should understand adjustment as a construct which differs depending on the perspective one applies, the expatriate's or an observer's perspective. By doing so, this study contributed to untangling the laundry list of criteria frequently used in expatriate research.

6 Reference List

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IV Appendices

Appendix A1 Self-rating adjustment

Verglichen mit dem Durchschnitt der in Korea arbeitenden Deutschen die Sie kennen:

Wie gut haben Sie sich an die Arbeitsabläufe in Korea angepasst?

1	2	3	4	5
sehr gut	besser als durchschnittlich	durchschnittlich	schlechter als durchschnittlich	sehr schlecht

Verglichen mit dem Durchschnitt der in Korea lebenden Deutschen die Sie kennen:

Wie sicher sind Sie um Umgang mit Koreanern?

1	2	3	4	5
sehr sicher	sicherer als durchschnittlich	durchschnittlich	weniger sicher als durchschnittlich	sehr unsicher

Verglichen mit dem Durchschnitt der in Korea lebenden Deutschen die Sie kennen:

Wie gut haben Sie sich auf das Leben außerhalb der Arbeit (Essen, Verkehr, Gesundheitsvorsorge, etc.) in Korea persönlich eingestellt?

1	2	3	4	5
sehr gut	besser als durchschnittlich	durchschnittlich	schlechter als durchschnittlich	sehr schlecht

Verglichen mit dem Durchschnitt der in Korea lebenden Deutschen die Sie kennen: Wie gut haben Sie sich insgesamt auf das Leben in Korea persönlich eingestellt?

1	2	3	4	5
sehr gut	besser als durchschnittlich	durchschnittlich	schlechter als durchschnittlich	sehr schlecht

Appendix A2 Other-rating adjustment

Verglichen mit dem Durchschnitt der in Korea arbeitenden Deutschen die Sie kennen:

Wie gut hat sich der Expatriate an die Arbeitsabläufe in Korea angepasst?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

Verglichen mit dem Durchschnitt der in Korea lebenden Deutschen die Sie kennen:

Wie sicher ist der Expatriate im Umgang mit Koreanern?

1	2	3	4	5
Sehr sicher		Durchschnittlich		Sehr unsicher

Verglichen mit dem Durchschnitt der in Korea lebenden Deutschen die Sie kennen:

Wie gut hat sich der Expatriate auf das Leben außerhalb der Arbeit (Essen, Verkehr, Gesundheitsvorsorge, etc.) in Korea persönlich eingestellt?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

Appendix B Alienation Adjustment Scale

Uns interessieren Ihre Einschätzungen zu den folgenden Aussagen. Bitte antworten Sie mit ja, wenn Sie der Aussage zustimmen. Kreuzen Sie hierzu das Kästchen "J" an.

Wenn Sie der Aussage nicht zustimmen, kreuzen Sie bitte "N" an.

Es gibt bei diesen Einschätzungen kein ‚richtig‘ oder ‚falsch‘. Uns kommt es auf Ihre persönliche Erfahrung an.

1. Ich würde nach meinen bisherigen Erfahrungen sagen, dass ich an den meisten wichtigen Problemen, die Korea lösen muss, nichts tun kann. J N
2. Die Dinge hier in Korea sind so kompliziert, dass ich es oft schwierig finde zu verstehen was vorgeht. J N
3. Um in Korea Fortschritte zu machen, ist man fast dazu gezwungen, einige Dinge zu tun, die gemessen an den eigenen Normen nicht immer richtig erscheinen. J N
4. Nach meinen Erfahrungen in Korea finde ich, dass ich selbst nicht viel Interesse an den kulturellen Aktivitäten habe, die die meisten Koreaner zu mögen scheinen. J N
5. In meinem ersten Jahr in Korea habe ich mich oft einsam gefühlt. J N
6. Meine bisher in Korea geleistete Arbeit hat mir nicht so richtig Freude gemacht. Aber ich glaube, sie ist dennoch wichtig, um sicherzustellen, dass meine langfristigen Ziele erreicht werden. J N
7. Meine bisher in Korea geleistete Arbeit hat mir nicht so richtig Freude gemacht. Aber ich glaube, sie ist dennoch wichtig, um sicherzustellen, dass die langfristigen Ziele meiner Familie erreicht werden. J N

Abschließend möchten wir Ihnen einige Fragen zur Einschätzung Ihrer eigenen Leistung in Korea stellen:

