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博士論文

文化認知差異、轉換型領導風格與員工績效關 係研究-以貨櫃航運業者為例 An Evaluation of Perceived Cultural Differences, Transformational Leadership and Employees' Job Performance in Container Shipping Companies

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An Evaluation of Perceived Cultural Differences, Transformational Leadership and Employees' Job Performance in Container Shipping Companies

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ABSTRACT

This study aims to evaluate the effects of perceived differences of national culture on employees' job performance based on Hofstede's national culture framework. Data are collected from employees worked in oversea branch offices or agents in the context of container shipping company. Based on factor analysis, five cultural difference dimensions are identified, namely, power distance, collectivism, uncertainty avoidance, masculinity, long-term orientation, whereas three transformational leadership dimensions are also identified: Charisma-inspiration, individual consideration, and intellectual stimulation. In addition, two individual related performance are also identified, namely, task and contextual performance in this study.

In addition, ANOVA results find that perceived cultural differences exist between employees and their foreign managing directors from the perception of employees. A hierarchical regression analysis is undertaken in this study. Results indicate that perceived cultural difference dimensions such as uncertainty avoidance and collectivism, and long-term orientation have a positive influence on job performance, whereas power distance and masculinity have a negative influence on job performance.

The study also investigates the moderating effects of transformational leadership. Results reveal that transformational leadership strengthen the positive effects of uncertainty avoidance, collectivism, and long-term orientation and weaken the negative effects of power distance and masculinity on job performance.

Keywords: National culture, transformational leadership, job performance, factor analysis,

hierarchical regression

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摘要

本研究以定期貨櫃航運業者海外分公司員工為研究對象,探討文化差異、轉換型 領導與員工工作績效之間的關係。依 Hofstede 國家文化理論架構,經由因素分析得 出五個文化差異構面,分別為「權利距離」、「不確定避免」、「群體主義」、「男性主義」 及「長期導向」。在轉換型領導部份則可區分為三個構面,分別為「魅力領導」、「個 別關懷」及「智能激勵」。員工工作績效部份亦區分為兩個構面;「任務績效」及「情 境績效」。

本研究經由單因子變異數分析(One-way ANOVA)得知,分公司員工與其外國主管 之間在國家文化構面「權利距離」、「不確定避免」、「群體主義」、「男性主義」及「長 期導向」間的確存在文化認知上的差異。

本研究採用階層迴歸方法,分析國家文化構面及轉換型領導對於員工個人績效的 影響關係。研究結果顯示員工在「不確定避免」、「群體主義」及「長期導向」上和主 管的認知差異愈大時,對於員工個人績效具有正向的影響。而對於「權利距離」及「男 性主義」等構面認知程度愈大時,則會對個人績效產生負向的影響。另外本研究亦發 現當員工認知到主管採用轉換型領導行為時,其對於個人績效亦會產生正向的影響效 果。

此外,本研究檢視轉換型領導在文化差異及員工個人績效關係之間的調節效果。 結果顯示當員工認知到主管的轉換型領導時,可增強其「不確定避免」、「群體主義」 及「長期導向」對於員工個人績效的正向影響並減弱「權利距離」及「男性主義」等 文化認知差異對於員工個人績效的負向影響。此研究結果可提供定期貨櫃航運業者在 選派管理人員至海外分公司經營業務時的參考。

關鍵字:國家文化、轉換型領導、工作績效、因素分析、階層迴歸、調節效果

Π

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CHAPTER 1 Introduction

1.1 Research Background and Motivation

The rapid expansion of globalization has had a tremendous impact on borders where businesses operate. Over the last twenty years, a great number of transnational companies have extended their international operational scope and have evolved in regard to scale and form in order for to survive in both markets and industries (UNCTAD 2009, 2010) and to look for business opportunities across the globe (Leung et al., 2005). According to UNCTAD (2010), more than 90 % (451 firms) of 500 largest global companies have established more than 200,000 branch offices overseas, an average numbers of 470 for each company in 2009. Further, the oversea sales value accounted for nearly half of the total sales values (47.8%) among these 500 global companies at that time. Organizations and employees in firms are facing an increasingly multicultural business world (Ger, 1999; Friedman, 2005; Tsui et al., 2007). The contemporary operating environment is therefore becoming culturally interconnected and more competitive.

Under the influence of globalization, firms need to particularly acknowledge the impacts of cultural diversity and difference when developing businesses in a new territory (House et al., 2004). Globalization provides opportunities for business but also brings major challenges. The most important challenge is to recognize cultural diversity along with business practices in different countries/societies throughout the world (Kogut and Singh, 1988; House et al., 2004), which contributes to the establishment of competitive advantage of operation. As container shipping companies disperse their assets and operations across the globe, their competitiveness become increasingly dependent on the

management ability to gain culturally diverse human resources. These increasing multinational operations increase multiculturalism within organizations and interactions between employees and managers of different cultures. The container shipping industry is an international service (Stopford, 2009). While facing the cultural diversity inherent in a global operation environment, container shipping companies need to ensure their management practices can succeed in providing services overseas.

In a multicultural context, container 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 offices in more than 125 countries or regions from which 16,900 local employees were hired around the globe (Maersk Line, 2013), whereas Mediterranean Shipping Company, MSC, which holds the position of the second largest carrier, sets up 421 local offices in 145 countries with MSC staff of over 30,000 professionals worldwide (Mediterranean Shipping Company, 2013). It should be understood that effective cross-cultural managerial practices, therefore, should include an awareness of cross-cultural differences between employees and managers (Adler et al., 1986; Thomas, 1999; Neelankavil et al., 2000).

Hence, in order to maintain a high level of service quality in various operations provided by branch offices or from agents to meet customer requirements, container shipping companies frequently have assigned managers or directors to supervise their overseas business. To sustain the organizational performance of a culturally diverse workforce, the development of cross-cultural management in a multinational context therefore has become an increasingly important strategic issue (Gelade et al., 2008). However, since employees are usually accustomed to their own culture, which are deeply embedded in employees mind and affect to their attitudes, beliefs, and behaviors, it is not easy to understand and accept practices and values of global fields that dramatically vary from one's own personal experiences. Thus, container shipping companies desiring to succeed in global business need to ensure their managers assigned overseas possess the characteristics and abilities of flexibility that will allow them to respond to cultures dramatically different from those of their own countries (House et al., 2004).

With the recognition and perception of leader type increases the likelihood of success with instructing overseas employees. The effects of transformational leader behavior have been applied as a useful leadership type in the context of cultural diversity. Transformational leadership can be an effective type of leadership (Dorfman et al., 1997), which involves developing a closer relationship between leaders and employees, one based more on trust and commitment than on contractual agreements (Bass and Avolio, 1994). Jung and Avolio (1999) indicated that in highly collectivist cultures, employees show higher performance with a transformational leader than with a transactional leader. On the other hand, employees from highly individualized cultures can also enhance their working performance with a group by accepting instruction through transformational leadership. Javidan and House (2001) also indicated that managers should be aware of specific differences and should expect to change the way they communicate with subordinates in countries with higher hierarchical structure and status differentials. Therefore, transformational leadership possesses significant effectiveness on eliminating the negative effects of cultural differences between local employees and foreign managing directors.

A vast body of previous studies on investigating cross-cultural differences have focused on Hofstede's (1983, 2001) dimensions of national culture. Hofstede (1980, p. 25) defined national culture as "... the collective programming of the mind which distinguishes the members of one group or society from another." Hofstede (1980) used the data collected from questionnaire surveys from 117,000 employees in a multinational corporation (IBM) and its subsidiaries in 71 countries to examine national cultural differences, and identified four national cultural 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 (Chen et al., 2009). Uncertainty avoidance represents the extent to which members share beliefs and build institutions that protect them from discomfort and fear of ambiguous situations. Individualism reflects a culture's emphasis on the needs and goals of individuals rather than those of tightly knit groups (Breser and Chen, 2007). Collectivist cultures tend to make greater distinctions between in-group versus out-group members, whereas individualist cultures tend to apply similar standards to all people. Masculinity is the extent to which members of a culture prefer stereotypically masculine values such as financial and other extrinsic rewards rather than stereotypically feminine values such as caring for others (Elfenbein and Ambady, 2003). Hofstede and Bond (1988) later developed a fifth dimension, Confucian dynamism (or long-term orientation). Long-term orientation refers to future-orientated values such as persistence and thrift, whereas short-term orientation refer to past- and present- oriented values such as respect for tradition and fulfilling social obligations(Hofstede, 2001; Kirkman et al., 2006). This five-dimension framework has favored by researchers for investigating and exploring studies in national culture differences because of its clarity, parsimony, and resonance with managers (Kirkman et al., 2006).

