THE EFFECTS OF PERCEIVED CULTURE DIFFERENCE AND TRANSFORMATIONAL LEADERSHIP ON JOB PERFORMANCE IN THE CONTAINER SHIPPING INDUSTRY

Chin-Shan Lu¹ and Chi-Chang Lin²

Key words: cultural difference, transformational leadership, job performance, container shipping industry.

ABSTRACT

The purpose of this study was to empirically examine the effects of perceived culture difference (between local employees and foreign managing directors) and foreign managing directors’ transformational leadership on job performance based on the perceptions of employees in the container shipping context. Research hypotheses were formulated and tested using survey data collected from Taiwanese employees working in four major foreign container shipping companies. Hierarchical regression analysis was used to examine the effects of four national culture dimensions (namely, power distance, collectivism, uncertainty avoidance, and masculinity) and transformational leadership on job performance.

Study findings indicated that the national culture dimensions of uncertainty avoidance and collectivism had a positive influence on job performance, whereas power distance and masculinity had a negative influence. The study also found that transformational leadership had a moderating effect on the relationship between national culture and job performance. Implications of the findings for shipping companies and areas for further research are discussed and proposed.

I. INTRODUCTION

The rapid expansion of globalization has had a tremendous impact on business operations. Over the last twenty years, transnational companies have extended their international operational scope and evolved in regard to scale and form in order to increase business opportunities and survive in the global arena [50, 74, 75]. According to UNCTAD [75], 451 of the 500 largest global corporations had established more than 200,000 branch offices overseas, an average of 470 for each company, in 2009. Moreover, the overseas sales value accounted for nearly half of the total sales values (47.8%) among these 500 global companies at that time. While globalization provides opportunities for business, it also brings major challenges since organizations and employees in firms face an increasingly multicultural business world [26, 28, 73]. Firms need therefore to be aware of the impacts of cultural diversity and differences on business practice when developing businesses in a new territory [39, 46].

The container shipping industry provides an international service. Shipping companies expand their business boundaries by establishing branch offices or using agencies in different countries. For example, Maersk Line, the largest container shipping company, has established 325 branches in more than 125 countries or areas around the globe [52], and the Mediterranean Shipping Company (MSC), the second largest carrier, owns 421 dedicated local offices in 145 countries and employs over 30,000 professionals worldwide [53]. In order to maintain a high level of service quality in foreign markets, shipping companies frequently assign foreign managing directors to supervise their overseas businesses. Such strategy increases multiculturalism within organizations, with the result that culture differences exist between local employees and foreign managing directors. The issue of cross-culture difference is becoming a major concern of container shipping companies since they need to ensure their management practices are continuing to provide high quality services overseas [1, 50, 59, 71, 73].

Previous studies on cross-culture difference have utilized Hofstede’s national culture dimensions [33, 37]. Hofstede [32] defined national culture as “… the collective programming of the mind which distinguishes the members of one group or society from another.” Hofstede [32] used the data collected from questionnaire surveys administered to 117,000 employees in a multinational corporation (IBM) and its sub-
sidiaries in 71 countries to examine national cultural difference. He subsequently identified four national culture dimensions, namely: power distance, individualism/collectivism, uncertainty avoidance, and masculinity/femininity. **Power Distance** reflects the extent to which members of a given culture accept unequal distributions of power within institutions and organizations. **Uncertainty Avoidance** represents the extent to which members share beliefs and build institutions that protect them from discomfort and fear of ambiguous situations. **Individualism** signifies a culture’s emphasis on the needs and goals of individuals rather than those of tightly knit groups. **Collectivistic** cultures tend to make greater distinctions between in-group versus out-group members, whereas individualistic cultures tend to apply similar standards to all people. **Masculinity** reflects the extent to which members of a culture prefer stereotypically masculine values such as financial and other extrinsic rewards to stereotypically feminine values such as caring for others [22].

One way to decrease culture difference is effective leadership. Several previous studies have investigated transformational and transactional leadership behaviors of managers and supervisors [4, 5, 77]. Transformational leadership is an effective leadership process [19] that involves developing a closer relationship between leaders and employees [6]. The effects of transformational leadership have been examined in the context of cultural diversity. Jung and Avolio [44] found that in highly collectivistic cultures, employees tend towards higher performance with a transformational leader than with a transactional one. Moreover, employees from highly individualistic cultures have been shown to enhance their work performance within a group when they accept instruction from a transformational leader [55]. In addition, transformational leaders can significantly eliminate culture differences between local employees and foreign managing directors if they change the way they communicate with subordinates in countries with hierarchical structures and status differentials [42].

Taiwan is an island economy that is highly dependent on foreign trade. International transportation therefore plays a crucial role in the sustained prosperity of its economy. According to the Ministry of Transportation and Communications [54], over 99 percent of annual foreign trade cargo in Taiwan is carried by sea transportation. As a result of the significant growth in foreign trade, the container shipping industry in Taiwan has become highly competitive, and the number of foreign maritime firms entering this market has remained consistently high. As well as local shipping companies, such as Evergreen Line, Yang Ming Line and Wan Hai Line, several global container shipping companies such as Maersk Line, Hanjin, Hyundai, APL, K-Line, NYK, COSCO, and OOCL have established branch offices or agencies in Taiwan. Thus, culture differences between local employees and foreign managing directors are increasingly viewed as being major factors influencing corporate performance.

Previous studies have shown that national culture differences are related to workplace behaviors and attitudes, and organizational outcomes [30, 32, 60, 68]. Accordingly, this study sought to examine how local employees’ job performance is affected by perceived differences in their foreign managing directors’ national culture attributes and foreign managing directors’ transformational leadership. It differs from past studies in two ways. First, previous culture difference research has focused primarily on the influence of national culture dimensions, and only a few studies have considered the role of transformational leadership [45]. By simultaneously studying culture differences and leadership style, this study sought to examine the effects of both culture difference and transformational leadership on job performance. Second, this study employed national culture measures to examine the effects of culture difference and transformational leadership on job performance in the international transportation and maritime environment, which had not previously been investigated.