17.1. Wie würden Sie Ihre Leistung bezüglich Ihrer täglichen Verantwortung, Ihrer Aufgaben und Ihrer Verpflichtungen im Vergleich zu einem durchschnittlichen, in Korea lebenden, deutschen Kollegen einschätzen?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

17.2. Wie gut würden Sie Ihre Arbeitsleistung bezogen auf den fachlichen Teil Ihrer zentralen Aufgaben beurteilen?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

17.3. Wie professionell sind Sie in der Zusammenarbeit mit den verschiedenen Gruppen innerhalb Ihrer Organisation (Entsendungsfirma, lokale Organisation, andere Expatriates)?

1	2	3	4	5
Immer professionell		Ich arbeite relativ gut mit den meisten der verschiedenen Gruppen		Unprofessionell

17.4. Wenn Sie Mitarbeiter haben, die direkt an Sie berichten: Wie gut sind Sie darin, Mitarbeiter zu entwickeln und zu fördern?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

17.5. Wie gut sind Sie darin, schriftliche und mündliche Informationen zu sammeln und weiterzuleiten?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

17.6. Wie gut sind Sie darin, andere zu überzeugen?

1	2	3	4	5
Ich überzeuge andere fast immer von meinen eigenen Ideen oder Zielen, wenn eine Entscheidung ansteht		Ich überzeuge andere häufig von meinen eigenen Ideen oder Zielen, wenn eine Entscheidung ansteht		Ich überzeuge andere selten von meinen eigenen Ideen oder Zielen, wenn eine Entscheidung ansteht

17.7 Wie gut sind Sie darin, Ziele für Ihren eigenen Verantwortungsbereich zu setzen?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

17.8. Wie stark fühlen Sie sich Ihrem derzeitigen Job verbunden?

1	2	3	4	5
Sehr verbunden		Durchschnittlich verbunden		Wenig verbunden

17.9. Wie groß ist Ihr Durchhaltevermögen unter widrigen Bedingungen?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

17.10. Haben Sie ein Verständnis von den langfristigen Zielen Ihrer Organisation?

1	2	3	4	5
Ich habe ein tiefgehendes Verständnis der Organisationsziele		Ich habe ein durchschnittliches Verständnis der Organisationsziele		Ich habe ein sehr geringes Verständnis der Organisationsziele

17.11. In welchem Ausmaß übernehmen Sie Verantwortung für Aufgaben, die über Ihren eigenen Tätigkeitsbereich hinausgehen?

1	2	3	4	5
Ich bin immer bereit, Aufgaben zu übernehmen, die über meinen eigentlichen Tätigkeitsbereich hinausgehen		Ich bin meistens bereit, Aufgaben zu übernehmen, die über meinen eigentlichen Tätigkeitsbereich hinausgehen		Ich bin selten bereit, Aufgaben zu übernehmen, die über meinen eigentlichen Tätigkeitsbereich hinausgehen

17.12. Wie beständig ist Ihre Arbeitsleistung?

1	2	3	4	5
Ich arbeite auf konstant hohem Qualitäts-Niveau		Ich habe gute und schlechte Tage, erbringe aber normaler Weise gute Arbeit		Meine Arbeitsleistung schwankt sehr stark.

17.13. Wie würden Sie Ihr Fachwissen beurteilen?

1	2	3	4	5
Ich habe ein tiefgehendes und aktuelles Wissen über Dinge, die mit meiner Tätigkeit zu tun haben.		Ich habe ein durchschnittliches und relativ aktuelles Wissen über Dinge, die mit meiner Tätigkeit zu tun haben.		Ich habe ein sehr geringes, wenig aktuelles Wissen über Dinge, die mit meiner Tätigkeit zu tun haben.

17.14. Wie würden Sie Ihr kultur-bezogenes Wissen beurteilen, das zur Ausübung Ihrer Arbeit wichtig ist?

1	2	3	4	5
Ich weiß alles über die koreanische Kultur, das man wissen muss, um in diesem Land zu arbeiten		Ich weiß die meisten Dinge über die koreanische Kultur, was man wissen muss um in diesem Land zu arbeiten		Ich weiß wenig über die koreanische Kultur, von dem was man wissen muss, um in diesem Land zu arbeiten.