Taiwan is an island-economy that is highly dependent on foreign trade. International transportation therefore plays a crucial role for the sustained prosperity of its economy.

According to the Ministry of Transportation and Communications (2009) report, over 99 % of annual foreign trade cargo in Taiwan is carried by sea transportation. With the significant growth in foreign trade, the container shipping industry in Taiwan has become flourished over recent decades. Three Taiwan-based container shipping companies, namely, Evergreen Marine Corporation Line, Yang Ming Marine Transport Corporation and Wan Hai Line, are accounting for more than 7 % of the container slot capacity in the world and are ranked among the top 23 global container carriers (AXS-Alphaliner, 2013). Evergreen Line established more than 240 offices around the world whereas Yang Ming Line set up branch offices and use agents in more than 70 countries or regions for providing shipping and logistics service to their customers around the world. Wan Hai Line also extended its business territory by deploying over 200 branches/agents in more than 70 countries overseas.

A growing body of previous studies has shown that national cultural differences are related to workplace behaviors, attitudes and other organizational outcomes (Hofstede, 1980; Trompenaars, 1993; Schwartz, 1994; Harris and Moran, 1995; Ng et al., 2009). Thus, this study seeks to examine how employee's job performance is affected by cultural difference with regard to specific national cultural dimensions and transformational leadership. It differs from past studies in two ways. Firstly, cultural differences research has focused primarily on the influence of national culture dimensions and only a few studies have considered the role of transformational leadership (Kirkman et al., 2006). By simultaneously studying cultural differences and leadership, this study is an attempt to assess the effect of cultural differences and the moderating role of transformational leadership on job performance. Second, some prior past studies have used cultural difference measures in a specific traffic industry. Merritt and Helmreich (1996) evaluate pilots and cockpit

attendants' attitude from nine countries in on the basis of Hofstede's individualism and power distance dimensions. Håvold (2000, 2007) investigates the effects of national culture and safety culture on seafarers' safety behavior. Lu et al. (2012) explores the relationship between national culture and seafarers' safety behavior. However, an understanding of cultural differences and leadership in an international transportation or maritime environment is lacking. To fill this gap, this study is an effort to examine the cultural differences between oversea employees and managers and further to investigate the moderating effect of transformational leadership as it relates to job performance in the context of container shipping company.

1.2 Objective of the Study

This study aims to evaluate the effects of cultural difference on employees' job performance based on Hofstede's national culture framework in the context of container shipping company. Furthermore, this study investigates the moderating effects of transformational leadership in this model. Several research issues associated with the objectives are explored as follows:

- (1) To recognize overseas employees' perception on national culture, transformational leadership, and job performance.
- (2) To examine perceived cultural differences between employees and foreign managing directors from employees' perceptions in the container shipping context.
- (3) To compare the perceived cultural difference between employees and foreign managing directors according to employees' nationality, religious affiliation, and job title.
- (4) To explore the relationships between cultural difference and job performance in the container shipping context.

- (5) To examine the relationships between transformational leadership and job performance in the container shipping context.
- (6) To examine the moderating effects of transformational leadership between cultural difference and job performance in the container shipping context.

1.3 Scope of the Study

The study primarily identifies the perceived differences of national culture between managing directors assigned overseas and foreign employees. Further, this study examines the moderating effects of transformational leadership between perceived cultural differences and employees' job performance. The term container shipping employed in this study refers to the container shipping companies with cargo-carrying ships operating between scheduled, advertised ports of loading and discharging on a regular basis.

Due to the limitation of time and data collection, this study focuses on investigating employees, who are hired in charge of operation in container shipping companies' foreign branch offices and agencies around the world and empirical study is conducted in investigating perception of cultural difference from these employees. On the other hand, non-liner shipping firms such as oil tanker, dry cargo ship, bulk carrier, and passenger vessels were not considered in the research.

1.4 Organization of the Study

The study consists of six chapters as shown in Figure 1.1. Chapter 1 composes the introduction which involving the background, motivation, objective, research scope, and organization of this study. An introduction of container shipping as well as a review of the literature on national culture, transformational leadership and job performance are presented

in Chapter 2. The objective of this chapter is to identify crucial dimensions of national culture, measures evaluating transformational leadership and types of employees' job performance. This chapter further discusses the moderating effects of transformational leadership on between perceived cultural difference, and employees' job performance.

Chapter 3 constructs a conceptual model to examine the relationships between perceived cultural difference, transformational leadership, and employees' job performance. In Chapter 3, questionnaire survey, sampling technique, and analysis methods are also included for describing the research methodology. The research framework and hypotheses then are initially developed and discussed based on the literature review. Subsequently, questionnaire design and sample selection are then specified. Ultimately, statistical techniques utilized in the research are introduced.

Chapter 4 presents the analytical results and findings of the study. Demographic characteristics of respondents and general statistical descriptions of perceived cultural differences, transformational leadership and employees' job performance attributes are firstly performed. Further, the results of exploratory factor analysis of underlying factors of perceived cultural differences, transformational leadership and job performance are performed. An ANOVA test is also conducted to identify respondents according to their characteristics such as nationalities, religion affiliation, job title, work experience, and educational level in this chapter.

Chapter 5 shows the empirical results of confirmatory factor analysis (CFA) (e.g. the evaluation of adequacy of validity, reliability, and unidimensionality of proposed models) of perceived cultural difference, transformational leadership, and job performance. Further, the relationships between perceived cultural difference and job performance as well as the

moderating role of transformational leadership are also examined by employing hierarchical regression technique in this chapter.

Chapter 6 reveals conclusions drawn from the research finding and contributions and the implications on perceived cultural differences between employees and foreign managing directors in the context of container shipping company. Limitations and suggestions for future research are also addressed in this chapter.



Chapter 6 Conclusions and Implications

Figure 1.1Organization of the Study

CHAPTER 2 Literature Review

This chapter deals with the contents of reviewing the introduction to container shipping, definitions of culture, national culture, transformational leadership and employees' job performance. Further, a theoretical framework is formulated to explain the relationships between national culture, transformational leadership and employees' job performance in the container shipping context.

The first section provides a comprehensive overview to container shipping. The second section concerns about the definition of culture and national culture dimensions. Literature on transformational leadership and job performance are subsequently introduced in the third and fourth section. The last section summaries the literature reviews in this study.

2.1 Introduction to Container Shipping

The term of container has not been comprehensively recognized until the early 1930s. Containers are defined as box-like structures of pressed steel resembling the top of a covered wagon fitted with ringbolts and/or slung from the low-sided or flat wagon on which are carried, and/or may then be mounted on road lorries and carted to any required point. From the definition of Dictionary of Military and Associated Terms (Department of Defense, U.S., 2005), container is an article of transport equipment that meets American National Standards Institute/International Organization for Standardization standards that is designed to be transported by various modes of transportation, which also designed to facilitate and optimize the carriage of goods by one or more modes of transportation without intermediate handling of the contents and equipped with features permitting ready handling and transfer from one mode to another. Containers may be fully enclosed with

one or more doors, open top, refrigerated, tank, open rack, gondola, flat rack, and other designs. Specifically, container is a large box-like receptacle of standardized design for the transportation of freight by road, rail, or sea.

The use of container in shipping can be traced back to World War I period, at which the Ammunition are loaded into containers by the United State military sent to its European ally (Mercogliano, 2006; Fossey, 2007). In 1955, a North Carolina trucking entrepreneur, Malcolm McLean, initially adopted a roll-on/roll-off stowage method, which taking trailers from large trucks and stowing them in a ship for transporting cargo (inter-modal). However, this method was not appreciated at that time due to the large waste of loading space onboard the vessel.

