

## **Cultural differences and job performance in container shipping: A social exchange theory perspective**

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## **Abstract**

Drawing on the social exchange theory, the objective of this study is to examine employees' perceptions of cultural differences of container shipping companies and its impact on job performance. We also examined the role of the leadership in the relationship between cultural differences and job performance. Survey data collected from 740 employees of container shipping companies in six different countries including UK, Germany, Belgium, Netherlands, Mainland China and Taiwan. A hierarchical regression analysis was conducted. Results indicated that transformational leadership and national cultural differences with respect to uncertainty avoidance, collectivism, and long-term orientation positively influenced job performance, whereas national cultural differences with respect to power distance and masculinity negatively influence job performance. Specifically, this research finds that transformational leadership plays a moderating role on the relationships between national culture differences and job performance. Implications for theory and practices were discussed.

**Keywords:** Container shipping; National culture; Culture difference; Transformational leadership; Job performance; Social exchange theory

## **1. Introduction**

The container shipping industry plays an important role in global trade and supply chain (Prockl et al., 2018). According to a report from the United Nations Conferences on Trade and Development (UNCTAD, 2019), over 80 per cent of the global trade volume is carried by sea transportation. Container shipping companies provides goods transporting services with container ships based on publicized schedule between particular ports (Lee, 2019; Lin et al., 2020). They generally have offices or agencies in different countries and a centralized headquarter where they implement global management (Pang and Lu, 2018). For example, the Maersk Line has 1,904 subsidiaries and serves 343 ports at 121 countries (Maersk Line, 2020), whereas Evergreen Line serves more than 315 locations around the world in America, Asia, Europe, Australia, the Middle East, and Africa (Evergreen Line, 2020). To maximize the effectiveness of foreign markets, shipping companies must respond to opposing demands for local responsiveness and global integration (Lee, 2019; Chao et al., 2020). One common method to establish and maintain both integration and control over global expansion

businesses is to rely on the expatriate manager. In particular, container shipping companies use parent country expatriates to implement strategic needs for international integration and local responsiveness. Expatriate managers have the potential to influence a subsidiary's or an employee's performance because of the strategic leadership positions they take, the headquarters' knowledge they transfer, and the boundary spanning between headquarters and the oversea subsidiaries (Chen, 2019). However, local employees are accustomed to their own culture, which affects their attitudes, beliefs, and behaviors (Hofstede, 1991). Local employees may not easily accept values from their expatriate managers that fundamentally differ from their own. Thus, container shipping operations are increasingly influenced by interactions between expatriate managers and local employees from different cultures in oversea subsidiaries (Håvold, 2000, 2007; Lu and Lin, 2014).

In particular, cross-cultural difference has been gaining increasing attention in management researchers as an important antecedent for understanding employee workplace behaviors, attitudes and organizational outcomes (Hofstede, 1980). Firms have to establish an effective leadership and cultural orientation to guide decision making within organization. The impacts of cultural differences arising when employees and managers differ in nationality, or when cross-cultural interpersonal interactions occur (Lu and Lin, 2014), it is important for shipping companies or multinational firms to be aware of cultural differences that take place in the business environment (Tsui et al, 2007), such as employee-customer, peer-peer, and subordinate-supervisor or manager.

Notably, there is a gap in the literature regarding theory on how cultural differences influence employee-expatriate manager relationships and job performance. Studies have compared cultures in different countries or regions such as Norway, China, Taiwan, and Philippine (Håvold, 2000, 2007; Lu et al., 2012), but have not developed or tested theory about how cultural differences and leadership impact employee's job performance. Drawing on the social exchange theory (Blau, 1964), this research contributes to the international shipping management and cross-culture literature by integrating the notion of cultural differences, job performance, and transformational leadership. The paper leverages these theories to develop hypotheses regarding the impacts of cultural difference and transformational leadership on job performance. The social exchange theory provides comprehensive perspectives to explain the cultural differences and leadership in expatriate manager-local employee relationships. They can be reconciled by incorporating the presence or absence on cultural differences. Therefore, this study addresses the important gap in the extant theory by examining the following research questions: Do cultural differences between an employee and expatriate manager decrease the job performance in container shipping services? Does expatriate manager's transformational leadership foster employee's job performance in

container shipping services? Does expatriate manager's transformational leadership moderate the impact of cultural differences on employee's job performance? To answer these questions, this paper proposes several research hypotheses regarding the impacts of cultural difference and transformational leadership on job performance based on the social exchange theory (Blau, 1964).

This research comprises five sections. After the introduction, Section 2 explores the social exchange theory, as well as presents the research hypotheses related to national culture, transformational leadership, and job performance. Section 3 describes the research methodology, including samples, survey measures, and analytical method. Section 4 analyzes the effects of culture difference on employee job performance and investigates the moderating effects of transformational leadership. Section 5 discusses the study findings, conclusions drawn from them and their implications for container shipping companies.

## **2. Theory and research hypotheses**

### *2.1 Social exchange theory*

Over the past decades, social exchange theory (SET) has become an important notion and frequently used for understanding individual and organizational behaviors (Cropanzano and Mitchell, 2005). The concept of SET is based on a series of transactions and interdependent interactions that obligate complementary actions among individuals (Blau, 1964; Cropanzano and Mitchell, 2005). Individuals often expect reciprocal behaviors or benefits from other persons such as gratitude, trust, affection, and economic return (Lee et al., 2014). Research on organizational behavior has discussed reciprocity within the exchange relationship between employers and employees (Lee et al., 2014). If the manager or employer is devoted to building a relationship of reciprocity with employees by fulfilling their interests through encouraging and offering them working skills and help; in return, employees will be delighted to making extra efforts to serve with a high level of performance as a means of reciprocity to their companies.

### *2.2 Transformational leadership*

Transformational leadership has been viewed as an effective leadership type in the context of cultural diversity (Dorfman et al., 1997) since it involves developing a closer relationship between employees and leaders (Bass and Avolio, 1994). Transformational leaders elevate employee motivation by displaying inspirational motivation, idealized influence, individualized consideration, and intellectual stimulation (Avolio et al., 1999). Burns (1978) indicated that leaders or supervisors can inspire employees to enhance their working skills, assume more responsibilities and achieve the goals of an

organization. From the SET perspective, when employees were treated fairly and encouraged, they are more likely to engage in reciprocal behaviors (Homans, 1958; Blau, 1964). Thus, the relationship between transformational leader-employee can be explained as a social exchange relationship.

### *2.3 National culture*

Hofstede (1980, 2001) defined national culture as collective programming of the mind, which manifests itself not only in values, but in more superficial ways: in symbols, heroes, and rituals. Early research on national cultures used the term "national character", for evaluating variables such as races of inhabitants, historical and political aspects, social, legal and religious indicators, and economic and medical measures (Hofstede and McCrae, 2004). National culture is defined as patterns of thinking, feeling, and acting rooted in the common values and conventions of a society (Cushman and King, 1985). Hofstede (1980, 1991) defined national culture as the implicit, core, systematic, causal, territorially unique, and shared manifestations of a people. The fields of anthropology differentiate the culture of one country from that of another based on examining the similarity between people, institutions and organizations.

A growing body of previous studies has developed dimensions for investigating the content of national culture (Hofstede and Bond, 1988, House *et al.*, 2004; Prince *et al.*, 2020; Tekic and Tekic, 2021). Hofstede (1980) identified four national cultural dimensions: power distance, individualism/collectivism, uncertainty avoidance, and masculinity/femininity. Furthermore, Bond (1988) proposed the fifth dimension, Confucian Dynamic/Long-term Orientation, for the analysis of the Chinese Value Survey (CVS) to explain the differences between Chinese and Western cultures.

### *2.4 Job performance*

Job performance can be defined as an evaluation for a specific task or achievement of individuals or groups in an organization in a specific period (Borman and Motowidlo, 1997). The measurement of job performance encompasses objective and subjective performance measures (Sturman *et al.*, 2005; He *et al.*, 2021). A subjective performance measure refers to an indicator used to evaluate a person's aggregated perceptions, assessments, or attitudes toward an organizational service or product. Subjective measures can be collected from surveys or interviews with targeted groups or individuals. Objective measures are mainly from empirical observation or key performance indicator (KPI) such as firm revenue, sales, production, or operational outcomes (González-Benito and González-Benito, 2005; He *et al.*, 2021). Subjective performance measures emphasize different factors influencing firm performance output and allow supervisors or managers to consider factors outside the employee's control (He *et al.*, 2021). Task performance involves organizational activities, such as producing products, merchandising, acquiring inventory, managing subordinates, or

delivering services (Motowidlo and Van Scotter, 1994). Contextual performance behaviors consist of volunteering for extra work, persisting with enthusiasm, helping and cooperating with others, following rules and procedures, and supporting or defending the organization (Motowidlo and Van Scotter, 1994).

## *2.5 Research hypothesis*

As indicated in Figure 1, the conceptual model presented provides a foundation for proposing testable hypotheses linked to specific research questions. Specifically, the model displays the effects of cultural differences and expatriates manager's transformational leadership on employee's perceived job performance based on the theoretical premises of social exchange theory.

### *2.5.1 The impact of cultural differences on job performance*

Hofstede (1997) demonstrated that power distance has a negative influence on job performance in cultures wherein social inequality is perceived to be legitimate because individuals recognize that superior performance is expected from their supervisors. A higher hierarchical structure culture may hinder the performance of employees. Employees in a high-power distance environment are sensitive to hierarchy. Employees are very respectful to and fearful of managers in high positions and often unwilling to challenge their supervisors and involve in decision making. Vitolla et al. (2019) also found that power distance was negatively related to the quality of corporate integrated reporting. Thus, we hypothesize the following:

H1a: The greater the level of employee's power distance, the lower the level of task performance in container shipping.

H1b: The greater the level of employee's power distance, the lower the level of contextual performance in container shipping.

Miao et al. (2018) addressed that a leader locates in high uncertainty avoidance cultures will be more likely to communicate operations, procedures, and regulations with their employees, thus resulting in higher task performance. Prior studies demonstrated that the higher the degree of uncertainty avoidance within an organization, the higher the employees' motivation, and lead the high employees' job performance (Miao et al., 2018; Jie et al., 2020). Research on container shipping have addressed that people characterized by high uncertainty avoidance tend to avoid ambiguous situations and are more conscious of rules and procedures (Lu et al., 2012; Lu and Lin, 2014). We therefore offer the following hypotheses:

H2a: The greater the level of employee's uncertainty avoidance, the higher the level of task performance in container shipping.

H2b: The greater the level of employee's uncertainty avoidance, the higher the level of contextual performance in container shipping.