17.15. Wie eigenständig arbeiten Sie?

1	2	3	4	5
Ich brauche keine Anleitung um gut zu arbeiten		Ich arbeite normaler Weise besser, wenn Anleitung gegeben wird		Ich arbeite ohne Anleitung nicht gut

17.16. Wie pünktlich sind Sie bei der Erledigung von Aufgaben?

1	2	3	4	5
Ich schließe Aufgaben immer pünktlich ab		Ich schließe Aufgaben normaler Weise pünktlich ab		Ich schließe Aufgaben selten pünktlich ab

17.17. In welchem Maß fördern Sie Teamarbeit in Ihrem Arbeitsumfeld?

1	2	3	4	5
In hohem Maße		In durchschnittlichem Maße		Ich fördere keine Teamarbeit

Appendix C2 Other-rating measure of performance

Bevor Sie mit der Beantwortung der Fragen beginnen, bitte kreuzen Sie an, ob Sie Kollege oder Vorgesetzter

von Herr/ Frau _____ sind.

Kollege Vorgesetzter Mitarbeiter

Bitte beantworten Sie die folgenden Fragen, indem Sie ein Kreuz über die Zahl setzen, die Ihrer Bewertung entspricht.

Beispielsweise so:

1	2	3 <input checked="" type="checkbox"/>	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

Jede Frage kann auf einer Skala von 1 bis 5 (entsprechend der Schulnoten) bewertet werden.

Zur Orientierung stehen unter einigen Fragen konkrete Verhaltensbeschreibungen. Vielen Dank!

1. Wie beurteilen Sie die Arbeitsleistung des Expatriate bezogen auf den fachlichen Teil seiner zentralen Aufgaben?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

2. Wie professionell ist die Zusammenarbeit des Expatriates mit den verschiedenen Gruppen innerhalb Ihrer Organisation (Entsendungsfirma, lokale Organisation, andere Expatriates)?

1	2	3	4	5
Immer professionell		Arbeitet relativ gut mit den meisten der verschiedenen Gruppen		Unprofessionell

3. Wenn der Expatriate Mitarbeiter hat, die direkt an ihn/sie berichten: Wie gut ist der Expatriate darin, Mitarbeiter zu entwickeln und zu fördern?

1	2	3	4	5
Sehr gut		durchschnittlich		Sehr schlecht

4. Wie gut ist der Expatriate darin, schriftliche und mündliche Informationen zu sammeln und weiterzuleiten?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

5. Wie gut ist der Expatriate darin, andere zu überzeugen?

1	2	3	4	5
Überzeugt andere fast immer von den eigenen Ideen oder Zielen, wenn eine Entscheidung ansteht		Überzeugt andere häufig von den eignen Ideen oder Zielen, wenn eine Entscheidung ansteht		Überzeugt andere selten von den eignen Ideen oder Zielen, wenn eine Entscheidung ansteht

6. Wie gut ist der Expatriate darin, Ziele für den eigenen Verantwortungsbereich zu setzen?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

7. Wie stark fühlt sich der Expatriate seinem derzeitigen Job verbunden?

1	2	3	4	5
Sehr stark verbunden		Durchschnittlich verbunden		Sehr wenig verbunden

8. Wie groß ist das Durchhaltevermögen des Expatriate unter widrigen Bedingungen?

1	2	3	4	5
Sehr gut		Durchschnittlich		Sehr schlecht

9. Hat der Expatriate ein Verständnis von den langfristigen Zielen der Organisation?

1	2	3	4	5
Hat ein tiefgehendes Verständnis der Organisationsziele		Hat ein durchschnittliches Verständnis der Organisationsziele		Hat ein sehr geringes Verständnis der Organisationsziele

10. In welchem Ausmaß übernimmt der Expatriate Verantwortung für Aufgaben, die über seinen Tätigkeitsbereich hinausgehen?

1	2	3	4	5
Ist immer bereit, Aufgaben zu übernehmen, die über seinen/ ihren eigentlichen Tätigkeitsbereich hinausgehen		Ist meistens bereit, Aufgaben zu übernehmen, die über seinen/ ihren eigentlichen Tätigkeitsbereich hinausgehen		Ist selten bereit, Aufgaben zu übernehmen, die über seinen/ ihren eigentlichen Tätigkeitsbereich hinausgehen

11. Wie beständig ist die Arbeitsleistung des Expatriate?

1	2	3	4	5
Arbeitet auf konstant hohem Qualitäts-Niveau		Hat gute und schlechte Tage, bringt aber normaler Weise gute Arbeit		Ich weiß nie, wie die Arbeit des Expatriates aussehen wird, die er/sie abgibt.