After that, this original concept has been adjusted, which loads only containers without the chassis onto the ships. On 26 April 1956, the first ship with containers, SS *Ideal X*, sailed from Port Newark, New Jersey, for Houston, Texas, and in 1958 the California to Hawaii trade delivery opened a new era of cargo transportation (Stopford, 2009). From then on, containers were employed as important loading equipment for shouldering significant operational and economic advantages for shippers (Mercogliano, 2006).

Yet, the appearance of containers did not solve the problem of cargo throughput. At the beginning, shipping companies were reluctant to adopt using container ship for some reasons. First is the conversion of existing ships, which merely equipment lashings on deck for the fixing of containers and use existing booms served as the means to handle the boxes. Further, there is a lack of standardization in container type (e.g. length, height, paid load capacity), which hindered the seamless movement of cargo through land to sea side (Mercogliano, 2006).

Until 1961, the International Standards Organization (ISO) set up standards, which applied to dimensions, corner casting strength, floor strength, racking tests and the gross weight of the container for containers (Stopford, 2009). The standard boxes types for general cargo were the twenty-foot equivalent unit (TEU) and the forty-foot equivalent unit (FEU). The introduction of the container enabled cargo handling processes to gain a high level of standardization and overcome many of the technical difficulties of cargo transshipment (Mercogliano, 2006). At the same time the use of containers solved the occurrence of pilferage during cargo transferred and reduced loading and discharging time. The container proved the means by which cargo could be transported by all modes with minimal adaptation of carrier technology.

Another major technological improvement in the transportation of containers came with the introduction of cellular construction. The installation of vertical rails in the holds of ships, known as cell guides, in conjunction with high-speed shore cranes, made container handling quicker and more efficient. In addition, this style of construction allowed the enlarging of cargo deck hatches. The introduction of material handling equipment also accelerated the cargo process. Motorized hand trucks, such as forklifts, dock tractors, crane trucks radically altered cargo handling operations. Nevertheless, the most significant factor of using container is that the capability to move cargo overseas in large quantities and in a way that allows for quicker turn-around in port.

For maritime shipping, all highly depends on variances with worldwide macroeconomic conditions. Developments in the world economy and merchandise trade are also driving developments in seaborne trade. Therefore, in line with the macroeconomic framework, seaborne trade also experienced similar evolution with an upswing in demand in 2010, and a positive turnaround in volumes. Data indicated that world seaborne trade in 2010 returned from the contraction of the previous year and grew by an estimated 7 %, taking the total of goods loaded to 8.4 billion tons (UNTCAD, 2011), a level surpassing the pre-crisis level reached in 2008.

Cargo has always been moved easier by water than over land. Even today, ninety percent of the world's commerce moves on the sea. The balance of 2.4 billion tons of dry cargoes is carried by containers (56%). As shown in Figure 2.1, driven primarily by the increasing international division of labor and productivity gains within the sector, container trade, the fastest-growing cargo segment expanded at an average rate of 7.1 % in 2011 (UNTCAD, 2012). Container trade volumes experienced a robust recovery with a surge in demand across nearly all trade lanes.



Source: United Nations Conference on Trade and Development (UNTCAD, 2012).

Figure 2.1 Global container trade volumes

In 2010, global container trade volumes returned back at 12.9 % over 2009, among the strongest growth rates in the history of containerization. According to Clarkson Research Services (2012), container trade volumes reached 151 million 20-feet equivalent units (TEUs) in 2011, equivalent to about 1.4 billion tons (UNTCAD, 2012).

Containerization and inter transport modal have radically altered the movement of cargo. The reasons for this change are numerous: globalization, better production techniques, mechanization, and improved management styles (Mercogliano, 2006). Growth of this magnitude is only possible through the use of containers. Before containerization, a typical freighter could handle only 10,000 tons and took nearly two weeks to load/unload in the past. In 2004, the port of Los Angeles/Long Beach alone accounted for 8.6 million containers, or thirty-six percent of the more than twenty-three million containers that moved in and out of the United States. That translates to over 23,000 containers per day, with each TEU capable of carrying up to twenty tons of cargo—equal to loading/offloading approximately forty-five freighters daily.

Table 2.1 displays the shipping growth was mainly generated by increased demand for imports in developing countries, with container trade volumes expanding strongly on the non-main lane East-West, North-South and intraregional lanes. Non-main lane East-West trade grew by 8.9 percent and 9.2 per cent respectively. In 2011, the three main lane trades totaled 27.3 million TEUs, while the non-main lane traders reached 103.3 million TEUs (UNTCAD, 2012).

	Transpacific		Europ	e Asia	Transatlantic	
	Asia-North	North	Asia-	Europe-	Europe-	North
	America	America-	Europe	Asia	North	America-
		Asia			America	Europe
2009	10.6	6.1	11.5	5.5	2.8	2.5
2010	12.8	6.0	13.5	5.6	3.1	2.8
2011	12.7	6.0	14.1	6.2	3.4	2.8
% change 2010-2011	1.2	0.9	4.6	10.6	8.3	2.8

Table 2.1 Estimated Cargo Flow on Major East-West Container Trade Routes

Source: United Nations Conference on Trade and Development (UNTCAD, 2012).

Containerships continue to grow in size and capabilities. Until April 2013, the merchant fleet worldwide owns 5,919 ships active on liner trades, account for 17,099,271 TEUs or 218,962,276 TDW including 4,945 fully cellular ships for 16,636,477 TEUs (AXS-Alphaliner website, 2013). As the demand for cargo increased, larger freighters were built for meeting the market request. New containerships are now capable of handling 16,000 TEUs. Plans are in the works for building ships capable of carrying up more than 18,000 TEUs (AXS-Alphaliner, 2013).

According to the report of AXS-Alphaliner (2013) report, as shown in Table 2.2, the total TEU capacity deployed on liner trade routed reached 16,250,082 TEU in April 2013. The top 23 container shipping operators accounted for 86.1% of the total slot capacity. The top three world leading shipping lines are the APM-Maersk, MSC and CMA-CGM, which account for 15.2, 13.5 and 8.4 % respectively. Table 2.2 also indicates the capacity of three Taiwan-based container shipping companies; Evergreen Line was ranked at the fourth largest container shipping carrier, which carried 0.738 million TUEs (4.3%) cargo. The other two container shipping companies, Yang Ming Line and Wan Hai Line are ranked as 14th and 21st among the top 23 container shipping companies, which account for 0.36

million TUEs(2.1%) and 0.16 million TUEs(0.9%) cargo.

		Total		Owned		Chartered		
Rank	Operator	TEU	Ships	TEU	Ships	TEU	Ships	Share %
1	APM-Maersk	2,592,237	588	1,342,635	239	1,249,602	349	15.2
2	MSC	2,309,330	474	1,027,036	188	1,282,294	286	13.5
3	CMA CGM	1,437,603	418	516,254	86	921,349	332	8.4
4	Evergreen	738,741	189	407,831	96	330,910	93	4.3
5	COSCO	729,541	161	395,230	105	334,311	56	4.3
6	Hapag-Lloyd	684,919	149	358,103	65	326,816	84	4.0
7	Hanjin	624,890	116	298,360	44	326,530	72	3.7
8	APL	606,178	124	265,912	42	340,266	82	3.5
9	CSCL	601,319	143	411,609	78	189,710	65	3.5
10	MOL	528,174	112	240,926	40	287,248	72	3.1
11	OOCL	494,587	100	322,711	50	171,876	50	2.9
12	NYK Line	415,172	98	300,513	54	114,659	44	2.4
13	Hamburg	410,583	100	218,048	44	192,535	56	2.4
14	Yang Ming	364,036	84	230,271	49	133,765	35	2.1
15	K Line	357,364	70	127,352	21	230,012	49	2.1
16	Zim	337,017	89	148,568	31	188,449	58	2.0
17	Hyundai	333,706	55	100,646	17	233,060	38	2.0
18	PIL	317,353	153	209,439	107	107,914	46	1.9
19	UASC	258,395	44	198,164	26	60,231	18	1.5
20	CSAV	255,568	54	48,178	10	207,390	44	1.5
21	Wan Hai	160,132	70	141,302	63	18,830	7	0.9
22	HDS Lines	86,320	21	4,576	2	81,744	19	0.5
23	X-Press	665,78	36	3,156	2	63,422	34	0.4

Table 2.2 Top 23 Container Shipping Operators

Source: AXS-Alpha, http://www.alphaliner.com/top100/index.php (April, 2013)

The global economy is increasingly being driven by emerging economies, not only BRICs (Brazil, Russian Federation, India and China) but also other emerging economic regions such as South America, Mid-east and Southeast Asia. New services for fulfilling the shipping requests are opening up and more value added cargo are shipped by means of loaded into containers (UNTCAD, 2011).