There are five sections in this paper. After this introduction to the study, a review of the literature on national culture, leadership behavior, and job performance is presented in Section 2. Section 3 describes the research methodology, including the questionnaire survey, sampling technique, and data analysis methods. Section 4 presents the data analysis results and multiple regression analysis and one-way analysis of variance findings. Conclusions drawn from the research findings and their implications for shipping companies are discussed in the final section.

**II. LITERATURE REVIEW AND HYPOTHESES**

The conceptual model for the study is illustrated in Fig. 1. The model shows the proposed effects of four national culture dimensions and transformational leadership on job performance. The Figure shows that national culture is expected to have a direct influence on job performance and transformational leadership is expected to have a moderating effect on the relationship between national culture and job performance.
1. Culture Difference and Job Performance

In this study, culture difference was defined based on Hofstede’s four national culture dimensions, namely: power distance, uncertainty avoidance, individualism, and masculinity. Harris and Moran [30] found employees’ job performance within organizations to be associated with culture difference. Job performance is widely reported to be a multidimensional construct [8, 9, 12]. Of the dimensions of job performance that have been discussed, two general dimensions have been used in previous studies, namely, task performance and contextual performance [9, 57]. Task performance includes behaviors that contribute to the core transformation and maintenance activities in an organization, such as producing products, selling merchandise, acquiring inventory, managing subordinates, or delivering services [56]. Contextual performance refers to behaviors that contribute to the culture and climate of an organization, namely, volunteering for extra work, persisting with enthusiasm, helping and cooperating with fellow employees, following rules and procedures, and supporting or defending the organization [8, 56].

Hofstede [36] indicated that power distance has a negative influence on job performance in cultures where social inequality is perceived to be legitimate since individuals expect superior performance from their supervisors. Consistent with this, Farh et al. [24] found task performance to be lower for individuals who gained high power distance scores. Lam et al. [49] also reported that employees’ perceptions of justice had a weaker positive effect on task performance in a high power distance culture. This suggests that individuals who are in high regard to power distance are more willing to accept arbitrary treatment from organizations or supervisors and are less likely to expect fair treatment. Employees job performance id therefore likely to be hindered in a high power distance culture. Accordingly, this study hypothesized the following:

Hypothesis 1: Perceived culture differences with respect to power distance between local employees and foreign managing directors are negatively associated with job performance in container shipping companies.

Uncertainty avoidance focuses on how a society deals with unknown aspects of the future [58]. Uncertainty avoidance reflects the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity, which leads them to support beliefs promising certainty and to maintain institutional norms for the purpose of protecting conformity [35]. Thus, in an uncertainty avoidance culture, individuals are oriented towards tradition and stability and are more concerned about maintaining the status quo. They are less willing to disturb the order once a state of equilibrium is attained [36]. Shackleton and Ali [70] found that people from uncertainty avoidance cultures are strongly and positively associated with the need to acquire information so that uncertainty during interpersonal communication can be reduced. Moreover, in high uncertainty avoidance cultures, people tend to avoid ambiguous situations and are more conscious of rules and procedures. They prefer clearly designated lines of authority and appear to be more emotional, active, fidgety, and aggressive. Accordingly, this study posited the following:

Hypothesis 2: Perceived culture differences with respect to uncertainty avoidance between local employees and foreign managing directors are positively associated with job performance in container shipping companies.

Triandis [72] identified several attributes to explain individualism-collectivism. People in individualistic societies rely on their personal attitudes and feelings when deciding to engage with groups, develop a more independent self-identity, calculate costs and benefits rationally, and are more likely to pursue their own goals when there is a conflict between their personal goals and any group to which they belong. If an employee in an individualistic culture feels favorably about a job, s(he) will devote more time and energy to the job and exert additional effort to ensure that the job is performed well. In contrast, in a collectivistic culture, job performance may be a lesser determinant of job behavior than group norms or collective goals [21, 60]. Further, foreign managing managers with collectivistic characteristics are likely to cooperate more with local employees and achieve better outcomes than those with individualistic characteristics. Consequently, this study hypothesized that:

Hypothesis 3: Perceived culture differences with respect to collectivism between local employees and foreign managing directors are positively associated with job performance in container shipping companies.

Masculinity has been defined as “the degree to which a society is characterized by assertiveness (masculinity) versus nurturance (femininity)” [32, 58]. Masculinity refers to a preference for achievement, heroism, assertiveness, and material success, whereas femininity stands for a preference for relationships, modesty, caring for weak groups, and quality of life [34]. Highly masculine societies place a low value on caring for others, inclusion, cooperation, and solidarity. Cooperation is considered a sign of weakness. Career advancement, material success and competition are paramount. However, cooperating with employees to finish tasks is necessary in the shipping context. Following this logic, it is reasonable to posit that a high level of masculinity will have a negative impact on job performance in container shipping operations. Accordingly, this study hypothesized that:

Hypothesis 4: Perceived culture differences with respect to masculinity between local employees and for-
eign managing directors are negatively associated with job performance in container shipping companies.

2. Culture Difference and Transformational Leadership

In the past, transformational leadership has been widely identified as a reasonable explanation for improved organizational performance [3, 11, 15, 43]. Transformational leaders rise to meet the needs of employees and promote positive change for individuals, groups, and organizations rather than attempt to satisfy employees’ needs by being concerned with transactions or contingent reward methods [6]. Transformational leaders set a direction, aligning people to their direction, while also motivating and inspiring people [47]. Transformational leaders have been reported to have positive and direct effects on organizational development, effectiveness and performance [6].

As regards different types of leaders and outcomes, transformational leadership has been shown to be more effective than transactional leadership [4, 5]. Fiol et al. [25] suggested that transformational leaders have positive effects on their organizations.