12. Wie würden Sie das Fachwissen des Expatriates beurteilen?

1	2	3	4	5
Hat ein tiefgehendes und aktuelles Wissen über Dinge, die mit seiner Tätigkeit zu tun haben.		Hat ein durchschnittliches und relativ aktuelles Wissen über Dinge, die mit seiner Tätigkeit zu tun haben.		Hat ein sehr geringes, wenig aktuelles Wissen über Dinge, die mit seiner Tätigkeit zu tun haben.

13. Wie würden Sie das kultur-bezogene Wissen des Expatriate beurteilen, das zur Ausübung seiner Arbeit wichtig ist?

1	2	3	4	5
Weiß alles über die koreanische Kultur, das man wissen muss, um in diesem Land zu arbeiten		Weiß die meisten Dinge über die koreanische Kultur, was man wissen muss um in diesem Land zu arbeiten		Weiß wenig über die koreanische Kultur, von dem was man wissen muss, um in diesem Land zu arbeiten.

14. Wie eigenständig arbeitet der Expatriate?

1	2	3	4	5
Braucht keine Anleitung um gut zu arbeiten		Arbeitet normaler Weise besser, wenn Anleitung gegeben wird		Arbeitet ohne Anleitung nicht gut

15. Wie pünktlich ist der Expatriate bei der Erledigung von Aufgaben?

1	2	3	4	5
Schließt Aufgaben immer pünktlich ab		Schließt Aufgaben normaler Weise pünktlich ab		Schließt Aufgaben selten pünktlich ab

16. In welchem Maß fördert der Expatriate Teamarbeit in seinem/ihrer Arbeitsumfeld?

1	2	3	4	5
In hohem Maße		In durchschnittlichem Maße		Fördert keine Teamarbeit

6. How proficient is the expatriate in setting goals for his/her own area of responsibility?

1	2	3	4	5
Very proficient		Proficient		Not proficient

7. How much is the expatriate dedicated to the foreign assignment?

1	2	3	4	5
The expatriate is always willing to put in extra effort		The expatriate is willing to put in extra effort most of the time		The expatriate is usually not willing to put in extra effort

8. How persistent is the expatriate under adverse conditions?

1	2	3	4	5
The expatriate always persists, even under stressful circumstances		Most of the times, the expatriate persists even under stressful circumstances		The expatriate is not persistent under stressful circumstances

9. Does the expatriate have an understanding of the long-term organizational goals?

1	2	3	4	5
The expatriate has a very profound understanding of the organization's goals		The expatriate has an understanding of the organization's goals		The expatriate has little understanding of the organization's goals

10. To what extent does the expatriate engage in tasks that are additional to his/her normal job activities?

1	2	3	4	5
The expatriate is always willing to engage in tasks additional to his/her normal activities		The expatriate is usually willing to engage in tasks additional to his/her normal activities		The expatriate is rarely willing to engage in tasks additional to his/her normal activities

11. How consistent is the expatriate's performance?

1	2	3	4	5
The expatriate consistently works on a high quality level		The expatriate has some good and some bad days but usually delivers good work		I never know what the work is going to look like that the expatriate is delivering

12. How would you rate the job-related knowledge of the expatriate?

1	2	3	4	5
The expatriate has a profound and up-to-date knowledge of things related to his job		The expatriate has a fair and relatively up-to-date knowledge of things related to his job		The expatriate has a little knowledge of things related to his job and is not very up to date

13. How would you rate the culture-related knowledge of the expatriate that is important to carry out his/her job?

1	2	3	4	5
Knows everything about Korean culture one needs to know to work in this country		Knows most of the things about Korean culture one has to know to work in this country		Knows very few of the things about Korean culture one has to know to work in this country

14. How self-sufficient is the expatriate?

1	2	3	4	5
The expatriate doesn't need guidance to work well		The expatriate usually performs better, when some guidance is provided		The expatriate doesn't work well without guidance

15. How timely is the expatriate in completing tasks?

1	2	3	4	5
Always completes tasks in time		Usually completes tasks in time		Rarely completes tasks in time

16. To which degree does the expatriate facilitate team performance?

1	2	3	4	5
To a high degree		To a an average degree		To a less than average degree