Meanwhile, the global container trade is expected to grow by 9.7 % in 2011 to reach 151 million TEUs, outpacing supply growth by 1.7 percentage points (Clarkson Research Services, 2012). The potential is crucial and many global enterprises are aware of it as well as the need to be prepared to capitalize on related commercial opportunities. This seems to be already the case, as evidenced by the evolving strategies of some maritime carriers and logistics services such as Maersk Line, MSC, CMA CGM, Evergreen Line, and Yang Ming Line etc. Over recent years, for facing these opportunities, these container shipping companies appear to be preparing to take advantage of the rising opportunities in emerging markets by means of through equipment procurement, personnel designation and changes to organizational structures.

For example, Maersk Line, the largest container shipping company, has established 325 branches in more than 125 countries from which hired 16,900 local employees (Maersk Line, 2013), whereas Mediterranean Shipping Company, MSC, which holds its position as the second largest carrier, owns 421 dedicated local offices in 145 countries, organized by an MSC staff worldwide of over 30,000 professionals (Mediterranean Shipping Company, 2013).

With the significant growth in foreign trade, the container shipping industry in Taiwan has become flourished over recent decades. Taiwan-based container shipping companies such as Evergreen Line, Yang Ming Line and Wan Hai Line, are sharing more than 7 % (AXS-Alphaliner, 2013) of the container slot capacity in the world and ranked among the top 23 global container carriers (AXS-Alphaliner, 2013). As shown in Figure 2.2, Evergreen Line established more than 200 branch offices around the world (Evergreen Line, 2013).

Global Agents

Head Office



Source: EVERGREEN MARINE CORP. http://www.evergreen-marine.com. (2013) Figure 2.2 Global Branch Offices of Evergreen Line

Yang Ming Line set up branch offices and agents in more than 70 countries or regions for providing shipping and logistics service to their customers around the world. Wan Hai Line also extended its business territory by deploying over 200 branches in more than 70 countries overseas (Wan Hai Lines, 2013). These branch offices or agents all stand a crucial role for representing container shipping companies to satisfy the requests of their global customers and explore new market opportunities. Increasingly, cultural difference between employee and foreign managing directors has usually been considered a major factor that might influence employees' performance.

This, clearly, is diversifying the shipping industry's operating environment and is expected to evolve further cargoes, markets and trade patterns as well as changes in response to the new global business behaviors. These developments are likely to affect market segments dramatically and result in shifts in international shipping deployment, with transport growing faster on some routes than others. This also raises the opportunity of opening new markets.

2.2 Definition of Culture

Culture has a number of meanings, which are all deriving from its original Latin meaning (Hofstede, 2001): the cultivation of soil. Many researches define culture as reference to fairly stable characteristics of a group that differentiate it from other groups (House et al., 2004; Tsui et al., 2007; Chen et al., 2009; Peretz and Rosenblatt, 2011; Schwartz, 2011; Smith et al., 2011). One well-known definition of anthropological consensus developed by as follows: Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values. (Kluckhone, 1951, p. 86)

Kroeber and Parsons (1958) achieved a conclusion of a cross-disciplinary definition of

culture as "transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behavior and the artifacts produced through behavior ". Triandis (1972) distinguishes "subjective" culture from its expression on "objective" artifacts and defines the former as "a cultural group's characteristic way of perceiving the man-made part of its environment".

Ingehart and Barker (2000) defined culture as "shared worldviews of people". Hofstede (2001, p. 9) also provided definition of culture as: "the collective programming of the mind that distinguishes one group or category of people from another". Schein (2003) defined culture as a pattern of shared basic assumption that the group absorbs as it solves its problems of external adaptation and internal integration. Furthermore, House et al. (2004) defined culture as "share motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives that are transmitted across generations" in the GLOBE Project (House et al., 2004).

Tsui et al. (2007) contended culture is common experience and shared meaning which is important delimiters of a specific group or society. Further, Schwartz (2010) suggested cultural values as the normative value emphases that underline and justify the functioning of societal institution. Therefore, the term, culture, can be applied to any human collectivity or category such as an organization, a profession, an age group, an entire gender, or a family as well. Culture values can also be seen as socially shared conceptions of what is good, right and desirable, which affected the way people perceive and interpret the world, the their preferences, choices and actions (Schwartz, 1992).

Figure 2.3 shows the stability of culture patterns, which indicated a mechanism in human societies reveals the stability in specific cultural patterns across generations (Hofstede, 2001). In origins, a variety of ecological factors (in the sense of factors affecting the physical and social environment) develop the societal norms (Hofsetede, 2001), which consist of the value systems shared by major groups of a specific population. The societal norms have led to the development and pattern maintenance of institutions in society with particular structures and ways of functioning; e.g. family, education systems, political systems, and legislation. These institutions reinforce the societal norms and the ecological condition, which contribute to their establishment. In a relatively closed society, their value system is rather stable and hardly changes. This suggests that a specific culture exist the persistent influence of a majority value system on people of a society or country and have an influence on their attitudes and behaviors.



Source: Hofstede (2001)

Figure 2.3 Cultural stability

2.2.1 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 for national cultures used the term "national character", for evaluating variables such as races of inhabitants, historical and political aspect, social, legal and religious indicators, and economical and medical measures (Hofstede and McCrae, 2004). However, studies of national character often reflected observer biases and unfounded stereotypes (Hofstede, 2001). Thus, the comparative study of national cultures calls for a certain amount of cultural relativism (Hofsted, 2001). 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. Further, Hofstede (1991, 2001) indicated that national culture differs mostly at the level of values. The fields of anthropology differentiate the culture one country from that of another based on similarity between people, institutions and organizations. The ways of knowing a national culture include physical (e.g. the meaning of time or space), communication (reliance on verbal or nonverbal means), sensory (attention to visual, auditory, and kinetic cues), psychological (decision-making style, information processing, or display of emotion), or philosophical (moral or spiritual bases of decision-making) (House et al., 2004).

2.2.2 National Culture Dimensions

A number of previous studies have developed dimensions for investigating the content of national culture (Kluckhohn and Strodtbeck, 1961; Hofstede and Bond, 1988, House et al., 2004; Schwartz, 2009c; Smith, 2011). Hofstede (1980) identified four national cultural dimensions, namely power distance, individualism/collectivism, uncertainty avoidance, and masculinity/femininity. Further, the analysis of the Chinese Value Survey (CVS) data revealed a fifth dimension in the worldwide answers to the Chinese questions unrelated to anything found with Western questions. Bond (1988) names it as Confucian Dynamic/Long-term orientation because the items on both poles of the dimension remind him of some of the teachings of Confucius, and dynamism because the positive pole groups future-oriented items and the negative pole groups present-oriented items (Hofstede, 2004).

Schwartz (1992) used smallest space analyses based on 10 value types to develop national cultural related dimensions, namely, openness to change versus conservation, self-enhancement versus self-transcendence (Schwartz, 1992, 1994). Trompenaars (1993) identified seven types of national culture valuing dimensions, namely universalism-particularism, achievement-ascription, individualism-collectivism, affectivity-neutrality, and specificity-diffuseness to address the delineation of cultural and personal pattern variables. House et al. (2004) extended the framework of Hofstede's national culture framework to yield a nine dimensions evaluation framework including future orientation, gender equality, assertiveness, humane orientation, in-group collectivism, institutional collectivism, performance orientation, power distance, and uncertainty avoidance. Leung and Bond (2004) also employed the dimensional map of culture by proposing five social axioms that represent generalized beliefs shared by people in a given society

Among these national cultural dimensions, the Hofstede's national culture framework has been extensively prevalent in the previous literature and its dimensions were identified in the dominant value systems over 50 countries or areas (Morris and Fu, 2001; Kirkman et al., 2006; Chen et al., 2009). Hence, this study employs Hofstede's national cultural dimensions, which briefly described below.