Collectivists prefer to work with a team and are more concerned about team performance. In particular, employees in collectivistic societies may more frequently support and be supported by their colleagues and thus increase their performances (Jackson et al., 2006). Prior studies have addressed the positive relationships between an employee's collectivism levels and his or her task performance within a group (Shaw et al., 2000; Jackson et al., 2006). Empirical research in shipping operations also suggests that an employee's collectivism positively related to his or her job performance (Lu et al., 2012; Lu and Lin, 2014). Consequently, we thus hypothesize the following:

H3a: The greater the level of employee's collectivism, the higher the level of task performance in container shipping.

H3b: The greater the level of employee's uncertainty avoidance, the higher the level of contextual performance in container shipping.

Masculinity refers to a preference for achievement, heroism, assertiveness, and material success (Hofstede, 1984; Hofstede, 2001). High masculine societies place a low value on caring for others, inclusion, cooperation, and solidarity. Excessive decisiveness may cause more conflicts among employees and can cause negative impacts on individual job performance. Masculinity was found to have a negative influence on the quality of corporate integrated reporting (Vitolla et al., 2019). Accordingly, it is reasonable to posit that a higher level of masculinity will have a negative impact on job performance in container shipping services (Lu and Lin, 2014). Thus, we posit the following hypotheses:

H4a: The greater the level of employee's masculinity, the lower the level of task performance in container shipping.

H4b: The greater the level of employee's masculinity, the lower the level of contextual performance in container shipping.

Long-term orientation refers to future-oriented values, such as persistence and thrift (Hofstede, 2001). Businesses with long-term orientation cultures are accustomed to working towards building up strong positions in their markets and their employees are

allowed time and resources to realize their own contributions (Hofstede, 2001). A company based in higher long-term orientation workplace provides a higher quality outcomes (Jung et al., 2008; Vitolla et al., 2019). He and Sun (2020) found that long-term orientation has a positive influence on supply chain partner's commitment and trust. Following this train of thought, it is reasonable to posit that a high level of long-term orientation will have a positive impact on task and contextual performance in container shipping series (Lu and Lin, 2014). We thus present the following hypotheses:

H5a: The greater the level of employee's long-term orientation, the higher the level of task performance in container shipping.

H5b: The greater the level of employee's long-term orientation, the higher the level of contextual performance in container shipping.

### *2.5.2 The impact of transformation leadership on job performance*

Transformational leadership promotes positive change for individuals and groups, and facilitates organizational effectiveness (Bass and Avolio, 1994). By building followers' self-confidence, self-efficacy, and self-esteem, such leaders are expected to have a strong, positive influence on followers' levels of identification, motivation, and goal achievement (Shamir *et al.*, 1993; Klein and House, 1995; Gardner and Avolio, 1998; Jung and Avolio, 1999). Buil et al. (2019) found that a significant and positive relationship between transformation leadership and job performance in the hospitality industry. Accordingly, we propose the following hypotheses:

H6a: Transformational leadership positively affects employee's task performance in container shipping.

H6b: Transformational leadership positively affects employee's contextual performance in container shipping.

### *2.5.3 The moderating effect of transformational leadership*

This research postulates that transformational leadership will negatively moderate the effect of cultural difference on performance in container shipping, as the transformational leader will manage through her/his behaviors to understand the conflicts resulting from the presence of cultural differences. If leaders exhibit transformational leadership behaviors, then subordinates would be able to understand and accept equal distributions of power within institutions and organizations. Accordingly, we thus hypothesize the following:

H7a: Transformational leadership negatively moderates the relationship between



power distance and task performance in container shipping.

H7b: Transformational leadership negatively moderates the relationship between power distance and contextual performance in container shipping.

Uncertainty avoidance refers to the tendency of employees to avoid ambiguous or uncertain situations due to risk perception (Hofstede, 1985). Transformational leaders play a critical role, considering the interactional perspective of employee work behavior, especially for employees with a high tendency towards uncertainty avoidance. Transformational leaders inspire, stimulate, and motivate subordinates to trust, respect and admire them, and effectively accomplish tasks. An individual who trusts and respects his or her supervisor is more likely to feel comfortable and work effectively without worrying about the supervisor's potential behavior. Therefore, transformational leaders are expected to strengthen the relationship between uncertainty avoidance and job performance. Accordingly, we propose the following hypotheses:

H8a: Transformational leadership positively moderates the relationship between uncertainty avoidance and task performance in container shipping.

H8b: Transformational leadership positively moderates the relationship between uncertainty avoidance and contextual performance in container shipping.

Transformational leaders can promote employees' values and attitudes and obtain conformity with their own values and tendency to confirm organizational goals and values. According to Jung and Avolio (1999), collectivists with a transformational leader generate more ideas, while individualists generate more ideas with a transactional leader. Group performance is generally higher than that of individuals working alone. Avolio et al. (1999) indicated that in high collectivist cultures, employees show higher performance with a transformational leader than with a transactional leader. We therefore hypothesize the following:

H9a: Transformational leadership positively moderates the relationship between collectivism and task performance in container shipping.

H9b: Transformational leadership positively moderates the relationship between collectivism and contextual performance in container shipping.

Masculinity refers to the extent of dominant values such as achievement, relationships, and the acquisition of objects and money (Hofstede, 2001). Caring is important to maintain customer relationship management. Shipping companies stress total quality

management in dealing with customers, staff, suppliers, and other stakeholders. Transformational leaders motivate their subordinates to accomplish tasks beyond what they really expect to achieve, stimulating them to increase the value of the tasks and helping subordinates achieve organizational goals. Accordingly, we hypothesize the following:

H10a Transformational leadership negatively moderates the relationship between masculinity and task performance in container shipping.

H10b Transformational leadership negatively moderates the relationship between masculinity and contextual performance in container shipping.

People with higher level of long-term oriented culture are likely to follow a person with vision, enthusiasm, and energy who inspires them and accomplish organizational goals. Past studies found transformational leadership to be effective in achieving higher levels of performance in organizations (Bass and Avolio, 1994; Lu and Lin, 2014). Transformational leaders are willing to develop social relationships and help employees to be more efficient for long-term commitment to their organizations. In container shipping services, such a leader will provide inspiration and vision to his or her employees and increase the positive effects that long-term orientation culture might have on job performance. Thus, we hypothesize the following:

H11a: Transformational leadership positively moderates the relationship between long-term orientation and task performance in container shipping.

H11b: Transformational leadership positively moderates the relationship between long-term orientation and contextual performance in container shipping.

<Please insert Figure 1 here>

### **3. Methodology**

#### *3.1 Analytical steps*

Figure 2 presents the analytical framework for identifying national culture dimensions, transformational leadership, and job performance. Essentially, the framework consists of four steps as elaborated below.

**<Please insert Figure 2 here>**

#### Step 1: The development of instrument

The first step was to identify the measurements and constructs of national culture dimensions, transformational leadership, and job performance. To ensure the instrument's accuracy and the content validity of the questionnaire, a comprehensive review of the literature and interviews with practitioners were conducted in this study (Hair et al., 2019). Each question items were based on previous studies and discussions with 12 executives and experts in container shipping business.

Since the sample collecting in this study were from different countries and using different languages, two types of questionnaires (Chinese (traditional/simple) version vs. English version) are developed for respondents. This study translates the question items from the original version (English version) to a Chinese version and then translates back to English for ensuring the accuracy of wordings used in this questionnaire.

#### Step 2: The descriptive study

Furthermore, a descriptive statistic was used to identify the perceived differences of national culture and job performance based on the profile of respondents such as nationality, age, job title, education level, and work experience. To understand the respondents' background is important to identify whether they had sufficient working experiences and capabilities to answer the questions. In addition, a correlation analysis was conducted to justify the relationship between variables. Correlation coefficient provides a useful information to identify the relationships between national culture dimensions, transformational leadership, and job performance (Hair et al., 2019).

The Cronbach's coefficient alpha value is commonly used to measure internal consistency reliability among a group of items combined to form a single scale. Coefficients at value of 0.7 or more are considered a satisfactory level of reliability in basic research (Iacobucci and Churchill, 2018).

#### Step 3: Confirmatory factor analysis

The confirmatory factor analysis (CFA) involves the specification and estimation of one or more hypothesized models of factor structure, each of which proposes a set of latent variables (factors) to account for covariance among a set of observed variables (Koufteros, 1999). Fit indices for assessing model fit are commonly considered in assessing model adequacy. These fit indices are the ration of chi-square to degrees of freedom less than 4.0, GFI (goodness of fit index) and AGFI (adjusted goodness of fit index) greater than 0.9, RMR (root mean square residual) and RMSEA (root mean

square of approximation) below 0.05, CFI (comparative fit index) and TLI (Tucker-Lewis index) higher than 0.9 (Koufteros, 1999).

Convergent validity can be tested by t-values that are all statistically significant on the factor loadings (Byrne, 2001). The t-value is the critical ratio (C.R.), which represents the parameter estimate divided by its standard error. T-value, greater than 1.96 or smaller than -1.96, implies statistical significance (Byrne, 2001). T

A more rigorous test compares the average variance-extracted (AVE) values between any two factors (Hair *et al.*, 2019). Discriminant validity exists if the items share more common variance with their respective construct than any variance that the construct shares with other constructs (Koufteros, 1999). The AVE for a construct is considered substantially higher than the squared correlation between the construct and all other constructs. Evidence of discriminant validity is provided by the AVE method presented.

#### Step 4: Hierarchical regression analysis

Hierarchical regression is a statistical method of examining the relationships among, and testing hypotheses about, a dependent variable and several independent variables (Cohen and Cohen, 1983). In this study, we initially explore the relationship between cultural difference, transformational leadership, and job performance, then consider the moderating effects of transformation leadership. Hierarchical regression is an adequate analyzing method used for explaining the effects of each cultural difference variable on job performance in this study. All analyses were carried out using *IBM SPSS Statistics 26.0* and *IBM SPSS Amos 26.0*.

### 3.2 Sample

The data used in this study were collected from survey respondents from the three major Taiwan-based container shipping companies: Evergreen Line, Yang Ming Line, and Wan Hai Line. These three companies share 9.3% of global fleet capacity (Alphaliner, 2019). Because employee information is confidential and survey should be permitted and distributed by the human resource department or general managers. Thus, the sample in this study was not based on a stratified sampling which is a useful approach to compare national culture. Four-page questionnaires were sent to employees working in branch offices of container shipping companies in the UK, Germany, Belgium, the Netherlands, China and Taiwan. Wan Hai Line mainly services in Asian area, which does not have any branch companies in Europe. Nevertheless, we considered the respondents from the employees at Wan Hai Line in China and Taiwan.