Appendix D Uncorrected correlates of overall adjustment ratings

Appendix D *Uncorrected correlates of overall adjustment ratings*

Variable	Self-ratings				Other-ratings			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
GMA	61	.01	-.25	.26	25	.21	-.17	.59
Emotional Stability	64	.13	-.11	.37	25	.47	.16	.78
Openness	64	.18	-.64	.41	25	.16	-.23	.54
Tolerance of Ambiguity	65	.22	-.01	.47	25	.13	-.27	.50
Prior international experience	64	.01	-.24	.01	25	-.04	-.43	.36
Culture novelty	65	-.04	-.28	.21	25	.05	-.35	.45
Cross-cultural training	65	.03	-.22	.27	25	.51	.21	.80
Length of time in Korea	64	.37	.16	.58	25	.00	-.40	.40
Language proficiency	65	.46	.26	.65	25	.23	-.15	.61
Favorableness of spouse	47	.13	-.16	.41	20	-.11	-.56	.33

Appendix E. Uncorrected Correlates of the Alienation Adjustment Scale

Appendix E. *Uncorrected Correlates of the Alienation Adjustment Scale*

Variable	Alienation Adjustment Scale			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper
GMA	61	-.15	-.40	.11
Emotional Stability	64	.42	.22	.63
Openness	64	.17	-.07	.41
Tolerance of Ambiguity	65	.31	.09	.53
Prior international experience	65	-.33	-.55	-.11
Culture novelty	65	-.16	-.40	.08
Cross-cultural training	65	.30	.08	.52
Length of time in Korea	64	.45	.25	.65
Language proficiency	65	.13	-.11	.39
Favorableness of spouse	47	.01	-.28	.30

Appendix F. Uncorrected Correlates of Interaction Adjustment Ratings

Appendix F. *Uncorrected correlates of interaction adjustment ratings*

Variable	Self-ratings				Other-ratings			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
Extraversion	64	-.02	-.27	.22	25	-.36	-.71	-.02
Agreeableness	64	.15	-.10	.39	25	.31	-.05	.67

Appendix G Uncorrected Correlates of General Adjustment Ratings

Appendix G. *Uncorrected correlates of general adjustment ratings*

Variable	Self-ratings				Other-ratings			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
HR support	49	-.10	-.38	.18	20	.29	-.12	.70

Appendix H Uncorrected Correlates of Work Adjustment Ratings

Appendix H. *Uncorrected correlates of work adjustment ratings*

Variable	Self-ratings				Other-ratings			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
Support colleagues/supervisor	52	-.13	-.40	.14	22	.09	-.33	.52

Appendix I Uncorrected Correlates of Overall Job Performance Ratings

Appendix I. *Uncorrected correlates of overall job performance ratings*

Variable	Self-ratings				Other-ratings			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
GMA	60	.09	-.17	.34	26	.22	-.16	.59
Emotional Stability	63	.22	-.02	.45	26	.30	-.06	.65
Openness	63	.02	-.23	.27	26	.05	-.34	.44
Conscientiousness	63	.26	.03	.50	26	.09	-.30	.48
Cross-cultural training	64	.15	-.09	.40	26	.23	-.15	.61
Length of stay	64	-.02	-.26	.23	26	.11	-.28	.49
Worries about repatriation	61	-.07	-.32	.18	25	-.09	-.48	.31

Appendix J Uncorrected Correlates of Ratings of the Interpersonal Facilitation Dimension of Performance

Appendix J. Uncorrected correlates of the interpersonal facilitation dimension of performance

Variable	Self-ratings				Other-ratings			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
Agreeableness	62	-.02	-.27	.23	26	-.11	-.50	.28

Appendix K Uncorrected Correlates of Extraversion and Performance in Managerial Positions

Appendix K. *Uncorrected correlation of Extraversion and performance in managerial positions*

Variable	Self-ratings				Other-ratings			
	<i>n</i>	<i>r</i>	95% CI for <i>r</i>		<i>n</i>	<i>r</i>	95% CI for <i>r</i>	
			Lower	Upper			Lower	Upper
Extraversion	55	-.02	-.27	.22	25	-.36	-.71	-.02