(1) Power Distance

Power distance reflects the extent to which members of a given culture accept unequal distributions of power within institutions and organizations (Hofstede, 1980, 2001). House et al. (2004) indicated power distance is the degree to which members of a collective expect power to be distributed equally. People are expected to acknowledge those in authority or with talents by according them special privileges and symbols of status (Hofstede, 1991; House et al., 2004; Kirkman et al., 2006; Blader and Chen, 2009). Power distance is a measure of the interpersonal power or influence between a supervisor and a subordinate as perceived by the less powerful of the two (Hofstede, 2001).

In high power distance societies, hierarchy is rigid and privileges equally (Peretz and Rosenblatt, 2011). Those societies with lower power distance attempt to "level the playing field" (Hofstede, 1991). Inequalities among people are not as well tolerated compared to the situation in higher power distance countries. Consequently, people attempt to minimize these gaps. It is thought that opportunities for advancement should be given not to the chosen few who happen to have been born into the right families or attended the best schools but to all within merit, ability, initiative and drive. In lower power distance countries, these concepts facilitate managers favoring equality and consulting subordinates, and fewer layers of communication (Hofstede, 1991, 2001).

(2) Uncertainty Avoidance

Uncertainty avoidance is 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 protecting conformity (Hofstede, 1985, p. 347). Peretz and Rosenblett (2011) indicated uncertainty avoidance refers to the extent to which a society, organization, or group relies on social norms, rules and procedures to alleviated the unpredictability of future events (House et al., 2004). Thus, in a uncertainty avoidance culture where individuals are oriented toward tradition and stability, and are more concerned about keeping the status quo and are less willing to disturb the order once a state of equilibrium is attained (Hofstede, 1997b).

Higher uncertainty avoidance has been associated with the prevalence of control systems, such as elaborate forms of planning, conservative accounting systems, and extensive written communications (Hofstede, 1980, Nakata and Sivakumar, 2001). In contrast, lower uncertainty avoidance communities are more at ease with the unknown situation and feel comfortable. They are tolerant of deviant persons and ideas as well as risk (Hosftede, 2001). The future is not only full of threats but also a silver lining promising opportunities, because the future may bring new ideas, products, managerial practices, and strategies, any of which may be develop for competitive advantage (Nakata and Sivakumar, 2001).

(3) Individualism/Collectivism

Triandis (1995) proposed defining attributes of individualism and 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 that they are more likely to pursue their own goals when there is a conflict between their personal goals and any group they belong to. Individualism reflects a culture's emphasis on the needs and goals of individuals rather than those of tightly knit groups. Collectivist cultures tend to make greater distinctions between in-group versus out-group members, whereas individualist cultures tend to apply similar standards to all people (Hofstede, 2001; Brewer and Chen, 2007).

In individualistic societies, value is place on standing apart from others and determining one's own course. Autonomy, self-expression, and independence are positive pole (Hofstede, 1991, 2001; Brewer and Chen, 2007; Chen et al., 2009). In contrast, in collectivist society, the group is the dominant structure and most actions are evaluated in terms of effects on other people (Smith et al., 2011), conformity, consideration of others, sacrifice for family or work unit, coordination of efforts to reduce chaos and competition and subordination of personal preference are up help (Hofstede, 1991; Rhee et al. 1996).

(4) Masculinity

Masculinity can be defined as "the degree to which a society is characterized by assertiveness (masculinity) versus nurturance (feminity)" (Hofstede, 1980; Nakata and Sivakumar, 1996). Masculinity refers to a preference for achievement, heroism, assertiveness, and material success, whereas femininity stands for a preference for relationships, modesty, caring for the weak groups, and quality of life (Hofstede, 1984). Societies high on masculinity value achievement, challenge, money, and performance (Hofstede, 1980, 2001).

A masculine culture is said to live to work, while a feminine culture is said to word to live (Hofstede, 1980). The utilitarian view emanate from a desire to compete successfully and have tangible proof of this success. However, in societies lower in masculinity, the focus is mainly on helping other, improving the quality of life, and avoiding self-recognition (House et al, 2004; Schwartz, 2011). The outward, more altruistic direction of feminine cultures is attending to others rather than self.

(5) Confucian Dynamic/Long-term orientation

Hofstede and Bond (1988) developed a fifth dimension named Confucian dynamic or long-term orientation. Confucian dynamics or long-term orientation refers to future-oriented values such as persistence and thrift (Hofstede, 2001; Kirkman et al., 2006). In contrast, the short-term orientation of the Confucian dynamic represents a static mentality focusing on the past and present as opposed to the future which refers to past- and present-oriented values such as respect for tradition and fulfilling social obligations(House et al., 2004). The short-term orientation consists of near-term outlook such as personal steadiness and stability, protecting your "face", respect for tradition and reciprocation of greetings, favors, and gifts as core attributes (Hofstede, 1991, 2004). Peretz and Rosenblatt, (2011) indicated that individuals from long term orientation societies tend to engage in future-oriented behaviors such as planning, investing in the future, and delaying gratification.

Hofstede's framework has an influence (Sivakumar and Nakata, 2001; Dickson et al., 2003) on national cultural study. It is important to note that, though Hofstede's national cultural framework has received substantial criticism, which argues that Hofstede's framework presents an overly simplistic four or five dimensional conceptualization of culture (Sivakumar and Nakata, 2001; Minkov and Hofstede, 2011); limiting the sample to a single multinational corporation; failing to capture the malleability of culture over heterogeneity (Sivakumar and Nakata, 2001).

In spite of criticism, researchers have favored this five-dimension framework because of its clarity, parsimony, and resonance within management research filed (Kirkman et al., 2006). Table 2.3 summarized previous researches associated with these five national culture dimensions.

Dimensions	Previous researches
Power Distance	Hofstede (1980, 2001); Harris and Moran (1995); Lu
	et al. (1999); Ingehart and Barker (2000); Schein
	(2003); House et al. (2004); Schwartz (2010)
Uncertainty Avoidance	Hofstede (1980, 2001); Schwartz (1992); Lu et al.
	(1999); Ingehart and Barker (2000); Schein (2003);
	House et al. (2004); Schwartz (2010)
Individualism/Collectivism	Hofstede (1980, 2001); Schwartz (1992); Lu et al.
	(1999); Ingehart and Barker (2000); Schein (2003);
	House et al. (2004); Schwartz (2010)
Masculinity	Hofstede (1980, 2001); Schwartz (1992); Lu et al.
	(1999); Ingehart and Barker (2000); Schein (2003);
71	House et al. (2004); Schwartz (2010)
Long-term Orientation	Hofstede and Bond (1988); Bond (1988); House et al.
	(2004)

Table 2.3 Previous researches on national culture dimensions

2.2.3 Previous Studies on National Culture

Cultural values had been explored in fields of psychology domains and individual behaviors and outcomes. Casimir and Keats (1996) assessed preference for leadership styles from among four choice (i.e. created by crossing the extent to which a leader is high or low on both concern for group performance and maintenance of group relations) in a anglo- and chinese -Australian managers. The results indicated that both cultures preferred leaders who expressed high concern for both performance and group relations which did not differ significantly.

Bochner and Hesketh (1994) surveyed Australian bank employees representing 28 different nationalities, assigned each a country score for national dimensions of individualism and power distance, and placed them into high and low groups on these two

values. Collectivists reported having more informal contact with fellow works knew staff better and were more likely to work on a team than alone compared with individualists. Bennett (1999) after first confirming that a US sample was significantly lower on collectivism and higher on masculinity than respondents from Chinese, found that collectivism was positively related to favorable attitudes towards group activities and cooperation in both countries. Masculinity was negatively related to attitudes towards human development but only in the US sample. Chiu (1999) revealed that individualists scored higher on positive affect and job satisfaction and lower on work stain than collectivist in a sample from Singaporean and Hong Kong nurses, who were significantly higher on collectivism and lower on individualism than Australian and US nurses. Clugston et al. (2000) assessed the relationship among Hofstede's four national cultural values of commitment using survey in a US public agency.

Van Dyne et al. (2000) asserted that cooperative housing residents in the US, collectivism was positively related to organizational citizenship behavior with organization-based self-esteem fully mediation the relationship. Lee et al. (2000a) found that individualists were more attuned toward a promotion focus (i.e. the pursuit of gains and aspiration toward ideals), whereas collectivists were more attuned toward a prevention focus (i.e. the avoidance of losses, and the fulfillment of obligations) in a sample of US undergraduate subjects who were significantly higher on individualism (i.e. independent self-construal) and lower on collectivism (i.e. inter dependent self-construal) than Hong Kong undergraduates.