In order to increase the responses, one of the authors visited and contacted these companies in Taiwan and their foreign branches. The questionnaire numbers allowed by these companies are shown in the Appendix 1. Questionnaires were distributed to

950 employees in the business departments of companies either via an online e-mail, mailed with a cover letter and a postage paid return envelope, or distributed and collected by a key person in each country. The effective population size was reduced to 927 as 23 employees had left the companies or had been promoted to other departments. We received 521 questionnaires in the initial mailing. A follow up mailing was sent two months after the initial mailing to employees who had not responded to the questionnaire in the first mailing. Additional 219 usable responses were returned. The total number of usable responses was 740, of which 100 were from the UK, 215 from Germany, 85 from Belgium, 100 from the Netherlands, 120 from China and 120 from Taiwan.

Furthermore, we considered the potential problem of non-response bias. To detect any potential non-response bias, Armstrong and Overton (1977) recommend ensuring that the last quartile or second wave of survey participants' responses is similar to that of non-respondents. The 740 survey respondents were divided into two groups based on their response period (first: n=521, 70.4% and second: n=219, 29.6%). T-tests were performed on the two groups' perceptions of cultural difference, transformational leadership, and job performance items at the 5% significance level. The test results suggested that non-response bias was not a problem in this study since the responses of the late respondents were similar to those of the first wave respondents.

Examining the profiles of all 740 respondents revealed that 100 respondents were from the UK, 215 from Germany, 85 from Belgium, 100 from the Netherlands, 120 from China, and 120 from Taiwan (see Table 1). Just over half respondents (56.5%) were aged between 31 and 40 years, more than twenty percent (20.4%) were aged between 41 and 50 years, and 15.9% were 51 years or older. Only 7.2% of respondents were aged 30 years or under. Regarding the educational level, more than half of the respondents (60.7%) held undergraduate degrees and just over a third (37.7%) had been educated to high school level or below. Less than 3% of respondents held postgraduate degrees or above.

**<Please insert Table 1 here>**

Study results also revealed that nearly half (49.7%) of the respondents had worked in their present companies for 11-15 years, 35.9% had worked for 6 -10 years, and 13.1% had worked for 5 years or less. Only a few (1.2%) had worked for 16 years or more. The results suggested that the respondents were well qualified to answer questions on national culture difference.

### *3.3 Measures*

*Culture difference measurement.* Hofstede's (1980) and Hofstede and Bond's (1988) national cultural items and framework were adopted; these covered five major dimensions (power distance, uncertainty avoidance, collectivism, masculinity, and long-term orientation). Four measurement items were used for each dimension based on previous studies (Hofstede, 1980, 2001; Hofstede and Bond, 1988; Lu *et al.*, 1999). The mean difference for each item between employees and expatriate supervisors was subsequently used for evaluating the effects of culture difference on employee job performance. Twenty items were employed to evaluate the perceptions of culture between employees and their expatriate supervisors.

*Transformational leadership.* Transformational factors are inter-correlated and require a combination of measurement variables to clarify the concept. Three distinct factors: charisma-inspiration, individualized consideration, and intellectual stimulation are regarded as crucial for explaining the concept of transformational leadership. There were a total of 12 measurement items employed for measuring transformational leadership (see Appendix 1). These items were taken from scales developed by Avolio *et al.* (1999) and Buil *et al.* (2019).

*Job performance.* It is widely agreed that individual job performance is a multidimensional construct. Campbell (1990) developed the job performance framework in terms of two general dimensions: task performance and contextual performance. Ten measurement items (five items for each dimension) were employed to evaluate an employee's job performance in this study (see Appendix 1) (Campbell, 1990; Buil *et al.*, 2019).

#### *Common method variance*

Since this study obtained data by employing a self-report questionnaire, this could result in the common method variance (CMV) problem. When measurement items are obtained from the same source, the CMV problem can bias the research findings (Podsakoff *et al.*, 2003). Hence, this study implemented procedural remedies. Respondents were assured of the anonymity and confidentiality of their responses; since there were no right or wrong answers, they were told that they should answer as honestly as possible. Accordingly, the common method variance problem does not seem to be present in the study.

## **4. Results**

### *4.1 Confirmatory factor analysis results*

The Chi-square value ( $\chi^2$  (135) = 390.440,  $p=0.000$ ) was statistically significant at the 0.05 significance level. In considering the sensitivity of the Chi-square statistic value

to sample size, the other measures of model fit were therefore adopted in evaluating the goodness of the measuring model. Referring to other goodness-of-fit indices,  $\chi^2/df = 2.892$ , goodness of fit (GFI)=0.951; adjusted goodness of fit (AGFI) =0.923; comparative fit index (CFI)=0.958; root mean square residual (RMR) =0.032; root mean square error of approximation (RMSEA)=0.051; the Tucker-Lewis index (TLI)=0.941 reveals that the CFA model is acceptable (Jöreskog and Sörbom, 1999).

As shown in Table 2, the results suggested that all C.R. values were significant at the 0.05 level, confirming that all indicators measured the identical construct, providing satisfactory evidence for the convergent validity and unidimensionality of each construct.  $R^2$  values are employed to measure the reliability of a particular observed variable (Kouferos, 1999).  $R^2$  values typically above 0.3 provide evidence of acceptable reliability (Hair et al., 2019). The results revealed that the  $R^2$  values of all items in these dimensions were greater than the recommended value of 0.3, implying that this model has an acceptable convergent validity.

**<Please insert Table 2 here>**

As indicated in Table 3, the highest squared correlation was observed between the uncertainty avoidance and power distance dimensions, which presented a value of 0.362. This was significantly lower than their individual AVE value of 0.609. The results demonstrated evidence of discriminant validity for the study's variables.

**<Please insert Table 3 here>**

The composite reliability of the constructs of long-term orientation, uncertainty avoidance, masculinity, power avoidance, and collectivism scales were 0.861, 0.874, 0.871, 0.868, and 0.864, respectively. All the measurements exceeded the suggested level of 0.60 (Hair *et al.*, 2019). Thus, convergent validity, discriminant validity, composite reliability, and average variance extracted (AVE) test results provided evidence that the national culture dimensions in the study were satisfactory.

#### *4.2 Hierarchical regression analysis results*

A hierarchical regression analysis was subsequently conducted to investigate the study hypotheses and the moderating effect. First, the control variables, i.e., the age, educational level and work experience of respondents were entered into the regression Models A and D (see Table 4). Since the control variables can confound the effects of other variables, age is a commonly employed control to account for personal effects that may affect the hypothesized relationships. Furthermore, respondents' educational level reflects the degree to which they understood the actual meaning of each question,

while long work experience suggested they had abundant experience in following leadership instructions and improving personal job performance in the container shipping context.

**<Please insert Table 4 here>**

In the second step, the perceived national culture differences and transformational leadership variables were entered into the regression to test the effects on each dimension of job performance (Models B and E). The evaluation of the effects of transformational leaders was treated as a second-order factor structure that contained two layers of latent constructs in this study. Third, the interaction of national culture variables and transformational leadership was entered into the regression as a moderator to examine the moderating effect of transformational leadership on the relationship between perceived national culture differences and job performance (Models C and F). If the interactions between transformational leadership and perceived national culture differences variables were found to be significant, then this supports a significant moderating effect of transformational leadership on the relationship between perceived national culture difference and job performance.

In the initial regression model set, Models A and D, the control variables, namely, age, educational level, and work experience had no significant influence on task performance and contextual performance in the container shipping context. In Models B and E, perceived culture differences and transformational leadership dimensions were entered into the second regression set to test the effects on task and contextual performance, respectively. The results showed that power distance ( $\beta=-0.103$ ,  $P<0.01$ ), uncertainty avoidance ( $\beta=0.273$ ,  $P<0.01$ ), collectivism ( $\beta=0.183$ ,  $P<0.05$ ), masculinity ( $\beta=-0.128$ ,  $P<0.01$ ), long-term orientation ( $\beta=0.171$ ,  $P<0.01$ ), and transformational leadership ( $\beta=0.364$ ,  $P<0.01$ ) were all significant in Model B (task performance). Accordingly, research Hypotheses H1a, H2a, H3a, H4a, H5a, and H6a were supported in this study. In addition, the results indicated that power distance ( $\beta=-0.148$ ,  $P<0.01$ ), uncertainty avoidance ( $\beta=0.294$ ,  $P<0.01$ ), collectivism ( $\beta=0.096$ ,  $P<0.05$ ), masculinity ( $\beta=-0.090$ ,  $P<0.01$ ), long-term orientation ( $\beta=0.244$ ,  $P<0.01$ ), and transformational leadership ( $\beta=0.386$ ,  $P<0.01$ ) all significantly influenced contextual performance in Model E. Hence, research Hypotheses H1b, H2b, H3b, H4b, H5b, and H6b were also supported in this study.

In general, the results indicated that perceived national culture differences with respect to uncertainty avoidance, collectivism, and long-term orientation were positively related to job performance, whereas perceived national culture differences with respect to power distance and masculinity were negatively related to task and contextual



performance. The results also indicated that both perceived national culture difference and transformational leadership influenced employee job performance in the container shipping companies' context, which was consistent with findings previously reported by Jung and Avolio (1999).

#### *4.2.1 The effects of national culture difference on job performance*

Prior to the creation of the interaction terms in Models B and E, the independent variables were mean-centered to reduce multicollinearity (Aiken and West, 1991). The results indicated that both job performance models (task and contextual) were statistically significant at a p-value = 0.01 level. Furthermore, the Durbin-Watson (D-W) values were all within the acceptable range (between 1.5 and 2.5), indicating that the residuals were not correlated and that an autocorrelation problem did not therefore exist in this study.

#### *4.2.2 The moderating effects of transformational leadership*

The third regression model set, Models C and F, considered the moderating effect of transformational leadership. On both task performance and contextual performance, the interaction between long-term orientation and transformational leadership was positive and significant ( $\beta=0.123$ ,  $P<0.01$ ) and ( $\beta=0.163$ ,  $P<0.01$ ). Regarding the relationship between power distance and job performance, the effects on task and contextual performance were revealed to be negative and significant ( $\beta=-0.056$ ,  $P<0.05$ ) and ( $\beta=-0.102$ ,  $P<0.01$ ) (see Figures 3). Hypotheses H7a and H7b were therefore supported in this study. The results suggested that when power distance was low, performance was high with high transformational leadership. In other words, the negative effects of power distance on job performance decreased when transformational leadership was at a high level.

**<Please insert Figures 3 here>**

Regarding the relationship between uncertainty avoidance and transformational leadership, the moderating effects on task and contextual performance were positive and significant ( $\beta=-0.242$ ,  $P<0.01$ ) and ( $\beta=-0.257$ ,  $P<0.01$ ). Hypotheses H8a and H8b were therefore supported in this study. The results presented in Figures 4 suggested that when uncertainty avoidance was high, performance was also high with high transformational leadership. This suggested that employees perceived a high level of uncertainty avoidance to be related to high task and contextual performance when transformational leadership was high rather than low.