Pillai and Meindl [62] found that collectively-orientated leaders have a strong positive effect on cultural groups, personnel and organizational performance. Gasimir and Waldman’s study indicated that more supervisors from Western cultures (e.g., Australia) manage employees by employing transformational leadership than supervisors from Eastern cultures (e.g., China). Accordingly, this study proposed that:

Hypothesis 5: Transformational leadership is positively associated with job performance.

According to Bass et al.’s study, transformational leader behavior is highly correlated with participation in decision-making [7]. Eylon and Au [23] examined the effects of empowerment and found that participants from both high and low power distance cultures are more satisfied with their jobs when they feel themselves to be empowered. This suggests that transformational leaders may need to be more participative in order to be effective in highly egalitarian societies. Javidan and House [42] also found that the managers employing transformational leadership can mitigate the differences between employees from more hierarchically structured cultures and can improve performance when working with group members. Accordingly, this study proposed the following:

Hypothesis 6: Transformational leadership weakens the negative relationship between power distance and job performance in container shipping companies; notably, high perceived differences in power distance will lead to lower job performance by employees in container shipping companies when transformational leadership is high rather than low.

Rauch et al. [64] compared the influence of culture difference on business success in small enterprises in Ireland, West Germany, and East Germany. They found a positive influence on small business success in a high uncertainty avoidance context but a negative influence in a low uncertainty avoidance context. Further, transformational leaders responded to the opinions of employees in high uncertainty avoidance companies, which resulted in a significant improvement in such employees’ performance. Transformational leadership therefore had an impact on the relationship between uncertainty avoidance and performance. Accordingly, this study hypothesized that:

Hypothesis 7: Transformational leadership strengthens the positive relationship between uncertainty avoidance and job performance in container shipping companies; notably, high perceived differences in uncertainty avoidance will lead to higher job performance by employees in container shipping companies when transformational leadership is high rather than low.

According to Jung and Avolio’s study [44], collectivists with a transformational leader generate more ideas, whereas individualists generate more ideas with a transactional leader. In their study, group performance was generally higher than that of individuals working alone. In House’s study [39], individualism attributes were found to vary across cultures. In Jung and Avolio’s study [44], in high collectivist cultures, employees showed higher performance with a transformational leader than with a transactional leader. They can enhance their work performance by following the instructions of their transformational leaders. Accordingly, this study posited that:

Hypothesis 8: Transformational leadership strengthens the positive relationship between collectivism and job performance in container shipping companies; notably, high perceived differences in regard to collectivism will lead to higher job performance by employees in container shipping companies when transformational leadership is high rather than low.

In their study, Helgstrand & Stuhlmecher [31] compared the leadership styles of Danish and American participants and found that leaders with transformational leadership behavior were able to mitigate the negative influence of masculine societies on employees’ work effectiveness. Examining individual and cultural variability in conversational indirectness, Holtgraves [38] found Koreans to be more indirect in regard to communication than Americans, and such indirectness in communication was linked to ‘face management’ [10]. People from Western societies regard cooperation as a sign of weakness. Leaders, therefore, need to increase the volition of
employees to enhance their performance by employing trans-
formational leadership. Managers can also use transforma-
tional leadership to reduce recognition conflicts between em-
ployees and managers. Accordingly, this study hypothesized
that:

Hypothesis 9: Transformational leadership weakens the nega-
tive relationship between masculinity and job
performance in container shipping companies; notably, high perceived differences of mascu-
linity will lead to lower job performance by
employees in container shipping companies
when transformational leadership is high rather
than low.

III. METHODOLOGY

1. Sample

The study sample comprised local employees in four major
foreign container shipping companies operating their busi-
nesses in the form of branch offices in Taiwan. These con-
tainer shipping companies, hereafter companies A, B, C and
D, originated in the USA, Japan, Korea, and Hong Kong,
respectively. Telephone calls to the companies’ Human Re-
source Managers revealed that companies A, B, C, and D had
150, 105, 110, and 102 local employees in Taiwan, respec-
tively; 467 in total. A questionnaire survey was sent to all
employees in the four foreign container shipping companies
in January, 2010. Forty-seven questionnaires were completed
by local employees in the USA based company (31.33 percent
of the total received); 59 questionnaires were returned from
the Japan based company (56.19 percent of the total received);
57 questionnaires were returned from the Korea based com-
pany (51.82 percent of the total received); and 49 question-
naires were returned from the Hong Kong based company
(48.03 percent of the total received). Thus, 212 usable re-
sponses were returned out of a possible 467, a response rate of
45.40 percent.

2. Measure

A variety of dimensions to measure culture difference are
found in the literature. Among these dimensions, Hofstede’s
[33, 34] cultural framework of power distance, uncertainty
avoidance, individualism, and masculinity has been widely
employed in the social sciences. Hofstede’s culture dimen-
sions, which have been cited and adopted more than 16,000
times since their publication [32], are widely referenced and
are frequently used as a conceptual framework for positing,
justifying, and explaining culture difference in research.
Hofstede’s dimensions provide a common ground for com-
parison and a relevant framework for assessing culture dif-
ference. Thus, the measurement items of culture difference in
this study were adapted from Hofstede’s national culture di-
dimensions. In order to ensure the accuracy and content validity
of the study questionnaire, the measures were discussed with
10 shipping executives and local employees in container ship-
ing companies in Taiwan.

Control variables

Several relevant control variables were controlled for pos-
sible confounding effects. Respondent’s age, educational
level, and work experience were included in the regression
models as control variables. Age is a commonly employed
control to account for personal effects that may affect hy-
pothesized relationships. Respondents’ educational level
reflected local employees’ level of ability to perceive differ-
ence in foreign managing directors’ national cultures and
leadership styles, while length of work experience indicated
the extent to which respondents’ possessed experience to as-
ass individual performance.