Thomas and Au (2002) found that high individualism was positively related to voice and that vertical collectivism was positively related to neglect and negatively related to loyalty. Finally, cultural distance was unrelated to opportunities to learn or further develop skills, internship satisfaction, or organizational commitment among from US MBA students sample in overseas internship (Feldman and Bolino, 2000).

Table 2.4 indicates that a variety of previous empirical studies have focus national culture-related researches on fields such as conflict management, behavior related to group processes, leadership, work-related attitudes, commitment, organizational citizen behavior, human resource management, negotiation, safety behavior, and managerial performance etc.

Research field	Previous studies
Conflict management	Leung (1988); Gabrielidis et al. (1997)
Behavior related to group	Bochner and Hesketh (1994); Bennett (1999); Lu et al
processes	(1999); Kirkman and Shapiro (2000); Satterwhite et
	al. (2000); Carpenter and Radhakrishnan (2000);
2	Gibson and Zellmer-Bruhn (2001); Kirkman and
	Shapiro (2001a)
Leadership	Casimir and Keats (1996); Pillai and Meindl (1998);
	Helgstrand and Stuhlmaher (1999); House et al. (1999);
2	Chan and Drasgow (2001)
Work-related attitudes	Chiu (1999); Clugston et al. (2000); Lee et al. (2000a);
	Lee et al. (2000b); Vandenberghe et al. (2001); Harpaz
	et al. (2002); Thomas and Au (2002)
Commitment	Clugston et al. (2000); Feldman and Bolino (2000)
Organizational citizenship	Moorman and Blakely (1995); Van Dyne et al. (2000)
behavior	
Human resource management	Earley (1986); Ramamoorthy and Carroll (1998);
	Earley et al. (1999)
Negotiation	Probst et al.(1999); Ng and Van Dyne (2001); Tinsley
	(2001); Tinsley and Brett (2001)
Safety behavior	Theotokas and Progoulake (2007); Håvold (2007); Tsai
	(2009); Lu et al. (2012)
Managerial performance	Neelankavil et al. (2000)

Table 2.4 Key empirical studies related to national culture

The antecedents to national culture have been wildly discussed in the personal behavior

and operations management, relatively fewer studies focus on individual or organization level performance. For filling this gap, this study seeks to investigate the influence of perceived difference of national culture dimensions on employees' job performance in container shipping companies from the perspective of oversea employees.

2.3 Transformational Leadership

2.3.1 Definition of Leadership

The definition of leadership has been identified for many studies. Yukl (1981) indicated leadership usually have as a common denominator the assumption that it is a group phenomenon involving interaction between two or more person, which reflect the assumption that it involves an influence process whereby international influence is exerted by the leader over follower. Hersey and Blanchard (1982) revealed leadership is a process of interaction among humans toward the establish goal. Bass (1985) asserted that leadership is a method to establish organizational goal for the employees and bring them to set up objective to achieve the goals. Bass and Avoilo (1990) further defined leadership is the process which provides organization with clear direction and specific goal. Dessler (1997) suggested that leadership is a managerial activity that can finished assigned task by means of inspiring and encouraging people within the group. Robbins (2001) indicated that leadership is an ability which can bring significant influence on members in the organization to work together to achieve organizational goal. In addition, Rickards et al. (2008) defined leadership is the person who have the ability to make decision, condense the consensus of members within the organization.

2.3.2 Definition of Transformational Leadership

It has been 20 years since Burns (1978) published his seminal work introducing the

concepts of transformational and transactional leadership. Burns (1978) indicated that supervisors can inspire employees to enhance their work skills and to assume more responsibilities and further achieve the goal of organization. Transformational leadership involves developing a closer relationship between leaders and followers, one base more on trust on commitment than on contractual agreements. Transformational leaders help follower to see the importance of transcending their own self-interest for the sake of the mission and vision of their group and organizations. By building followers' self-confidence, self-efficacy, and self-esteem, such leaders are expected to have a strong, positive influence of followers' levels of identification, motivation, and goal achievement (Shamir et al. 1993; Klein and House, 1995; Gardner and Avolio, 1998; Jung and Avolio, 1999).

Transformational leadership has been examined in various cultures. Yokochi (1989) reported that the top managers in several large Japanese firms rated by follower as more transformational also had higher ratings on their followers' level of effectiveness. Koh (1990) reported a similarly positive relationship between rating of transformational leadership, levels of trust, and school effectiveness from secondary school principals in Singapore.

Bass (1990) defined transformational leadership in terms of how the leader affects followers, who are intended to trust, admire and respect the transformational leader. Bass (1990) also identified three ways in which leaders transform followers: Increasing their awareness of task importance and value, getting them to focus first on team or organizational goals, rather than their own interests and activating their higher-order needs. Two key charismatic effects that transformational leaders achieve are to evoke strong emotions and to cause identification of the followers with the leader. This may be through stirring appeals. It may also occur through quieter methods such as coaching and mentoring. Bass (1990) noted that authentic transformational leadership is grounded in moral foundations that are based on four components (1) Idealized influence, (2) Inspirational motivation, (3) Intellectual stimulation and (4) Individualized consideration and three moral aspects, namely, "The moral character of the leader", "The ethical values embedded in the leader's vision, articulation, and program (which followers either embrace or reject)", and "The morality of the processes of social ethical choice and action that leaders and followers engage in and collectively pursue".

2.3.3 Leadership Dimensions

Transformational leadership refers to the leader moving the follower beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration. It elevates the follower's level of maturity and ideals as well as concerns for achievement, self-actualization, and the well-being of others, the organization, and society.

Bass (1985) developed a better understanding of the behaviors exhibited by such leaders, key personality characteristics underlying those behaviors, their impact, and how charismatic personalities develop. Some of the traits attributed to *charismatic* are the same for one's immediate supervisor as for the distant world class leader. Other traits are different for immediate and distant charismatic leaders (Shamir, 1995).

Idealized influence encompasses influence over ideology, influence over ideals, and influence over "bigger-than-life" issues. It was conceived as a substitute for the term charismatic for several reasons. First, charismatic had come to represent many meanings in the media and the public mind: celebrated, flamboyant, exciting, rabble-rousing, magnetic, and awe-inspiring. Second, charisma was too much associated with dictatorship and pseudo transformational leaders. Third, for researchers such as Klein and House (1995) and Conger and Kanungo (1988), charisma was an all-inclusive term for transformational leadership taking in inspiration, intellectual stimulation, and individualized consideration.

A confirmatory factor analysis suggested the model for transformational leadership is given by three factors: individualized consideration, intellectual stimulation and inspirational-idealized influence (charisma) (Avolio et al., 1999). Similarly, an equally large-scale confirmatory factor analysis by Podsakoff et al. (1990) suggested that six factors of transformational leadership could be distinguished. In addition to individualized consideration and intellectual stimulation, they were able to divide the charismatic– inspirational sector into identifying and articulating a vision, providing a model and setting the example, fostering acceptance of group goals, and setting high performance expectations. There are three conceptually distinguishable factors—charisma–inspiration, intellectual stimulation, and individualized consideration—emerge in most studies either when using principal components factor analysis or when employing partial least squares analysis (Avolio et al., 1999).

Idealized influence and inspirational leadership are displayed when the leader envisions a desirable future, articulates how it can be reached, sets an example to be followed, sets high standards of performance, and shows determination and confidence (Avolio et al., 1999). Followers want to identify with such leadership. Intellectual stimulation is displayed when the leader helps followers to become more innovative and creative. Individualized consideration is displayed when leaders pay attention to the developmental needs of followers and support and coach the development of their followers. The leaders delegate assignments as opportunities for growth (Avolio et al., 1999).

Since the transformational factors are substantially inter-correlated, a single transformational factor which combines them may satisfy the needs for parsimony in some research (Bass, 1990). Nevertheless, the three distinct factors instead of one transformational leadership factor remain useful when applied in training. Trainees can learn a lot about how to be more inspirational; they have a harder time authentically reinventing themselves as they already are intellectually stimulating.