**<Please insert Figure 4 here>**

As seen in Models C and F, the results indicated that the interaction effects of collectivism and transformational leadership are positively related to task performance ( $\beta=0.101$ ,  $P<0.01$ ) and contextual performance ( $\beta=0.148$ ,  $P<0.01$ ). Thus, H9a and H9b were supported in this study. The results shown in Figures 5 imply that when collectivism was high, performance was also high with high transformational leadership. This indicated that employees perceived a high collectivism level to be related to high task and contextual performance when transformational leadership was at a high level.

**<Please insert Figure 5 here>**

The regression results suggested that transformational leadership mitigated the negative influence of power distance and masculinity, whereas it facilitated the positive effects of long-term orientation, uncertainty avoidance and collectivism on employee job performance. All of the hypotheses were supported in this study.

As shown in Models C and F examining the relationship between masculinity and job performance, the effects on task and contextual performance were negative and significant ( $\beta=-0.065$ ,  $P<0.05$ ) and ( $\beta=-0.066$ ,  $P<0.05$ ). Hypotheses H10a and H10b were also supported in this study. In considering the moderating effect of transformational leadership, as plotted in Figures 6, when masculinity was at a lower level, job performance was at a high level with high transformational leadership. This suggested that the negative effects of masculinity on job performance decreased when the transformational leadership was at a high level.

**<Please insert Figure 6 here>**

Consistent with Hypotheses H11a and H11b, Figures 7 show that when long-term orientation was high, performance level was high with high transformational leadership. This indicated that employees perceived a high level of long-term orientation to be related to high task and contextual performance when transformational leadership was high rather than low.

**<Please insert Figure 7 here>**

## 5. Discussion

In an increasingly competitive global environment, the importance of cultural differences in management and leadership for the success of international shipping operations has been well recognized (Lu et al., 2012; Lu and Lin, 2014). However there have been few studies examining the relationships between transformational leadership and job performance with culture. Prior studies on maritime studies have either not been

comprehensive in nature or have not used rigorous empirical research methods in different countries. Thus, the objective of this research is to move toward addressing this gap by developing a framework and a set of testable propositions of the linkages between national culture, transformational leadership, and employee's job performance. Also, the moderating effect of transformational leadership in the relationship between national culture and employee's job performance was assessed. This study specifically focused on the employees of container shipping companies in Belgium, China, Germany, the Netherlands, Taiwan, and the UK.

We applied an analytical framework with 4-step approach to identify national culture dimensions and its relationships with transformational leadership and employee's job performance. According to the confirmatory factor analysis, five national culture dimensions were identified: long-term orientation, uncertainty avoidance, masculinity, power distance and collectivism based on the studies of Hofstede's (1980) and Hofstede and Bond (1988). The results from the hierarchical regression analysis indicate that national culture in terms of uncertainty avoidance, collectivism, and long-term orientation were positively related to employee job performance, whereas national culture in terms of power distance and masculinity were negatively related to employee job performance. Accordingly, Hypotheses H1a-H5a and H1b-H5b that postulate the effects of national culture on job performance proposed in this study are all supported. This research finding is consistent with the previous studies of Jung et al. (2008), Taras et al. (2011), Lu and Lin (2014), Vitolla et al. (2019), and Jie et al. (2020). The results also found that transformational leadership had a positive influence on employee job performance; these findings are in line with those reported in the studies of Gardner and Avolio (1998), Jung and Avolio (1999), Buil et al. (2019), and Jung and Avolio (1999). Hypotheses H6a and H6b were therefore also supported in this study.

One of the most important findings of this research is the moderating impact of transformational leadership on the relationship between national culture differences and job performance. Transformational leadership also mitigated the negative impact of power distance and masculinity on employee job performance. This implied that a high transformational leadership levelling together with low power distance and masculinity leads to better job performance. Research Hypotheses H7a, H7b, H10a, and H10b were therefore supported. We also found that transformational leadership strengthened the effects of uncertainty avoidance, collectivism, and long-term orientation on job performance, implying that perceived high uncertain avoidance, collectivism, and long-term orientation led to high task performance by employees when transformational leadership was high rather than low. Accordingly, Hypotheses H8a, H8b, H9a, H9b, H11a, and H11b in this study were supported.

From a theoretical point of view this research would enable researchers to justify if culture differences truly affect employee's job performance in the way it has been examined by culture researchers. This is particularly crucial given many of the previous issues in international business culture studies (Lu and Lin, 2014). From a practical standpoint, this research suggests that transformational leadership skills can be developed through training and education programs to foster employee's job performance. Through these training programs, shipping managers may reinforce their leading skills including how to communicate with employees about the organizational goals, set organizational targets, motivate employees to achieve goals, and invent innovative methods for problem-solving to achieve individual and organizational performance.

### *5.1 Implications of the study*

Several implications can be drawn from the study findings. First, culture difference is a crucial factor affecting employee job performance in container shipping companies and must be taken into consideration by shipping operators. It is necessary for container shipping companies to assess the influence of culture differences on employee performance in overseas branch office operations. By understanding the culture differences between employees and their expatriate supervisors or overseas shipping managers, a variety of strategies can be delivered to employees by transformational leaders that may facilitate improvements in employee job performance.

The operational environment of container shipping companies is extremely competitive. Thus, managers need to determine any existing culture differences between employees and expatriate supervisors to reduce any negative influence on employee job performance. The study findings also indicated that power distance and masculinity are negatively related to employee job performance while long-term orientation, uncertainty avoidance, and collectivism are positively related to employee job performance. These results suggest that a low perceived difference in power distance and masculinity and a high perceived difference related to long-term orientation, uncertainty avoidance, and collectivism on the part of employees and expatriate managing directors are helpful in regard to improving job performance.

More importantly, supervisors/managers possessing transformational leadership have positive effects on employee job performance, and this plays a crucial role in moderating the negative effects of perceived culture difference on job performance. An important finding indicates that transformational leadership significantly decreases the negative effects of power distance and masculinity, and reinforces the positive effects of long-term orientation, uncertainty avoidance, and collectivism on job performance. This implies that high transformational leadership with low power distance, masculinity

or high long-term orientation, uncertainty avoidance, and, collectivism can improve employee performance. In such a multinational context as container shipping operations, it is suggested that supervisors/managers use transformational leadership to transcend perceived culture differences and enhance employee job performance.

### *5.2 Limitations and directions for future research*

There are several study limitations which provides meaningful directions for further research in this field. First, respondents may not have considered their responses as carefully and objectively as they might otherwise have done. As a result, bias may have occurred in their responses. Second, this study is limited to the use of Hofstede's national culture dimensions based on the studies of Hofstede (1990, 2001), and Hofstede and Bond (1988). Recent studies suggest that the effects of national culture differences may be explained more comprehensively in considering the more dimensions (Groh, 2020).

This study's findings provide suggestions for future research. Researchers might examine how national culture dimensions influence individual behaviors or attitudes, particularly those that may lead to the improvement of employee performance (Hofstede, 2001) in the container shipping context. In addition, future research could examine the links among national culture, work group resources, human resource practice, organizational commitment, organizational citizen behavior (Lu et al., 2017), and organizational performance.

## 6. Conclusions

Our theoretical framework reconciles the contributions of two important streams in the literature: studies that explain the impact of national cultural differences on job performance and those that explore the impact of transformational leadership. We attempt to explicate how transformational leadership moderates the influence of national cultural differences on job performance. This research contributes to the management of cultural differences literature by focusing on the much-neglected cultural differences and transformational leadership enriching the extant literature on international shipping management. Cultural differences are shown to be important determinants of job performance and outcomes. It highlights the importance of transformational leadership in facilitating job performance by complying with national cultures. Although cultural differences and transformational leadership are rarely examined in shipping operations, this research suggests that such notion might be beneficial to improve individual and organizational performance.