Appendix M1. Intercorrelation of performance self-ratings

Variable	1	2	3	4	5	6	7	8	9
1. Overall performance	1	.58	.51	.49	.51	.64	.67	.67	.44
95% CI for <i>r</i>	1	.42	.33	.30	.33	.49	.54	.53	.24
Lower bound	1	.74	.69	.68	.69	.79	.81	.81	.64
Upper bound	1								
(<i>n</i>)	(64)	(64)	(64)	(64)	(64)	(64)	(64)	(64)	(64)
2. Task proficiency		1	.37	.01	.06	.30	.44	.30	.12
95% CI for <i>r</i>		1	.16	-.23	-.18	.08	.24	.08	-.13
Lower bound		1	.58	.26	.31	.53	.64	.53	.36
Upper bound		1							
(<i>n</i>)		(64)	(64)	(64)	(64)	(64)	(64)	(63)	(64)
3. Job knowledge			1	.15	.13	.16	.23	.25	.05
95% CI for <i>r</i>			1	-.09	-.11	-.08	.00	.01	-.20
Lower bound			1	.39	.37	.40	.47	.48	.29
Upper bound			1						
(<i>n</i>)			(64)	(64)	(64)	(64)	(64)	(63)	(64)
4. Administrative Competence				1	.32	.16	.27	.24	.06
95% CI for <i>r</i>				1	.10	-.08	.04	.01	-.19
Lower bound				1	.54	.40	.50	.47	.30
Upper bound				1					
(<i>n</i>)				(64)	(64)	(64)	(64)	(63)	(64)
5. Communication Competence					1	.32	.07	.34	.31
95% CI for <i>r</i>					1	.10	-.17	.11	.09
Lower bound					1	.54	.32	.56	.53
Upper bound					1				
(<i>n</i>)					(64)	(64)	(64)	(63)	(64)
6. Leadership						1	.29	.70	.21
95% CI for <i>r</i>						1	.06	.58	-.03
Lower bound						1	.52	.83	.45
Upper bound						1			
(<i>n</i>)						(64)	(64)	(63)	(64)
7. Effort & Initiative							1	.29	.13
95% CI for <i>r</i>							1	.06	-.12
Lower bound							1	.52	.37
Upper bound							1		
(<i>n</i>)							(64)	(63)	(64)
8. Interpersonal Facilitation								1	.11
95% CI for <i>r</i>								1	-.13
Lower bound								1	.36
Upper bound								1	
(<i>n</i>)									(63)
9. Integrity									1
95% CI for <i>r</i>									1
Lower bound									1
Upper bound									1
(<i>n</i>)									(64)

Appendix M2 Intercorrelation of performance other-ratings

Variable	1	2	3	4	5	6	7	8	9
1. Overall performance	1	.70	.58	.83	.68	.72	.88	.65	.73
95% CI for <i>r</i>									
Lower bound	1	.49	.32	.71	.47	.53	.78	.43	.54
Upper bound	1	.90	.84	.95	.89	.91	.97	.88	0.91
(<i>n</i>)	(26)	(25)	(26)	(26)	(26)	(26)	(26)	(26)	(26)
2. Task proficiency		1	.23	.52	.47	.28	.64	.40	.26
95% CI for <i>r</i>									
Lower bound		1	-.15	.22	.16	-.09	.41	.07	-.12
Upper bound		1	.61	.81	.78	.65	.88	.74	.63
(<i>n</i>)		(25)	(25)	(25)	(25)	(25)	(25)	(25)	(25)
3. Job knowledge			1	.28	.49	.36	.37	.17	.49
95% CI for <i>r</i>									
Lower bound			1	-.08	.19	.02	.03	-.21	.19
Upper bound			1	.65	.79	.70	.71	.55	.79
(<i>n</i>)			(26)	(26)	(26)	(26)	(26)	(26)	(26)
4. Administrative Competence				1	.50	.64	.68	.66	.56
95% CI for <i>r</i>									
Lower bound				1	.21	.41	.47	.43	.29
Upper bound				1	.79	.87	.89	.88	.83
(<i>n</i>)				(26)	(26)	(26)	(26)	(26)	(26)
5. Communication Competence					1	.58	.43	.41	.41
95% CI for <i>r</i>									
Lower bound					1	.32	.11	.08	.09
Upper bound					1	.84	.75	.73	.74
(<i>n</i>)					(26)	(26)	(26)	(26)	(26)
6. Leadership						1	.54	.64	.55
95% CI for <i>r</i>									
Lower bound						1	.26	.40	.27
Upper bound						1	.82	.87	.82
(<i>n</i>)						(26)	(26)	(26)	(26)
7. Effort & Initiative							1	.50	.54
95% CI for <i>r</i>									
Lower bound							1	.21	.26
Upper bound							1	0.80	.82
(<i>n</i>)							(26)	(26)	(26)
8. Interpersonal Facilitation								1	.36
95% CI for <i>r</i>									
Lower bound								1	.01
Upper bound								1	.70
(<i>n</i>)								(26)	(26)
9. Integrity									1
95% CI for <i>r</i>									
Lower bound									1
Upper bound									1
(<i>n</i>)									(26)