Nevertheless, the overall factor structure continues to provide a meaningful framework (Bass, 1997). While idealized influence (charisma) is the largest component of variance in transformational leadership, the other components of intellectual stimulation and individualized consideration are important theoretically and practically. They involve different behaviors, attributions, and effects. Table 2.5 summarized previous researches associated with these three transformational leadership dimensions.

D : .	
Dimensions	Previous researches
Charisma-Inspiration	Bass (1985); Conger and Kanungo (1988);
	Podsakoff et al. (1990); Shamir (1995); Bass
	(1997); Avolio et al. (1999)
Individualized-Consideration	Bass (1985); Conger and Kanungo (1988);
	Podsakoff et al. (1990); Klein and House (1995);
	Bass (1997); Avolio et al. (1999)
Intellectual-Stimulation	Bass (1985); Conger and Kanungo (1988);
	Podsakoff et al. (1990); Klein and House (1995);
	Bass (1997); Avolio et al. (1999)

Table 2.5 Previous researches on transformational leadership dimensions

2.3.4 The Relationship between National Culture and Transformational Leadership

Transformational leadership is widely suggested as a reasonable explanation for radical individual and organization change, which is one of the reasons why it has found growing favor in recent years among researchers and practitioners (Bass, 1985; Burns, 1978; Conger and Kanungo, 1988; Jermier, 1993). Gerstner and Day (1994) compared leadership prototypes across eight countries and found reliable differences of leadership behavior along cultural dimensions similar to Hofstede's power distance uncertainty avoidance and individualism.

Concerning different types of leaders and outcomes, transformational leadership is more effective than transactional leadership (Bass, 1996, 1997). Pillai and Meindl (1998) conducted a survey with 596 managers founded collective orientated leadership style had a strongly positive effects on cultural groups. Leadership also plays an important role among personnel and performance among organizations.

Den Hartog et al. (1999) indicated transformational leadership is strongly and universally endorsed across cultures. Fiol, Harris, and House (1999) noted that leaders described as transformational type have positive effects on their organizations and followers (Fiol et al., 1999). Research in this area also shows that transformational leadership is closer to perceptions of ideal leadership than transactional leadership (Bass and Avolio, 1990) when proceeding managing behavior. Helgstrand and Stuhlmacher (1999) conducted a culture and leadership fit model and found that leaders with characteristics of feminine-individualistic type are gaining higher evaluation in both individual and collective orientation countries.

Hofsted (2001) indicated that leadership had a crucial impact on cultural values. Among

Hofstede's cultural dimensions, masculinity, individualism and power distance mattered most with leadership. The most rigorously developed leadership model and instrument were based on Bass's transformational leadership and its related Multifactor Leadership Questionnaire (Bass, 1985). Javidan and Carl (2004) revealed transformational leadership deploys motivational drivers that may be robust across the cultural dimensions. Casimir and Waldman (2007) compared the leadership behavior reception of employees of supervisors from Australia and China. The results indicated that supervisors from western cultures (e.g. Australia) concern employees by employing transformational leadership than do from eastern cultures (e.g., China).

The identical results were also supported by the Brodbeck et al. (2000), conducting survey in European areas. Dickson et al. (2003) reviewed relevant studies from 1996s indicated that issues of cross cultural leader behavior have been critical because of the globalization of enterprise operation.

According to Bass (1990), transformational leadership may take more as well as less participative forms. In highly egalitarian countries such as the Netherlands and Australia, transformational leader behaviors are highly correlated with participation in decision making (Den Hartog et al., 1997). People from different cultures own different characteristics and behaviors with the leadership role.

Eylon and Au (1999) compared the effects of empowerment founded that participants were more satisfied with their job in the empowered condition. This suggests that transformational leaders may need to be more participative to be effective in highly egalitarian societies. In contrast, in high power distance societies, transformational leadership may perform in a directive form (Den Hartog et al., 1997). Rauch et al. (2000) compared the success of planning for small business leaders in Germany and Ireland indicated detailed planning by leaders was found to have a positive influence on small business success in the high uncertainty avoidance context but a negative influence in the low uncertainty avoidance context. Thus, uncertainty avoidance has an impact on the characteristics associated with outstanding leadership and leaders' typical career patterns. In high uncertainty avoidance countries, planning and detailed agreements are established, whereas in countries with low uncertainty avoidance flexibility and innovation are more common. Accordingly, this study set hypothesis that high uncertainty is positively associated with transformational leadership.

Jung and Avolio (1999) showed that collectivists with a transformational leader generated more ideas, but individualists generated more ideas with a transactional leader. Group performance was generally higher than that of individuals working alone. Individualism can also be linked to leadership. Jung and Avolio (1999) addressed that collectivist values seem to fit well with some of the processes central to transformational leadership, such as the central role of the group and identification processes. Collectivists are expected to be more prone to identify with their leaders' goals and the common purpose or shared vision of the group and organization and typically exhibit high levels of loyalty (Jung, Bass, and Sosik, 1995). People from individualist cultures, however, are expected to be more motivated to satisfy their own self-interests and personal goals. Accordingly, this study set hypothesis that individualism has a positive effect on transformational leadership behavior.

Masculinity is probably the most heavily critiqued of Hofstede's national culture dimensions. In masculine-oriented nations self-reliance may be favored as a proof of one's leadership abilities, whereas in feminine nations preservation of harmony will be a stronger motive. Holtgraves (1997) revealed Koreans, for instance, were found to be more indirect in communication than Americans such indirectness in communication can be linked to 'face management' (Brown and Levinson, 1987). In affective cultures, people typically show their emotions such as western countries. Effective leaders communicate through a vivid and temperamental expression of emotion. In more neutral cultures, people used to hind their emotions. Other research confirms that displaying emotion may be interpreted as a lack of self-control or weakness (Trompenaars and Hampden-Turner, 1997). Helgstrand and Stuhlmacher (1999) compared leader prototypes of Danish and American participants found to difference on masculinity and individualism. It was expected that individuals would rate a leader candidate that matched their own culture as more effective and more collegial than a leader that did not match. Unexpectedly, the highest leader ratings were not in conditions with a cultural match between participants and leader candidate. Rather, both cultures saw feminine leaders as most collegial and feminine–individualistic leaders as most effective.

2.4 Job Performance

2.4.1 Definition of Job Performance

Job performance is an evaluation for specific task or achievement of individuals or group in organization in a specific period. Porter and Lawler (1968) indicated job performance consists of the measurements aspects of quality, quantity and levels at which individuals accomplished their work. Kane (1986) suggested job performance is the total evaluation of efficiency items (e.g. production, return of revenue, quality, cost, customer satisfaction) to which the employees need to achieve in a group. Schermerhorm (1989) indicated job performance is the total quality or quantity presentation when individuals or groups finished specific jobs. Campbell (1990) asserted job performance is the behaviors which employees satisfy with the requirement and expectation of as being organizational members. Borman and Motowidlo (1993) defined job performance as behaviors relevant to organizational goal and vision, which individual performance in the organization will be evaluated according to proceed these behavior.

Brouthers (2002) asserted job performance is a level at which employees need to attend, which is the results of effort from the employees. Nevertheless, researchers face a considerable challenge in obtaining accurate and reliable data to measure firm performance in empirical studies. This is due to the fact that actual performance data is rarely published for individual business units, since most companies consider such data to be too sensitive to publish and are therefore reluctant to disclose it (Fawcett et al., 1997). Fortunately, recent research has found that certain perceptual measures correlated closely with objective financial and marketing data and have been reported to be valid indicators of performance (Dess and Robinson, 1984; Fawcett et al., 1997). The personnel financial data of Taiwanese container shipping companies are difficult to obtain due to the fact that the majority of such companies are not publicly listed and secrecy is inherent in this industry. Accordingly, this study used perceptual measures and respondents were asked to assess their individual's performance.

2.4.2 Job Performance Dimensions

It is widely agreed that individual job performance is a multidimensional construct (Borman and Motowiddlo, 1993; Campbell et al., 1996; Befort and Hattrup, 2003). Katz and Kahn(1978) classified job performance into two types, namely, In-Role Behavior and Extra-Role Behavior °

(1) In-Role Behavior: Behaviors norms were regulated within a group. Organization set

up rules or principles as an evaluation standard for their employees accordingly. In-Role behavior is factors which directly related to the reward and promotion of employees.