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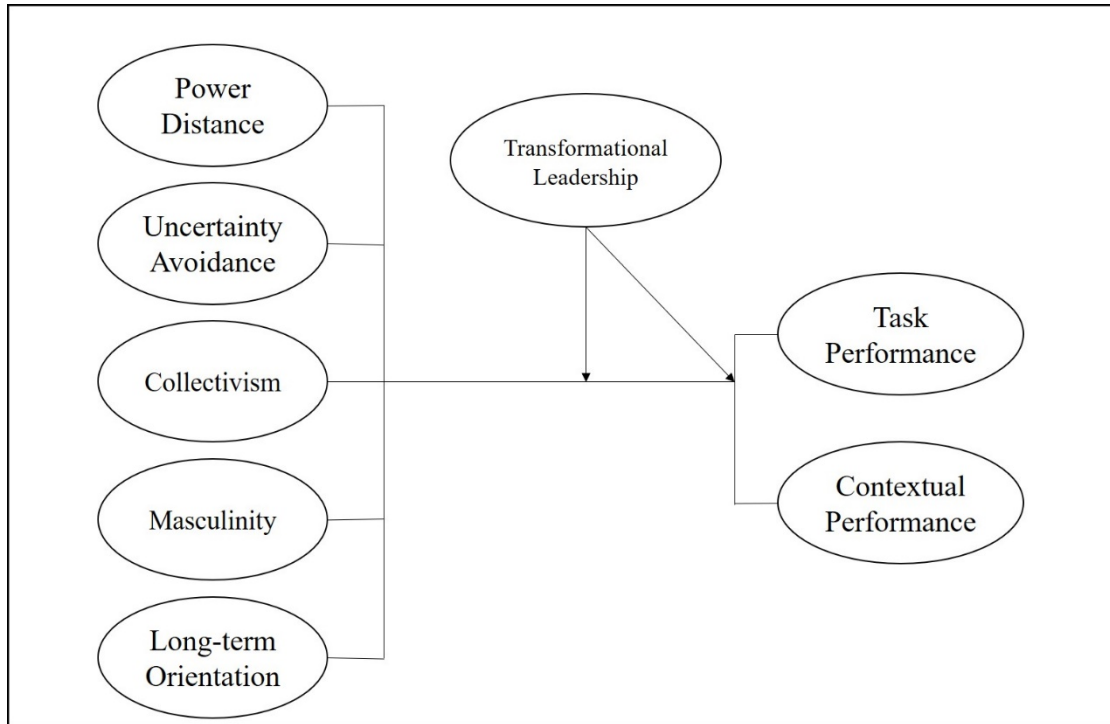
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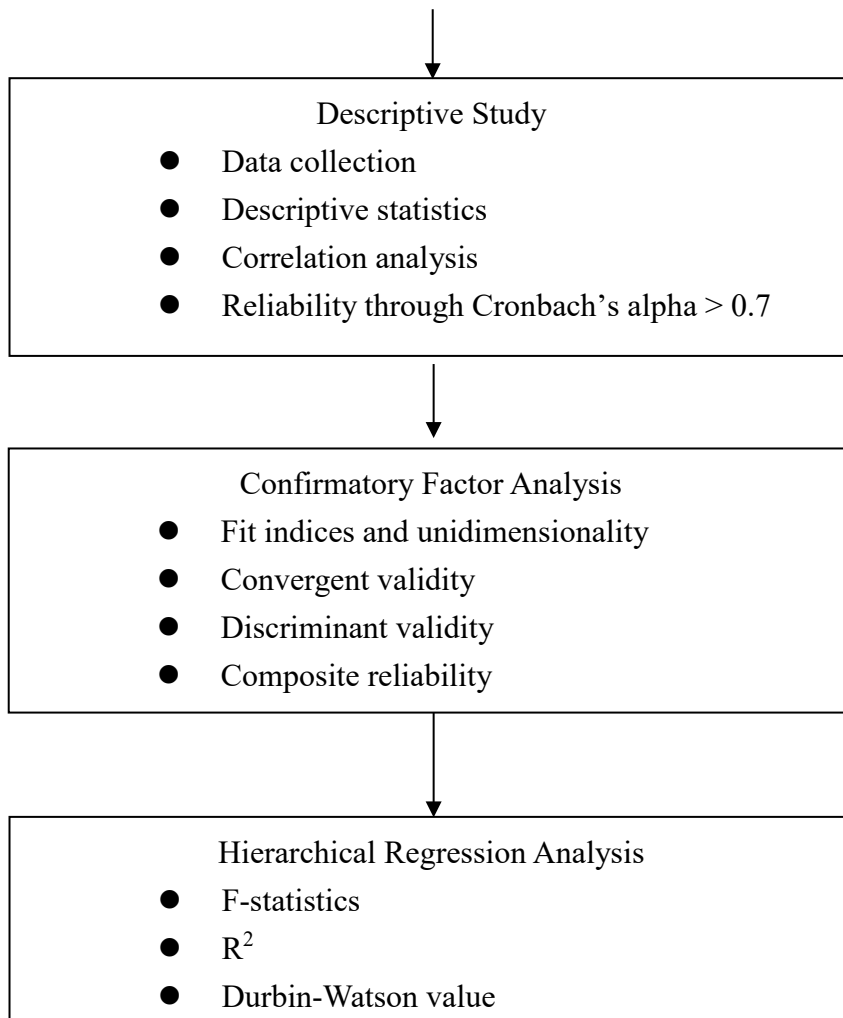
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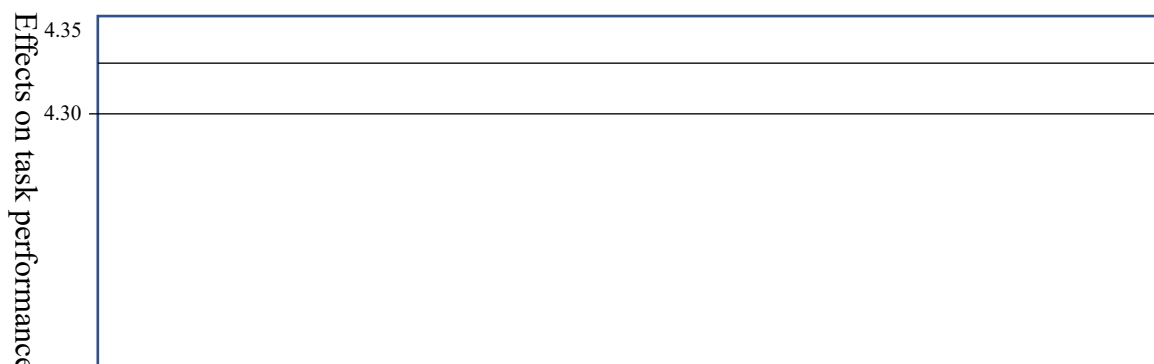


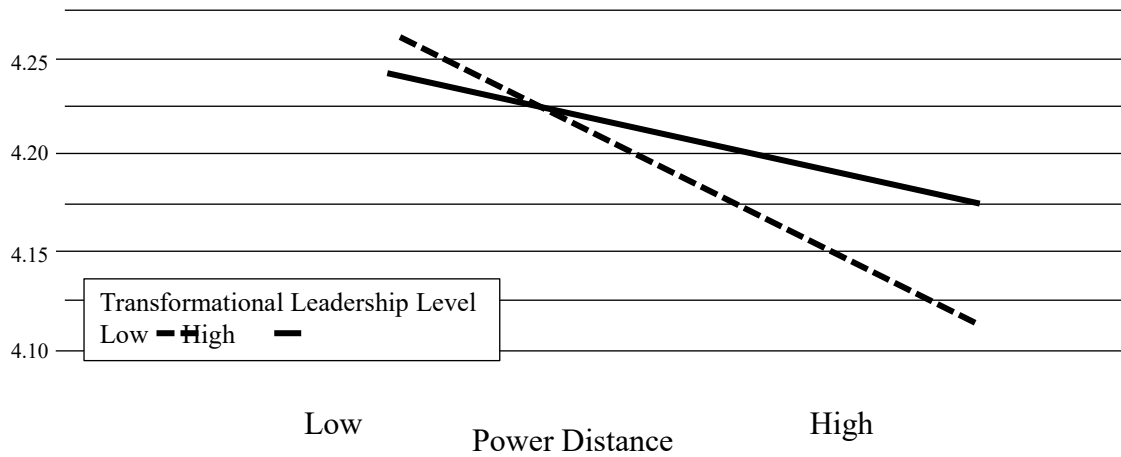
**Figure 1.** The Conceptual Model

- Instrument Development
- Literature review
  - Interviews with shipping practitioners
  - Questionnaire design
  - Content validity

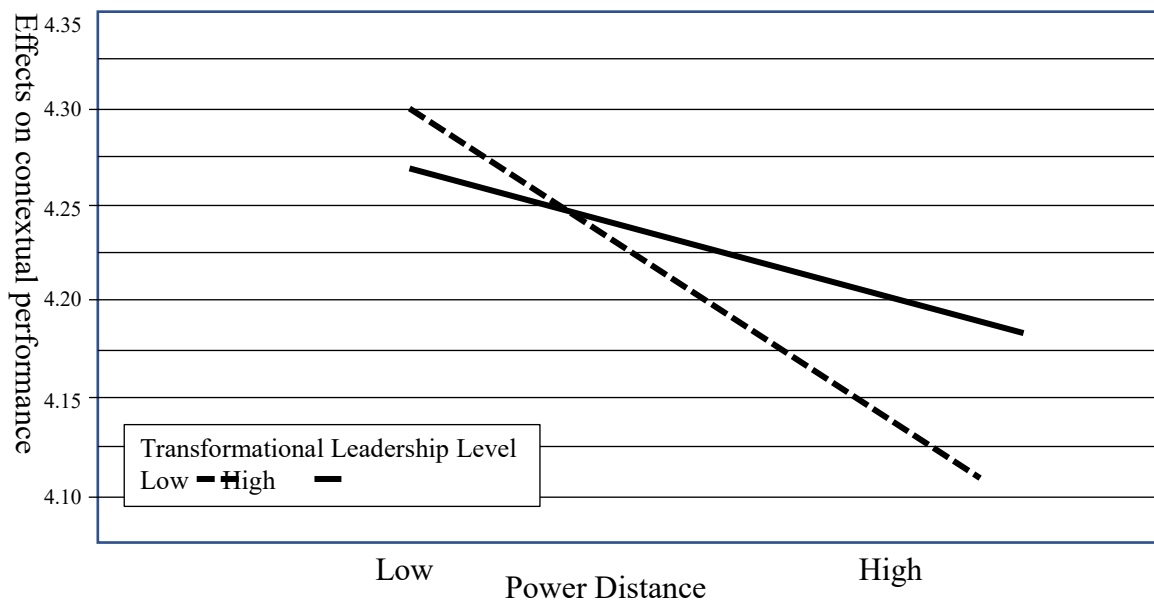


**Figure 2.** Analytical Steps



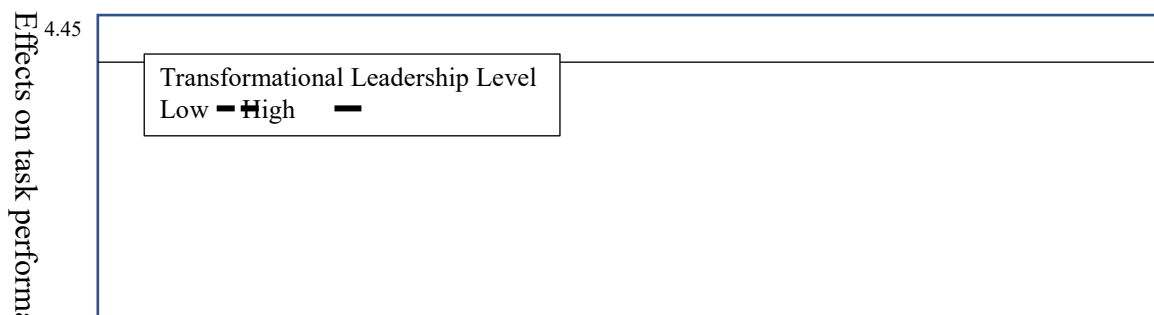


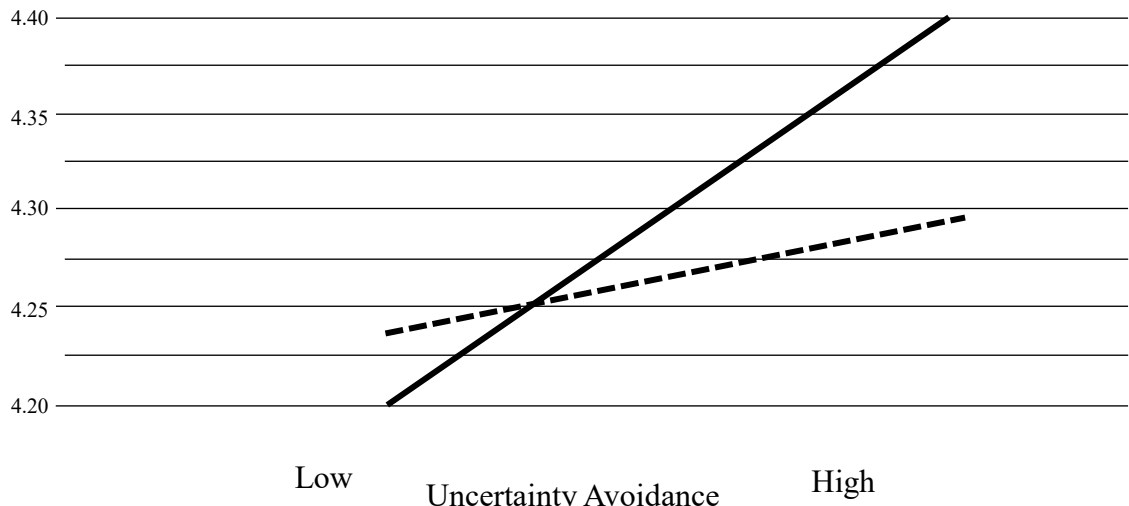
**Figure 3a.** The effect of power distance on task performance by transformational leadership level