Appendix M3. Intercorrelation of performance self- and other ratings ratings

Variable		1	2	3	4	5	6	7	8
1. Task proficiency		.30	-.19	-.08	.02	.14	.15	-.29	.12
95% CI for r	Lower bound	-.07	-.57	-.47	-.38	-.25	-.24	-.65	-.28
	Upper bound	.66	.20	.32	.42	.54	.54	.08	.51
	(n)	25	25	25	25	25	25	25	25
2. Job knowledge		.35	.34	.25	.15	.49	.30	.10	.24
95% CI for r	Lower bound	-.00	-.01	-.12	-.23	.19	-.05	-.29	-.13
	Upper bound	.69	.69	.62	.54	.79	.66	.49	.61
	(n)	26	26	26	26	26	26	26	26
3. Administrative Competence		.26	.17	.11	.21	.14	.29	-.22	.04
95% CI for r	Lower bound	-.10	-.22	-.28	-.16	-.25	-.07	-.59	-.35
	Upper bound	.63	.55	.50	.59	.52	.65	.16	.43
	(n)	26	26	26	26	26	26	26	26
4. Communication Competence		.32	.16	.20	.05	.44	.02	.03	.14
95% CI for r	Lower bound	-.03	-.23	-.18	-.34	.12	-.37	-.37	-.24
	Upper bound	.67	.54	.57	.44	.75	.41	.42	.53
	(n)	26	26	26	26	26	26	26	26
5. Leadership		.26	-.14	-.13	-.03	.28	.18	-.13	-.09
95% CI for r	Lower bound	-.11	-.52	-.52	-.42	-.08	-.20	-.52	-.48
	Upper bound	.62	.25	.25	.37	.64	.55	.25	.30
	(n)	26	26	26	26	26	26	26	26
6. Effort & Initiative		.32	.21	-.08	.30	.07	.51	-.19	.32
95% CI for r	Lower bound	-.04	-.16	-.46	-.06	-.32	.23	-.57	-.04
	Upper bound	.67	.59	.31	.65	.46	.80	.18	.67
	(n)	26	26	26	26	26	26	26	26
7. Interpersonal Facilitation		.13	.20	-.18	.12	.30	.18	-.22	.09
95% CI for r	Lower bound	-.26	-.18	-.56	-.27	-.06	-.20	-.59	-.29
	Upper bound	.52	.58	.20	.50	.66	.55	.16	.48
	(n)	26	26	26	26	26	26	26	26
8. Integrity		.51	.51	.47	.85	.60	.32	.06	.50
95% CI for r	Lower bound	.22	.22	.17	.74	.35	-.03	-.33	.21
	Upper bound	.80	.80	.78	.96	.85	.67	.45	.79
	(n)	26	26	26	26	26	26	26	26

Appendix N Confidence Interval overlap of the Big Five Factors and Tolerance of Ambiguity

Appendix N Comparison of confidence intervals of Correlations with the Big Five and Tolerance of Ambiguity

Variable		Present Study ^a	Deller 2000 ^b
Emotional Stability		.43	.26
95% CI for <i>r</i>	Lower bound	.23	.05
	Upper bound	.63	.47
Extraversion		.19	.00
95% CI for <i>r</i>	Lower bound	-.05	-.22
	Upper bound	.43	.23
Openness		.16	.02
95% CI for <i>r</i>	Lower bound	-.08	-.20
	Upper bound	.40	.25
Agreeableness		-.06	.05
95% CI for <i>r</i>	Lower bound	-.30	-.17
	Upper bound	.19	.27
Conscientiousness		-.34	-.19
95% CI for <i>r</i>	Lower bound	-.56	-.41
	Upper bound	-.13	.03

^a *N* = 64

^b *N* = 78