Independent variables

After carefully specifying the domain of each culture di-
mension, multiple-item scales were developed. Hofstede’s
[33, 34] culture dimensions of power distance, uncertainty
avoidance, collectivism, and masculinity were used in the
study for the purpose of measuring perceived differences
between local employees’ and foreign managing directors’
national culture attributes. Each of the four dimensions had
four items. In addition, since leadership style is reported to
better predict non-task performance behavior and contextual
performance behavior [14], we assessed transformational
leadership using five items developed from Bass’s [3] study.

Dependent variables

Job performance is an evaluation of specific tasks or the
achievement of individuals or groups in organizations. Ac-
cording to Porter and Lawler [63], measurements of job
performance include quality, quantity and the levels at which
individuals accomplish their work. Schermerhorn [67] stated
that job performance is the total quality or quantity pre-
semed when individuals or groups finish tasks. Borman and
Motowidlo [9] divided job performance into task and con-
textual performance. They defined task performance as the
individual’s or group’s job-relevant output, and contextual
performance as the perceptual evaluations of individuals by
other interested groups such as colleagues or supervisors.

Given that objective data are rarely published for individual
business units, and most companies consider actual perform-
ance data to be sensitive and are therefore reluctant to share
them, perceptual measures which asked respondents for their
assessment of their own performance were used to measure
personal performance. Eight job performance indicators were
used, namely: “I am one of the most efficient employees within
the organization”, “I actively learn specific skills and knowl-
dge”, “I can complete the task assigned by the supervisor”,
“My foreign managing director commends my performance”,
“I cooperate with my colleagues”, “I quickly response to cli-
ents’ question”, “My colleagues applaud my working effi-
ciency”, and “I help others after I finish my work”.


Moderating variables

Chan & Drasgow [14] investigated the effects of individual differences on the motivation to lead using factors such as general cognitive ability, values, personality and attitudes from different units and countries. They found that vertical individualism positively affected affective-identity and social-normative motivation to lead but had a negative impact on non-calculation motivation to lead. Moreover, transformational leadership had a crucial impact on factors related to national culture and individual performance. Foreign managing directors with transformational leadership were found to strengthen relationships with employees and facilitate their performance when they recognized the cultural characteristics of local areas. Given the aforementioned findings, this study posited that transformational leadership would moderate the relationship between national culture and job performance.

This study measured transformational leadership using 5 items adapted from Dubinsky et al. [20], Pillai and Meindl [62], and Helgstrand and Stuhlmaecher [31]. High scores on these items would suggest that respondents perceived high levels of concern from their foreign managing directors.

3. Research Steps

Several research steps, including the questionnaire design and various analysis methods, are described below. The first step was to select national culture attributes by reviewing the cross-culture management research literature and then design the questionnaire by carrying out personal interviews with container shipping practitioners and a content validity test. The questionnaire design followed the stages outlined by Iacobucci and Churchill [41]. Information sought was first specified, and then the following issues were settled: type of questionnaire and its method of administration, content of individual questions, form of response to and wording of each question, sequence of questions, and physical characteristics of the questionnaire.

In the process of determining questionnaire items, it is crucial to ensure the validity of their content, since this is an important measure of a survey instrument’s accuracy. Content validity refers to the extent to which a test measures what we actually wish it to measure. The assessment of content validity typically involves an organized review of a survey instrument’s content to ensure it includes everything it should and does not include anything it should not. The content validity of the questionnaire used in this study was tested through a survey instrument’s accuracy. Content validity refers to the extent to which a test measures what we actually wish it to measure. The assessment of content validity typically involves an organized review of a survey instrument’s content to ensure it includes everything it should and does not include anything it should not. The content validity of the questionnaire used in this study was tested through a literature review and interviews with practitioners. That is to say, questionnaire items were based on previous studies and judged to be relevant by 10 personnel who worked in foreign shipping companies.

Interviews with practitioners resulted in minor modifications to the wording of some questionnaire items and examples provided in some measurement items, which were finally deemed to possess content validity. For each item, respondents were asked to indicate the extent to which they agreed with it using a five-point rating scale where (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree).

In addition, this study used factor analysis to summarize national culture, transformational leadership, and job performance attributes into a smaller group of underlying dimensions named critical factors. The VARIMAX rotation technique was applied to transform a set of interrelated variables into a set of unrelated linear combinations of these variables. Only variables with a factor loading higher than 0.5 were extracted to aid interpretation. An Eigenvalue greater than one was used as the criterion to determine the number of factors in each data set [41]. Scales were tested using the Kaiser-Meyer-Olkin measure and the Bartlett test of Sphericity with all constructs [29]. In addition, a reliability test based on the Cronbach α value was employed to test the internal consistency of questionnaire responses.

One-way ANOVA was subsequently used to identify whether there were perceived differences between local employees’ and foreign managing directors’ national culture attributes. Finally, hierarchical regression analysis was used to examine the effects of perceived culture difference on employees’ job performance. Job performance consisting of task and contextual performance was used as a dependent variable in the study. The moderating effect of transformational leadership on the relationship between national culture and job performance was also investigated in the regression analysis. The analysis was carried out using the SPSS 17.0 for Windows statistical packages.

IV. ANALYSIS RESULTS

1. Profile of Respondents

Respondents’ profiles and their characteristics are displayed in Table 1. Table 1 shows the majority of survey participants (81.1%) were general employees, while 10.4% were supervisors. Only a few respondents held the position of division director/vice director (4.7%) and manager/assistant manager (3.8%), respectively. Table 1 also reveals respondents’ ages. Almost 30% of respondents were 41 years old or more, whereas 21.7% were 30 years old or less. Over half of respondents (59.0%) were aged between 31 and 40 years. Employees who had graduated from college/university accounted for more than two-thirds (69.8%) of respondents, while 29.7% employees had attended senior high school or below. Less than 1% (0.5%) of respondents held a Master degree or above. Table 1 also indicates that 42.9% of respondents had worked in their present company for 5 years or less, nearly one-third (32.1%) between 6 and 10 years, and 25.1% had worked for their current employing company for 11 years or more.