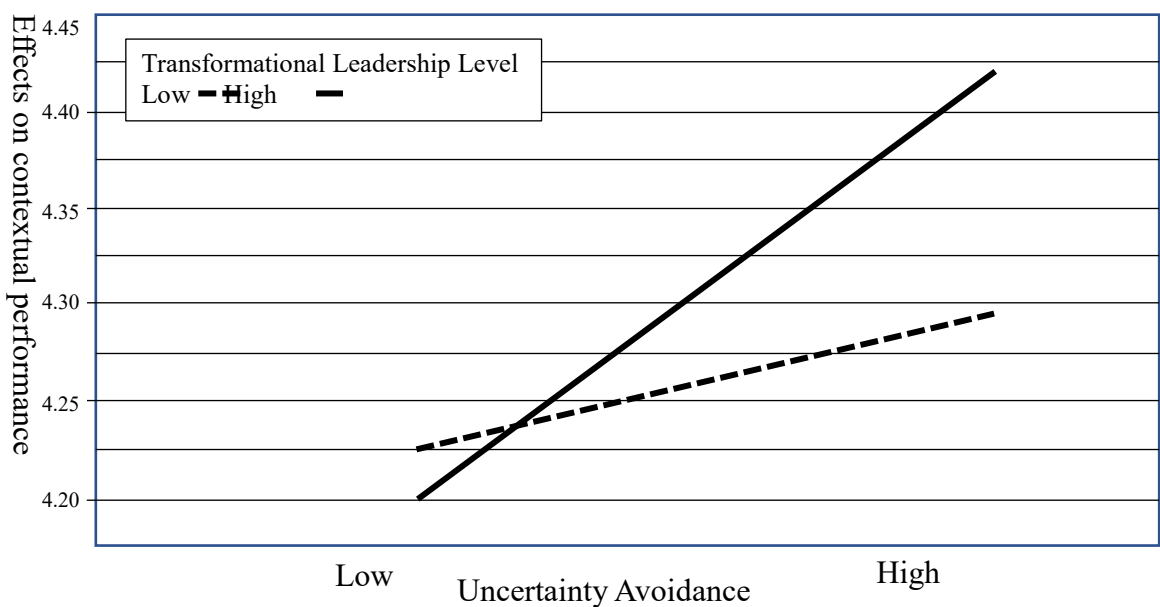
**Figure 3b.** The effect of power distance on contextual performance by transformational leadership level

**Figure 3.** The effect of power distance on job performance by transformational leadership



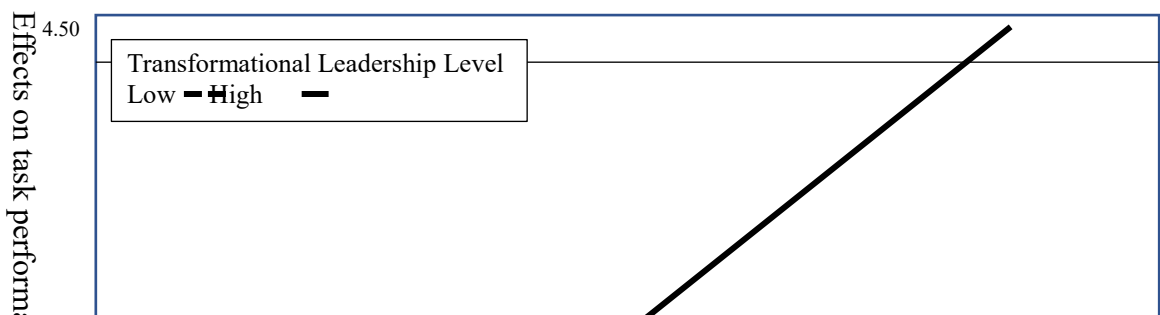


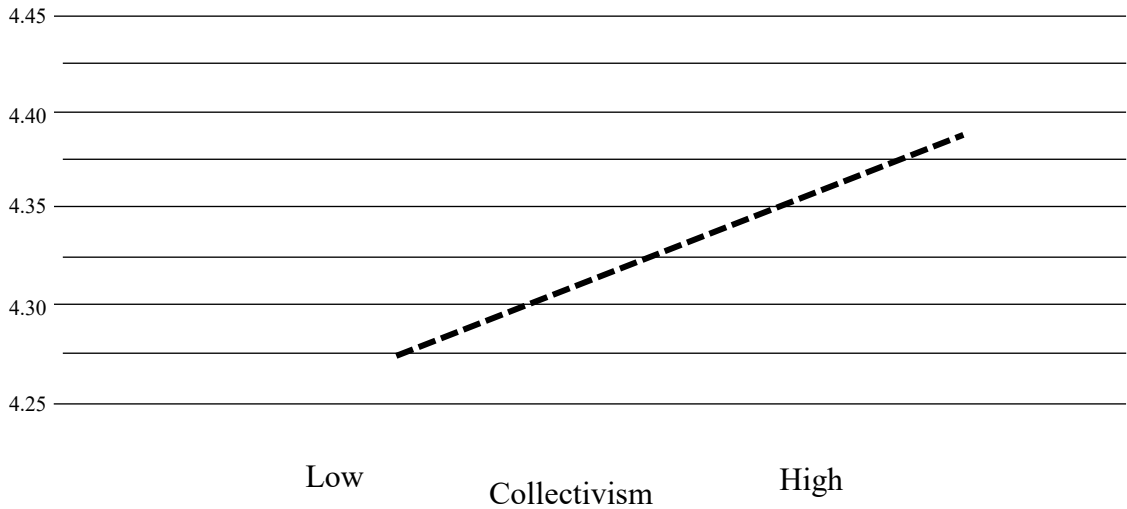
**Figure 4a.** The effect of uncertainty avoidance on task performance by transformational leadership level



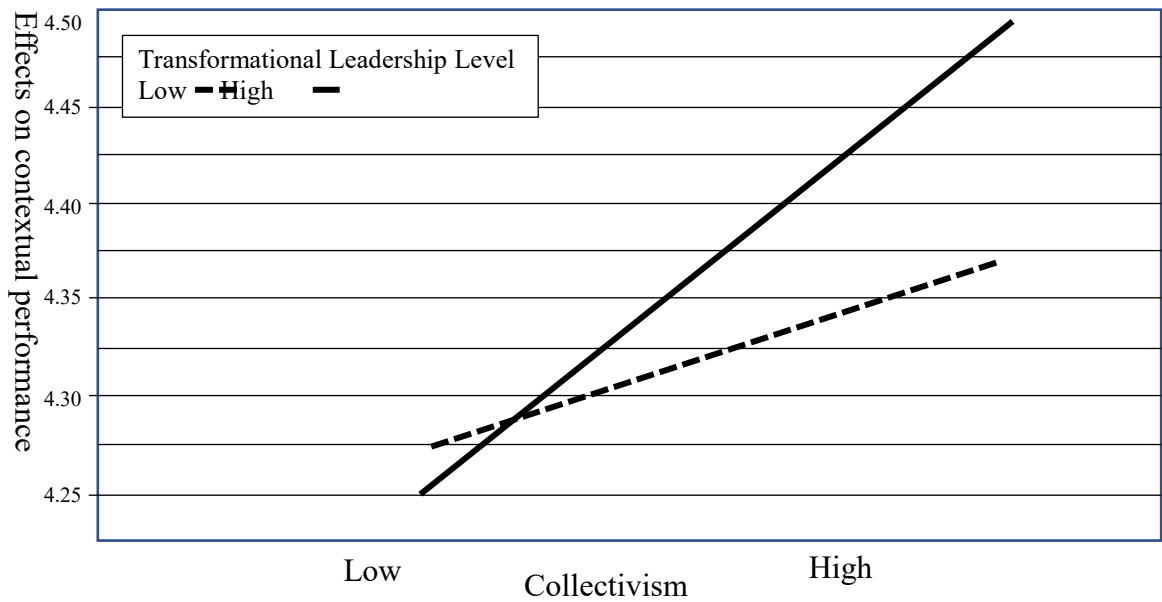
**Figure 4b.** The effect of uncertainty avoidance on contextual performance by transformational leadership level

**Figure 4.** The effect of uncertainty avoidance on job performance by transformational leadership



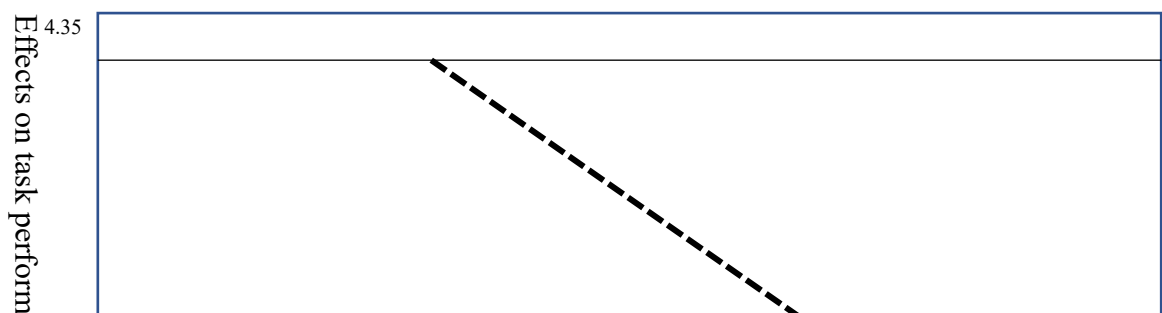


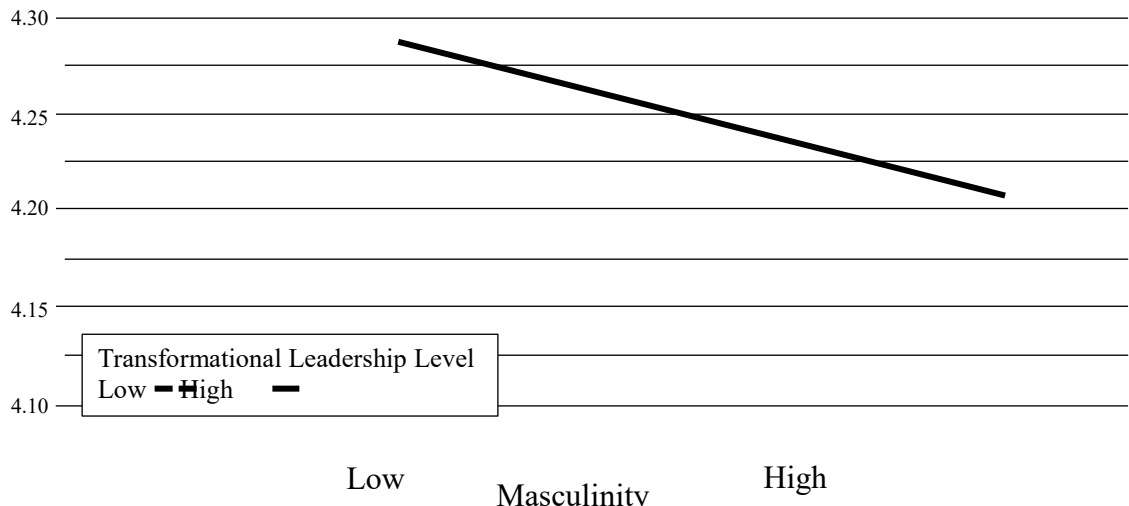
**Figure 5a.** The effect of collectivism on task performance by transformational leadership level



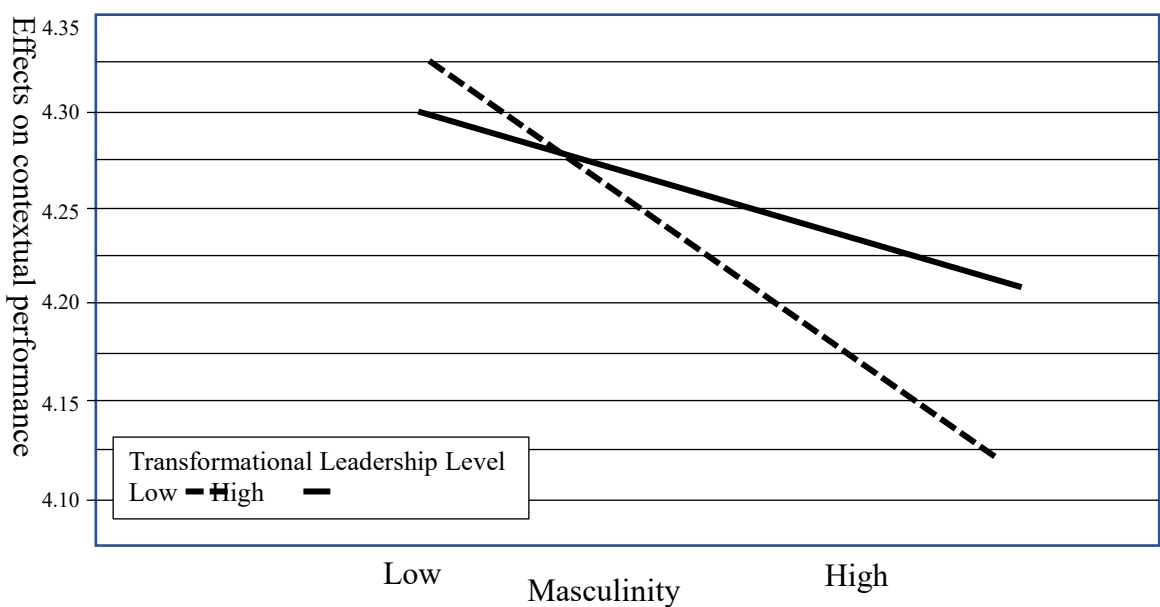
**Figure 5b.** The effect of collectivism on contextual performance by transformational leadership level

**Figure 5.** The effect of collectivism on job performance by transformational leadership



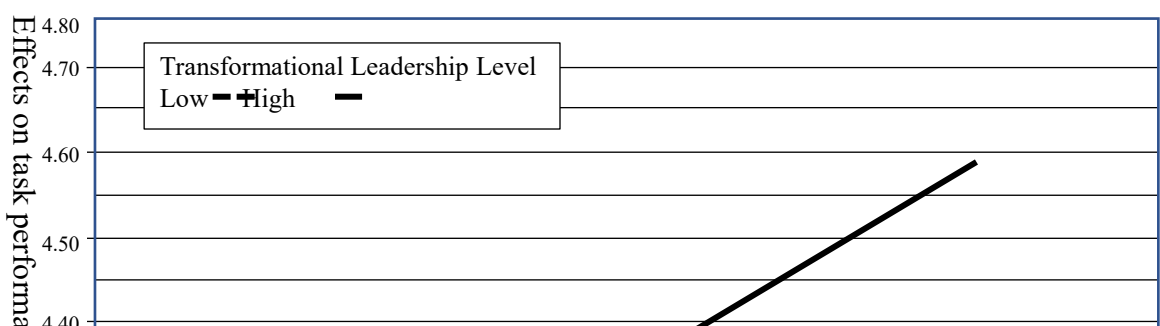


**Figure 6a.** The effect of masculinity on task performance by transformational leadership level



**Figure 6b.** The effect of masculinity on contextual performance by transformational leadership level

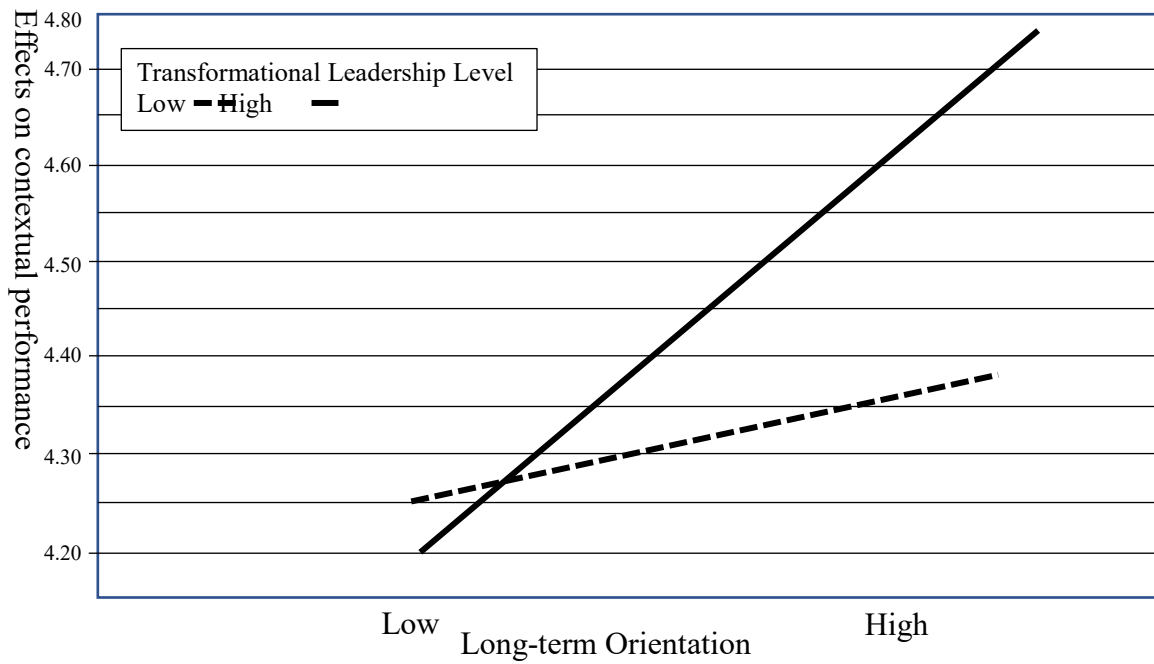
**Figure 6.** The effect of masculinity on job performance by transformational leadership





Low Long-term Orientation High

**Figure 7a.** The effect of long-term orientation on task performance by transformational leadership level



**Figure 7b.** The effect of long-term orientation on contextual performance by transformational leadership level

**Figure 7.** The effect of long-term orientation on job performance by transformational leadership

**Table 1.** Profile of Respondents

| Characteristics | Number of | Percentage of |
|-----------------|-----------|---------------|
|-----------------|-----------|---------------|

|                         | respondents | respondents |
|-------------------------|-------------|-------------|
| Nationality             |             |             |
| Germany                 | 100         | 13.5        |
| UK                      | 215         | 29.1        |
| Belgium                 | 85          | 11.5        |
| Netherland              | 100         | 13.5        |
| China                   | 120         | 16.2        |
| Taiwan                  | 120         | 16.2        |
| Age                     |             |             |
| 30 and under            | 53          | 7.2         |
| 31-40                   | 418         | 56.5        |
| 41-50                   | 151         | 20.4        |
| 51 and above            | 118         | 15.9        |
| Education level         |             |             |
| High school or under    | 279         | 37.7        |
| Undergraduate           | 449         | 60.7        |
| Postgraduate            | 12          | 1.6         |
| Work experience (years) |             |             |
| 5 years or less         | 97          | 13.1        |
| 6-10 years              | 266         | 35.9        |
| 11-15 years             | 368         | 49.7        |
| 16 years or more        | 9           | 1.2         |
| Total                   | 740         | 100         |