This study attempted to examine the effects of perceived culture difference on local employees’ job performance. Respondents were asked to provide an assessment of their job performance by indicating their level of agreement with eight job performance perceptual measures. As shown in Table 2,
Table 1. Profile of respondents.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number of respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job title</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager/assistant manager</td>
<td>8</td>
<td>3.8</td>
</tr>
<tr>
<td>Division director/vice director</td>
<td>10</td>
<td>4.7</td>
</tr>
<tr>
<td>Supervisor</td>
<td>22</td>
<td>10.4</td>
</tr>
<tr>
<td>General employee</td>
<td>172</td>
<td>81.1</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 years or less</td>
<td>46</td>
<td>21.7</td>
</tr>
<tr>
<td>31-40 years</td>
<td>125</td>
<td>59.0</td>
</tr>
<tr>
<td>41-50 years</td>
<td>31</td>
<td>14.6</td>
</tr>
<tr>
<td>51 years or more</td>
<td>10</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior high school or below</td>
<td>63</td>
<td>29.7</td>
</tr>
<tr>
<td>College/ University</td>
<td>148</td>
<td>69.8</td>
</tr>
<tr>
<td>Master or above</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Work experience (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 years or less</td>
<td>91</td>
<td>42.9</td>
</tr>
<tr>
<td>6-10 years</td>
<td>68</td>
<td>32.1</td>
</tr>
<tr>
<td>11-15 years</td>
<td>33</td>
<td>15.6</td>
</tr>
<tr>
<td>16-20 years</td>
<td>15</td>
<td>7.1</td>
</tr>
<tr>
<td>21 years or more</td>
<td>5</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Table 2. Respondents’ job performance.

<table>
<thead>
<tr>
<th>Job performance item</th>
<th>Mean¹</th>
<th>S.D.²</th>
</tr>
</thead>
<tbody>
<tr>
<td>I cooperate with my colleagues</td>
<td>4.18</td>
<td>0.43</td>
</tr>
<tr>
<td>I quickly respond to clients’ questions</td>
<td>4.15</td>
<td>0.60</td>
</tr>
<tr>
<td>I am one of the most efficient employees within the organization</td>
<td>4.11</td>
<td>0.61</td>
</tr>
<tr>
<td>I actively learn specific skills and knowledge</td>
<td>4.06</td>
<td>0.41</td>
</tr>
<tr>
<td>My colleagues applaud my work efficiency</td>
<td>4.06</td>
<td>0.53</td>
</tr>
<tr>
<td>I can complete the tasks assigned by the supervisor</td>
<td>4.01</td>
<td>0.39</td>
</tr>
<tr>
<td>My foreign managing director commends my performance</td>
<td>3.96</td>
<td>0.57</td>
</tr>
<tr>
<td>I help others after I finish my work</td>
<td>3.93</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Note: 1. The ratings were based on the mean scores obtained from a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).
2. S.D. = standard deviation.

respondents’ aggregated agreement scores for the eight job performance items ranged from 3.93 to 4.18. “I cooperate with my colleagues” was the transformational leadership item with which respondents most agreed, followed by “I quickly respond to clients’ questions”; “I am one of the most efficient employees within the organization”; “I actively learn specific skills and knowledge”; “My colleagues applaud my work efficiency”; “I can complete the tasks assigned by the supervisor”; “My foreign managing director commends my performance”; and “I help others after I finish my work”. The results implied that employees’ were satisfied with their performance under the instruction of their foreign managing directors.

Table 3 presents respondents’ perceptions of their foreign managing directors’ transformational leadership. Five items were evaluated. The item “My foreign managing director enables me to think about old problems in new ways” had the highest mean score (mean = 3.93), followed by “My foreign managing director expresses appreciation when I do a good job” (mean = 3.90); “My foreign managing director gives me personal attention when I seem neglected” (mean = 3.83); “My foreign managing director sets high standards for my work” (mean = 3.36), and “My foreign managing director makes me proud to be associated with him/her” (mean = 3.00).

2. Factor Analysis

This study used factor analysis to summarize the large number of national culture attributes into a smaller group of underlying dimensions. The data were deemed appropriate for analysis, according to the Kaiser-Meyer-Olkin sampling adequacy value of 0.836 [29]. The Bartlett Test of Sphericity result was significant ($\chi^2 = 3080.906, p < 0.00$), and well above the recommended level. Results shown in Table 4 indicate that four factors were subsequently found to underlie national culture attributes. They accounted for 67.325% of the total variance. To aid interpretation, only factors with a loading of 0.5 or higher were extracted [29].

Factor analysis with VARIMAX rotation was used to reduce the five transformational leadership items into a smaller group of underlying factors. The Kaiser-Meyer-Olkin value of 0.830 indicated that the data were appropriate for analysis. The Bartlett Test of Sphericity result (Chi-square = 353.526, $P < 0.00$) suggested that correlations existed among some of the response categories. One factor was extracted from the five transformational leadership items (see Table 4). Since the five transformational leadership items were associated with the leader’s individual behavior which can impact on employees’ job performance, this dimension was identified as a
transformational leadership dimension. This factor accounted for 64.479% of the total variance. “My supervisor can be trusted” had the highest factor loading on this factor. Two factors, which accounted for 62.902% of the total variance, were found to underlie the job performance attributes. The Kaiser-Meyer-Olkin value of 0.838 indicated that the data were appropriate for analysis. The Barlett Test of Sphericity result (Chi-square = 718.593, \( P < 0.000 \)) was well above the recommended level. The two extracted dimensions were consistent with those developed by Borman and Motowidlo [9].