**Table 2.** Parameter Estimate, Standard Errors, Critical Ratios, and R<sup>2</sup> for National Culture Dimensions

| Latent item variable            | Unstandardized factor loading | Completely standardized factor loading | Standard error <sup>a</sup> | Critical Ratio <sup>b</sup> | R <sup>2</sup> |
|---------------------------------|-------------------------------|--|-----------------------------|-----------------------------|----------------|
| <b>ξ1 Long-term Orientation</b> |                               |  |                             |                             |                |
| LTO1                            | 1.226                         | 0.752                                  | 0.069                       | 17.790                      | 0.566          |
| LTO2                            | 1.425                         | 0.832                                  | 0.075                       | 19.110                      | 0.693          |
| LTO3                            | 1.219                         | 0.739                                  | 0.070                       | 17.511                      | 0.547          |
| LTO4                            | 1.000                         | 0.683                                  | - <sup>c</sup>              | -                           | 0.267          |
| <b>ξ2 Uncertainty Avoidance</b> |                               |  |                             |                             |                |
| UN1                             | 0.970                         | 0.676                                  | 0.056                       | 17.187                      | 0.457          |
| UN2                             | 0.889                         | 0.633                                  | 0.072                       | 12.416                      | 0.401          |
| UN3                             | 1.357                         | 0.946                                  | 0.076                       | 17.864                      | 0.895          |
| UN4                             | 1.000                         | 0.682                                  | -                           | -                           | 0.465          |
| <b>ξ3 Masculinity</b>           |                               |  |                             |                             |                |
| MAS1                            | 1.136                         | 0.665                                  | 0.062                       | 18.226                      | 0.863          |
| MAS2                            | 0.887                         | 0.618                                  | 0.053                       | 16.737                      | 0.489          |
| MAS3                            | 0.692                         | 0.699                                  | 0.040                       | 17.157                      | 0.382          |
| MAS4                            | 1.000                         | 0.929                                  | -                           | -                           | 0.442          |
| <b>ξ4 Power Distance</b>        |                               |  |                             |                             |                |
| PD1                             | 1.432                         | 0.647                                  | 0.071                       | 15.139                      | 0.419          |
| PD2                             | 1.547                         | 0.739                                  | 0.129                       | 11.997                      | 0.546          |
| PD3                             | 1.074                         | 0.772                                  | 0.121                       | 11.829                      | 0.596          |
| PD4                             | 1.000                         | 0.524                                  | -                           | -                           | 0.374          |
| <b>ξ5 Collectivism</b>          |                               |  |                             |                             |                |
| COL1                            | 1.181                         | 0.782                                  | 0.063                       | 15.390                      | 0.611          |
| COL2                            | 1.348                         | 0.941                                  | 0.381                       | 3.534                       | 0.886          |
| COL3                            | 0.974                         | 0.650                                  | 0.337                       | 3.501                       | 0.422          |
| COL4                            | 1.000                         | 0.612                                  | -                           | -                           | 0.375          |

**Goodness-of-fit indicators**

$\chi^2$  (135) =390.440, p = 0.000;  $\chi^2/df$  =2.892; GFI=0.951; AGFI=0.923; CFI=0.958; RMR=0.032; RMSEA=0.051; TLI=0.941

Note: a. S.E. is an estimate of the standard error of the covariance

b. C.R. is the critical ratio obtained by dividing the estimate of the covariance by its standard error.

A value exceeding 1.96 represents a level of significance of 0.05.

c. Indicates a parameter fixed at 1.0 in the original solution.

**Table 3.** Assessment of AVE Values of National Culture Dimensions

| Measures              | AVE <sup>a</sup> | Long-term Orientation | Uncertainty Avoidance | Masculinity | Power Distance | Collectivism |
|-----------------------|------------------|-----------------------|-----------------------|-------------|----------------|--------------|
| Long-term Orientation | 0.609            | 1                     |                       |             |                |              |
| Uncertainty Avoidance | 0.635            | 0.502**               | 1                     |             |                |              |
|                       |                  | (0.252) <sup>c</sup>  |                       |             |                |              |

|                   |       |                     |                     |                    |                    |   |
|-------------------|-------|---------------------|---------------------|--------------------|--------------------|---|
| Masculinity       | 0.629 | 0.582**<br>(0.339)  | 0.590**<br>(0.348)  | 1                  |                    |   |
| Power<br>Distance | 0.622 | -0.551**<br>(0.303) | -0.602**<br>(0.362) | 0.532**<br>(0.283) | 1                  |   |
| Collectivism      | 0.615 | 0.412**<br>(0.170)  | -0.510**<br>(0.260) | 0.510**<br>(0.260) | 0.570**<br>(0.325) | 1 |

Note: a. Average variance extracted (AVE) = (sum of squared standardized loadings) / [(sum of squared standardized loadings) + (sum of indicator measurement error)]; Indicator measurement error can be calculated as 1-(standardized loading)<sup>2</sup>.

b. \* correlation is significant at the 0.01 level; \*\* correlation is significant at the 0.01 level.

c. Squared correlation.

**Table 4.** Hierarchical Regression Analysis Results (standard  $\beta$  coefficients)

|                                  | Task performance |          |          | Contextual Performance |          |          |
|----------------------------------|------------------|----------|----------|------------------------|----------|----------|
|                                  | Model A          | Model B  | Model C  | Model D                | Model E  | Model F  |
| <b>Control Variables</b>         |                  |          |          |                        |          |          |
| Age                              | 0.067            | 0.055    | 0.024    | 0.025                  | -0.013   | -0.621   |
| Educational level                | 0.033            | 0.003    | -0.016   | 0.019                  | -0.008   | -0.440   |
| Work experience                  | -0.048           | -0.044   | -0.032   | -0.062                 | 0.013    | 0.661    |
| <b>Main effects</b>              |                  |          |          |                        |          |          |
| Power distance (PD)              |                  | -0.103** | -0.073*  |                        | -0.148*  | -0.128** |
| Uncertainty avoidance (UN)       |                  | 0.273**  | 0.169**  |                        | 0.294**  | 0.177**  |
| Collectivism (COL)               |                  | 0.183*   | 0.054*   |                        | 0.096*   | 0.082*   |
| Masculinity (MAS)                |                  | -0.128** | -0.105** |                        | -0.090** | -0.081*  |
| Long-term Orientation(LTO)       |                  | 0.171**  | 0.074*   |                        | 0.244**  | 0.109*   |
| Transformational leadership (TL) |                  | 0.364**  | 0.286**  |                        | 0.386**  | 0.307**  |
| <b>Moderating Variables</b>      |                  |          |          |                        |          |          |
| LTO x TL                         |                  |          | 0.123**  |                        |          | 0.163**  |
| UN x TL                          |                  |          | 0.242**  |                        |          | 0.257**  |
| MAS x TL                         |                  |          | -0.065*  |                        |          | -0.066*  |
| PD x TL                          |                  |          | -0.056*  |                        |          | -0.102** |
| COL x TL                         |                  |          | 0.101**  |                        |          | 0.148**  |
| F value                          | 5.834**          | 27.304** | 23.882** | 0.806                  | 23.170** | 19.596** |
| D.W. value                       | 2.578            | 2.252    | 2.142    | 1.807                  | 2.192    | 2.183    |
| R <sup>2</sup>                   | 0.019            | 0.243    | 0.302    | 0.022                  | 0.213    | 0.261    |

Note: \*: Significant at  $p < 0.05$ , \*\*: Significant at  $p < 0.01$

## Appendix 1 Measurements

| Measurements for national cultural differences |  |   |
|--|--|---|
| <u>Items</u>                                   | <u>Employee</u>  | <u>Supervisor</u>   |
| <i>Power Distance</i>                          |  |   |
| PD1:   | I think employees should not hold too many personal opinions.                                    | My supervisor thinks employees should not hold too many personal opinions.                          |
| PD2:   | I think any work needs to be instructed by a supervisor.   | My supervisor thinks that employees should work under his/her instruction.                          |
| PD3:   | I fear having a dispute with my supervisor.  | My supervisor fears having a dispute with headquarters.   |
| PD4:   | I believe my supervisor would not consult with other colleagues before making a decision.        | Before making decisions, my supervisor never elicits opinions from employees.                       |
| <i>Uncertainty Avoidance</i>                   |  |   |
| UN1:   | I prefer to work with detailed job specifications.   | My supervisor prefers routine work in order to avoid making mistakes.                               |
| UN2:   | I prefer to do routine work in order to avoid making mistakes.                                   | My supervisor likes to get employees' opinions before conducting his/ her work.                     |
| UN3:   | I like to discuss my work with someone before doing it.  | My supervisor prefers to work with detailed job specifications.                                     |
| UN4:   | I would collect more information for decision-making.  | My supervisor collects sufficient information before making decisions.                              |
| <i>Collectivism</i>                            |  |   |
| COL1:  | I prefer team work than doing work alone   | My supervisor emphasizes group interests rather than personal benefits.                             |
| COL2:  | I maintain harmony and avoid conflict with my colleagues   | My supervisor prefers to encourage team work.   |
| COL3:  | I think group interests are more important than personal benefits                                | My supervisor maintain harmony and avoids conflicts with employees.                                 |
| COL4:  | I think it is important to cooperate with other colleagues                                       | My supervisor thinks it is important to cooperate with employees.                                   |
| <i>Masculinity</i>                             |  |   |
| MAS1:  | I think individual career achievement is more important than life quality.                       | My supervisor thinks personal career achievement is more important than life quality.               |
| MAS2:  | I strive for any promotional opportunity.  | My supervisor strives for any promotional opportunity.  |
| MAS3:  | I think individual career achievement is more important than good relationships with co-workers. | My supervisor thinks individual career achievement is more than good relationships with co-workers. |
| MAS4:  | Other than at work, I do not interact with my colleagues.  | Other than at work, my supervisor does not interact with employees                                  |
| <i>Long-term orientation</i>                   |  |   |
| LTO1:  | I am willing to sacrifice present pleasure for future success                                    | My supervisor is willing to sacrifice present pleasure for future success.                          |
| LTO2:  | I feel ashamed when I have done something wrong.   | My supervisor feels ashamed when he/she has done something wrong.                                   |
| LTO3:  | I finish my job with perseverance.   | My supervisor finishes his job with   |

|       |  |   |
|-------|--|---|
| LTO4: | I emphasize a long-term outlook rather than immediate benefits | perseverance.<br>My supervisor emphasizes a long-term outlook rather than immediate benefits. |
|-------|--|---|

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Measurement of Transformational Leadership

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*Charisma inspiration*

- CI1 My supervisor makes me proud to work with him/her.
- CI2 I admire my supervisor's leadership behavior.
- CI3 My supervisor clearly transmits his/her mission/vision to me.
- CI4 My supervisor sets high standards for my work.

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*Individualized consideration*

- IC1 My supervisor encourages employees with a variety of methods.
- IC2 I deeply feel encouragement from my supervisor.
- IC3 My supervisor encourages employees to think about problems in innovative ways.
- IC4 My supervisor emphasizes the use of intelligent methods to solve problems on the job.

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*Intellectual stimulation*

- IS1 My supervisor supports reasonable opinions from employees.
- IS2 My supervisor shows personal concern for me.
- IS3 My supervisor sets my goals and helps me to achieve them.
- IS4 My supervisor expresses his/her appreciation when I do well.

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Measurement of Job Performance

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*Task performance*

- TP1 My foreign supervisor thinks my work quality is excellent.
- TP2 I can finish any work assigned by my foreign supervisor on schedule.
- TP3 My foreign supervisor thinks I am one of the most efficient colleagues
- TP4 My foreign supervisor acknowledges my performance.
- TP5 I actively learn specific job skills and knowledge suggested by my foreign supervisor.

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*Contextual performance*

- CP1 I help colleagues after I finish the work assigned by my foreign supervisor.
  - CP2 I can work independently to finish tasks assigned by my foreign supervisor.
  - CP3 My foreign supervisor acknowledges my work efficiency.
  - CP4 I like to cooperate with my foreign supervisor.
  - CP5 I can quickly respond to client concerns that are proposed by my foreign supervisor.
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