3. Reliability Test

A reliability test based on Cronbach’s alpha statistic value was used to determine whether the extracted dimensions were consistent and reliable [29]. Cronbach’s alpha value for each dimension was well above the suggested threshold of 0.7, considered adequate for confirming a satisfactory level of reliability in research [13, 41, 61, 69] (see Table 5).
Table 6. Perceptions of the national culture of employees and foreign managing directors.

<table>
<thead>
<tr>
<th>National culture variables and dimensions</th>
<th>PEME Mean</th>
<th>PEME S.D</th>
<th>PFMD Mean</th>
<th>PFMD S.D</th>
<th>Mean Difference</th>
<th>t-value</th>
<th>p-value *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power distance (PD)</strong></td>
<td>3.03</td>
<td>0.30</td>
<td>3.07</td>
<td>0.62</td>
<td>-0.145</td>
<td>-2.52</td>
<td>0.03**</td>
</tr>
<tr>
<td>I encourage employees to participate in corporate decision making</td>
<td>4.12</td>
<td>0.56</td>
<td>4.02</td>
<td>1.01</td>
<td>0.100</td>
<td>1.26</td>
<td>0.21</td>
</tr>
<tr>
<td>I think that employees should not hold many personal opinions</td>
<td>2.21</td>
<td>0.67</td>
<td>2.90</td>
<td>1.51</td>
<td>-0.693</td>
<td>-6.92</td>
<td>0.00***</td>
</tr>
<tr>
<td>I think that work needs to take place following supervisors’ instructions</td>
<td>3.29</td>
<td>1.02</td>
<td>2.86</td>
<td>1.37</td>
<td>0.437</td>
<td>2.90</td>
<td>0.00***</td>
</tr>
<tr>
<td>Before making decisions, I will not acquire opinions from employees</td>
<td>2.51</td>
<td>0.67</td>
<td>2.65</td>
<td>0.74</td>
<td>-0.140</td>
<td>-2.34</td>
<td>0.02**</td>
</tr>
<tr>
<td><strong>Uncertainty avoidance (UA)</strong></td>
<td>3.72</td>
<td>0.38</td>
<td>3.51</td>
<td>0.28</td>
<td>0.208</td>
<td>6.29</td>
<td>0.00***</td>
</tr>
<tr>
<td>I prefer to have routine works in order to avoid making mistakes</td>
<td>2.61</td>
<td>0.63</td>
<td>2.92</td>
<td>0.62</td>
<td>-0.310</td>
<td>-5.15</td>
<td>0.00***</td>
</tr>
<tr>
<td>I like to discuss with employees before making decisions</td>
<td>4.13</td>
<td>0.54</td>
<td>2.92</td>
<td>0.71</td>
<td>1.210</td>
<td>20.26</td>
<td>0.00***</td>
</tr>
<tr>
<td>I prefer to work with detailed specification</td>
<td>3.62</td>
<td>0.67</td>
<td>3.91</td>
<td>0.64</td>
<td>-0.290</td>
<td>-3.97</td>
<td>0.00***</td>
</tr>
<tr>
<td>I will collect more information before making decisions</td>
<td>4.52</td>
<td>0.53</td>
<td>4.30</td>
<td>0.70</td>
<td>0.220</td>
<td>5.16</td>
<td>0.00***</td>
</tr>
<tr>
<td><strong>Collectivism (COL)</strong></td>
<td>3.96</td>
<td>0.42</td>
<td>3.83</td>
<td>0.57</td>
<td>0.136</td>
<td>5.47</td>
<td>0.00***</td>
</tr>
<tr>
<td>I emphasize on group interests rather than personal benefits</td>
<td>3.32</td>
<td>0.99</td>
<td>2.49</td>
<td>0.91</td>
<td>0.830</td>
<td>15.28</td>
<td>0.00***</td>
</tr>
<tr>
<td>I prefer to encourage team work</td>
<td>3.94</td>
<td>0.67</td>
<td>4.27</td>
<td>0.61</td>
<td>-0.330</td>
<td>-6.38</td>
<td>0.00***</td>
</tr>
<tr>
<td>I keep harmonious among groups</td>
<td>4.11</td>
<td>0.51</td>
<td>4.09</td>
<td>0.77</td>
<td>0.020</td>
<td>0.21</td>
<td>0.83</td>
</tr>
<tr>
<td>I think it is important to cooperate with employees</td>
<td>4.48</td>
<td>0.59</td>
<td>4.45</td>
<td>0.58</td>
<td>0.003</td>
<td>0.66</td>
<td>0.51</td>
</tr>
<tr>
<td><strong>Masculinity (MAS)</strong></td>
<td>2.98</td>
<td>0.36</td>
<td>3.85</td>
<td>0.41</td>
<td>-0.843</td>
<td>-22.72</td>
<td>0.00***</td>
</tr>
<tr>
<td>I think personal career achievement is more important than life quality</td>
<td>2.10</td>
<td>0.69</td>
<td>4.25</td>
<td>0.62</td>
<td>-2.150</td>
<td>-32.06</td>
<td>0.00***</td>
</tr>
<tr>
<td>I pursue any promoting opportunity</td>
<td>4.03</td>
<td>0.63</td>
<td>4.32</td>
<td>0.47</td>
<td>-0.290</td>
<td>-5.31</td>
<td>0.00***</td>
</tr>
<tr>
<td>I am a self-confident person</td>
<td>3.89</td>
<td>0.71</td>
<td>4.32</td>
<td>0.62</td>
<td>-0.430</td>
<td>-6.99</td>
<td>0.00***</td>
</tr>
<tr>
<td>Besides work, I am less concerned with employees</td>
<td>1.93</td>
<td>0.70</td>
<td>2.44</td>
<td>1.02</td>
<td>-0.510</td>
<td>-5.98</td>
<td>0.00***</td>
</tr>
</tbody>
</table>

Note: 1. PEME: perceptions of employees’ national culture; PFMD: employees’ perceptions of their foreign managing directors’ national culture 2. The ratings were based on the mean scores obtained from a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) 3. 1 = strongly disagree, 5 = strongly agree; ** = P < 0.05; *** = P < 0.001

Table 5. Reliability test results.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Item</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>National culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power distance (PD)</td>
<td>4</td>
<td>0.81</td>
</tr>
<tr>
<td>Uncertainty avoidance (UA)</td>
<td>4</td>
<td>0.83</td>
</tr>
<tr>
<td>Collectivism (COL)</td>
<td>4</td>
<td>0.82</td>
</tr>
<tr>
<td>Masculinity (MAS)</td>
<td>4</td>
<td>0.77</td>
</tr>
<tr>
<td>Transformational leadership (TL)</td>
<td>5</td>
<td>0.74</td>
</tr>
<tr>
<td>Job performance</td>
<td>8</td>
<td>0.85</td>
</tr>
</tbody>
</table>

4. Differences between Local Employees’ and Foreign Managing Directors’ National Culture Attributes from the Perspective of Employees

To evaluate the differences between local employees’ and foreign managing directors’ national culture attributes from the perspective of employees, one-way analysis of variance (ANOVA) was performed. As can be seen in Table 6, local employees’ and foreign managing directors’ national culture attributes differed significantly. Employees had significantly higher mean scores than foreign managing directors on the collectivism (mean = 3.96 and 3.83, respectively) and uncertainty avoidance (mean = 3.72 and 3.53, respectively) dimensions. In contrast, employees had significantly lower mean scores than foreign managing directors on the power distance (mean = 3.03 and 3.07, respectively) and masculinity (mean = 2.98 and 3.85, respectively) dimensions. These results were not unexpected since foreign managing directors are in charge of the operational and organizational performance of their businesses. They can make a decision without taking into account employees’ opinions.

5. Perceived Culture Difference Based on Country of Origin of Foreign Managing Directors’ Employing Company

One-way analysis of variance was also employed to evaluate the perceived culture difference based on country of origin of foreign managing directors’ employing company. As previously indicated in Section 3.1, respondent employees’ foreign managing directors’ companies originated in the USA, Japan, Korea and Hong Kong (companies A, B, C and D). Based on local employees’ perceptions, national culture dimension mean scores differed significantly between foreign managing directions in companies originating in the USA, Japan, Korea and Hong Kong. Table 7 shows that foreign managing directors in company B (originating in Japan) had a significantly higher mean score for the power distance dimension (mean = -0.96) than foreign managing directors in companies A, C and D (originating in the USA, Korea and Hong Kong, respectively). The findings were consistent with those reported in previous studies [36, 37].
Table 7. Culture difference based on country of origin of foreign managing directors’ employing company.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F Ratio</th>
<th>P-value</th>
<th>Scheffe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power distance</td>
<td>-0.53</td>
<td>-0.96</td>
<td>-0.83</td>
<td>-0.77</td>
<td>85.38</td>
<td>0.00***</td>
<td>(1,2) (1,3) (2,3) (2,4) (3,4)</td>
</tr>
<tr>
<td></td>
<td>(0.54)b</td>
<td>(0.27)</td>
<td>(0.24)</td>
<td>(0.69)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty avoidance</td>
<td>0.21</td>
<td>-0.11</td>
<td>0.55</td>
<td>0.20</td>
<td>25.40</td>
<td>0.00***</td>
<td>(1,2) (1,3) (2,3) (2,4) (3,4)</td>
</tr>
<tr>
<td></td>
<td>(0.52)</td>
<td>(0.43)</td>
<td>(0.24)</td>
<td>(0.43)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collectivism</td>
<td>0.23</td>
<td>0.23</td>
<td>-0.04</td>
<td>0.14</td>
<td>7.86</td>
<td>0.00***</td>
<td>(1,3)</td>
</tr>
<tr>
<td></td>
<td>(0.52)</td>
<td>(0.26)</td>
<td>(0.25)</td>
<td>(0.31)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masculinity</td>
<td>-0.71</td>
<td>-1.06</td>
<td>-0.82</td>
<td>-0.81</td>
<td>3.95</td>
<td>0.00**</td>
<td>(1,2)</td>
</tr>
<tr>
<td></td>
<td>(0.85)</td>
<td>(0.35)</td>
<td>(0.37)</td>
<td>(0.46)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: A: U.S.A; B: Japan; C: Korea; D: Hong Kong.
a. represents mean; b. represents standard deviation.
** represents significance level p < 0.05; ***represents significance level p < 0.01.

In contrast, foreign managing directors in company C (originating in Korea) had a significantly higher mean score (mean = 0.55) for the uncertainty avoidance dimension than foreign managing directors in companies A, B and D (0.21, -0.11 and 0.20, respectively). Table 7 also shows that foreign managing directors in company B had a much lower mean score for the masculinity dimension (-1.06) than foreign managing directors in companies A, C and D (mean = 0.71, -0.82, and -0.81).

Scheffe tests employed to test differences in national culture dimensions based on the country of origin of foreign managing directors’ employing company indicated that foreign managing directors in companies originating in the USA, Japan, Korea and Hong Kong significantly differed from each other in the power distance and uncertainty avoidance dimensions.

Foreign managing directors in companies originating in the USA and Japan significantly differed from those in company C (based in Korea) in the collectivism dimension. There was also a significant difference between foreign managing directors in companies originating in the USA and Japan in the masculinity dimension.

6. Hierarchical Regression Analysis

In this study, hierarchical regression analysis was used to examine the research hypotheses. As shown in Table 8, the analysis was conducted in several steps. In the first step, control variables namely, respondent’s age, educational level and years of work experience were entered into the regression Model A.

Second, the national culture and transformational leadership dimensions were entered into the regression in Model B. Finally, the moderating effects of transformational leadership were examined in Model C. If the interactions between transformational leadership and national culture variables were found to be significant, then there existed evidence to support the hypothesis that transformational leadership had a moderating effect on the relationship between national culture and job performance.

Prior to the creation of the interaction terms in Models A and B, the independent variables were mean-centered to reduce multicollinearity [2]. The subsequent results indicated that the job performance models were statistically significant at a P-value = 0.01 level. Further, Durbin-Watson (D-W) values were all in the acceptable range (between 1.5 and 2.5), indicating the residuals were not correlated and that an autocorrelation problem did not therefore exist in this research.

In the first regression model, Model A, only control variables were taken as independent variables, and showed no
significant influence on job performance. In Model B, national culture and transformational leadership dimensions were considered. The results showed that power distance ($\beta = -0.197, P < 0.01$), collectivism ($\beta = 0.238, P < 0.05$), masculinity ($\beta = -0.311, P < 0.01$) and transformational leadership ($\beta = 0.288, P < 0.01$) were all significant in Model B. Accordingly, research hypotheses H1, H3, H4 and H5 were supported in the study. However, the results showed uncertainty avoidance ($\beta = 0.149$) was not significant in Model B. H2 was therefore not supported in the study.

In general, the results indicated that perceived differences in national culture with respect to collectivism were positively associated with job performance, whereas perceived differences in national culture with respect to power distance and masculinity were negatively related to job performance. Overall, the results indicated that national culture and transformational leadership partially influence employees’ job performance in the container shipping context. The results also suggested that transformational leadership has a positive influence on employees’ job performance. This result is consistent with the previous studies of Dickson et al. [18], Jung and Avolio, [44], Kuchinke [48], and Scandura and Dorfman [66].

The third regression model set considered the moderating effect of transformational leadership. The interaction between power distance and transformational leadership ($\beta = -0.276, p < 0.01$) and masculinity and transformational leadership ($\beta = -0.179, p < 0.01$) was negative and significant. Thus, H6 and H9 were supported. Further, as seen in Model C, the results indicated that the interaction between transformational leadership ($\beta = 0.212, p < 0.05$) and uncertainty avoidance and collectivism ($\beta = 0.301, p < 0.01$) was positively associated with job performance. Thus, H7 and H8 were supported. The results thus indicated that transformational leadership weakened the negative influence of power distance and masculinity, while it strengthened the positive effects of uncertainty avoidance and collectivism on employees’ job performance.

V. DISCUSSION AND CONCLUSION

This study empirically examined the effects of perceived culture difference between local employees and foreign managing directors and foreign managing directors’ transformational leadership on job performance based on employees’ perceptions in the container shipping context. Research hypotheses were formulated and tested using survey data collected from Taiwanese employees working in four major foreign container shipping companies. Hierarchical regression analysis was used to examine the effects of national culture dimensions (namely, power distance, collectivism, uncertainty avoidance, and masculinity) and transformational leadership on job performance.

The study found that uncertainty avoidance and collectivism positively influenced job performance, whereas power distance and masculinity were negatively associated with job performance. The study findings indicated, therefore, that foreign, managing directors need to find ways to mitigate the perceived negative effects of power distance and masculinity culture characteristics and enhance the positive effects of uncertainty avoidance and collectivism culture characteristics on job performance.

The study also found foreign managing directors’ transformational leadership behavior had a positive effect on local employees’ job performance. This finding suggests that foreign managing directors should encourage employees to participate in decision-making and use creative and innovative methods in the performance of their jobs. Moreover, by expressing appreciation for employees’ efforts to complete tasks on time, or to perform them to the best of their ability, foreign managing directors can enhance local employees’ job satisfaction and achievement.

This study also found that transformational leadership had a significant moderating effect on the relationship between national culture and job performance. The study results also indicated that high transformational leadership weakens the negative influence of power distance and masculinity characteristics on job performance and strengthens the positive effects of uncertainty avoidance and collectivism characteristics on it. The study findings imply, therefore, that by adopting transformational leadership behavior, the negative effects of power distance and masculinity characteristics on job performance can be weakened, and the positive effects on it of uncertainty avoidance and collectivism characteristics can be strengthened. The study’s findings thus suggest that foreign managing directors should grant local employees empowerment by encouraging them to present their opinions before making final decisions. Moreover, to mitigate culture differences between local employees and foreign managers, the latter should endeavor to improve group relationships among employees and set clear regulations to decrease the impact of cultural difference.

This study makes several contributions to the literature. First, most previous studies have focused on cross-culture issues and few have investigated the influence of national culture dimensions on job performance in the container shipping context. This research not only examined the effects of perceived culture differences between local employees and foreign managing directors and transformational leadership on local employees’ job performance in the container shipping industry, but also employed hierarchical regression analysis to investigate their effects.

Second, the study explored the moderating effect of transformational leadership on the relationship between national culture and job performance. Third, to the authors’ best knowledge, this study was the first to examine the effects of local employees’ perceptions of their foreign managing directors’ national culture and transformational leadership on job performance. The insights gained may be of value to current and potential container shipping carriers. Fourth, the study provides a stepping stone for further empirical research in the maritime context with regard to cross-culture manage-
ment. Fifth, from a practical point of view, this study’s insights gained from employees’ perceptions of the effects of national culture and transformational leadership on job performance may assist container shipping carriers in identifying the effects of culture difference factors in their international business operations.

However, despite its contributions, this study was limited to an evaluation of the effects of four national culture dimensions and transformational leadership on job performance. Job performance can be influenced by other variables such as organizational culture and organizational citizenship behavior [40, 51, 55, 76]. These additional variables might be considered in future research and provide critically important insights. Finally, this research was limited to investigating perceived culture differences among foreign managing directors in four container shipping companies in Taiwan. Future research could extend the investigation to international businesses in other countries.

REFERENCES