(2) Extra-Role Behavior : Behaviors were involved with attitudes of employees. Extra-role behaviors are related to the behaviors such as organizational citizenship behaviors or pro social behaviors. Campbell (1990) suggested job performance is the evaluation of work, which can be classified into efficiency, productivity and utility.

(1) Efficiency: Evaluating results of work

- (2) Productivity: Cost used in achieving the assigned work.
- (3) Utility: Value brought from the work

Gatewood and Field (1998) divided job performance into four types listed as follows :

(1) Productivity data: quality and quantities of output.

(2) Human resource data: Attendance rate, absence rate etc.

- (3) Validity of training on the job training and scenario test.
- (4) Evaluation criteria: Evaluation from leaders and colleagues to the employees' performance.

Robbins (2001) classified job performance into three categories. (1) Employees' work result: individual's performance was evaluated by the results rather than work process of assigned tasks (i.e. sales quota and production efficiency). (2) Employees' work behavior: individual's performance was evaluated by the attitude when proceeding work and the ability to deal with incident occurred in the work. (3) Employees' characteristics: individual's performance was evaluated by the personal characteristics such as cooperative attitude, reliable, confident, full of rick work experience to which positive job performance are highly correlated.

According to the job performance framework Campbell's (1990) two general dimensions, namely task performance and contextual performance, have been used (Borman and Motowidlo, 1993; Motowidlo and Van Scotter, 1994) and comprehensive evaluated the employees' performance by the results (Conway, 1999; McManus and Kelly, 1999; Moorman and Wells, 2003) in previous studies.

Task performance is an indicator which evaluated the level of a job which was assigned to an individual. The concept of task performance is similar with in-role behavior within an organization, which has an impact on performance of organization. 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 (Motowidlo and Schmit, 1999).

Motowidlo and Van Scotter (1994) employed 14 items to evaluate task performance of maintenance and repair crews of aircraft. Goodman and Svyantek (1999) used questionnaires which include items of goal achievement, meeting the work requirement, professional skill, follow work instruction, assuming extra job, assuming work designed and finishing work without delay to evaluated employees' job performance. Moorman and Wells (2003) identified seven items for evaluating task performance of customer service personnel, (i.e. confirming and responding request from customers, providing proper solution, following work instruction, finish work without delay, avoiding making any mistakes on job,

work independently, follow the principle and regulation). Bakker et al. (2004) adopted task evaluation sheet to investigate the task performance among different department employees.

Contextual performance, in contrast, is a behavior which is directly connected with the organizational activities. Individuals are volunteers to conduct compulsory activities such as corporate with others, sacrificing personal interests for achieving organizational goals, from their mind. These behaviors are not directly related to the performance of an organization. Contextual performance refers to behaviors that contribute to the culture and climate of the organization, in other words, the context within which transformation and maintenance activities are carried out. Contextual performance behaviors consists 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 Schmit, 1999; Befort and Hattrup, 2003). Table 2.6 summarized previous researches associated with these two types of job performance dimensions employed in this study.

Dimensions	Previous researches
Task performance	Campbell (1990); Borman and Motowidlo (1993);
	Motowidlo and Van Scotter (1994); Motowidlo
	and Schmit (1999); Goodman and Svyantek
	(1999); Moorman and Wells (2003); Bakker et al.
	(2004)
Contextual performance	Campbell (1990); Borman and Motowidlo (1993);
	Motowidlo and Van Scotter (1994); Befort and
	Hattrup (2003)

Table 2.6 Previous researches on job performance dimensions

Harris and Moran (1995) indicated that these cultural dimensions differences had significant influences on employees' job performance within organizations. Bailey, Chen, and Dou (1997) on the basis of individualism versus collectivism value, argue that US respondents expect success feedback, whereas Japanese and Chinese desire failure feedback. The result supported the hypotheses for the United States and Japan, but there was no difference between the U.S. and Chinese samples in terms of their success-feedback expectations. Another study focused on how individualists and collectivists would react to individual or group based feedback in terms of self-efficacy, performance, and job satisfaction (Earley et al., 1999). This study used samples from three countries (the U.S., China. and Czechoslovakia). Based both measured cultural values on of Individualism/Collectivism and the country proxies, the results were inconsistent with the predictions. In particular, collectivists positively reacted to both individual-based and group-based feedback. Smith, Peterson and Schwartz (2002) studied how managers in 47 countries handled eight specific work events. The study used national culture scores from Hofstede's framework. Results suggested that cultural values predict sources of guidance that managers relay on when they pertain to vertical relationship. However, values are less successful in predicting reliance on peers. Another study, by Smith, Peterson, and Wang (1996), examined managers in China, the United State, and Britain. They found that Western managers rely more on their own experiences, whereas Chinese managers rely more on rules and procedures. The author used national culture to explain the difference, even though culture was not measured and the country proxy was used in the statistical analyses (Tsui et al., 2007).

2.5 Summary

This chapter initially focused on the introduction to definition of cultures, national culture, transformational leadership and job performance. This study further reviewed the relationship between national culture, transformational leadership and job performance.

Based on the literature review in this chapter, dimensions of national culture, transformational leadership and job performance have been identified. As regards for national culture, five dimensions (e.g. power distance, uncertainty avoidance, individualism/collectivism, masculinity/femininity, Confucian dynamic/long-term orientation) are classified. Transformational leadership consists of four dimensions including idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. As for job performance, two dimensions namely, task performance and contextual performances were identified. With aforementioned national cultural, transformational leadership and job performance dimensions are employed to examine the relationship between national culture and job performance as well as the moderating effect of transformational leadership in the container chipping context. The research techniques and data analysis methods are introduced in the following chapter.

CHAPTER 3 Research Design and Methodology

The concepts of national culture, transformational leadership and job performance have been explained in previous chapter. By reviewing relevant studies of these concepts, a theoretical conceptual model can therefore be constructed to examine the relationship between cultural difference, transformational leadership and job performance as well as the moderating role of transformational leadership. In this chapter, the research design and data analysis methodologies are discussed, which focus on the sections as follows:

- Conceptual model
- Research hypotheses
- Sources and collection of data
- Reliability and validity test
- Data analysis method

3.1 The Conceptual Model

Based on the Hofstede's (1980, 1983) and Hofstede and Bond (1988) national culture values and the previous literature on transformational leadership and job performance, the conceptual model of this study is illustrated in Figure 3.1. The model starts from selection of control variables based on personal demographics (e. g. age, educational level, and work experience). Further, factors related to national culture, transformational leadership and job performance are adopted in the model, which proposes the effects of cultural difference and transformational leadership on job performance. It can be noted that culture difference and transformational leadership are expected to have a direct significant influence on employee's job performance whereas transformational leadership later acts as a moderating role between cultural difference and job performance.

The network of relationship among these factors in this model and the proposed linkages are constructed in this study. The aim of this study therefore is to construct a conceptual model to explore the effects of perceived cultural difference and transformational leadership on employees' job performance as well as considering the moderating effect of transformational leadership in the container shipping context.



Figure 3.1 Conceptual Model

3.2 Research Hypotheses

This study uses Hofstede's cultural value framework to develop the research hypotheses on examining the relationship between employees' perception of cultural difference and job performance (Kirkman et al., 2006). These perceived cultural dimensions differences may have significant influence on employees' job performance within organizations (Harris and Moran, 1995).

Regarding the power distance in Hofsted's framework, this study suggests that there will have a lower job performance in cultures wherein social inequality is perceived to the legitimate because individuals recognize that superior performance is expected from their supervisors (Hofstede, 1997b). Hofstede (1997b) pointed out that power distance had a negative influence on job performance in cultures wherein social inequality is perceived to the legitimate because individuals recognize that superior performance is expected from their supervisors. Farth et al. (2007) also stated that task performance is lower for individuals high on power distance value. They explained that high power distance individuals tend to defer to authority figures with respect to the amount of work effort needed.

Similarly, Lam et al. (2002) found that employees' justice perceptions have a weaker positive effect on task performance in a high power distance culture than in a low power distance culture. This reflected that individuals high in power distance are more willing to accept arbitrary treatment from organizations or supervisors and less likely to expect fair treatment. These organizations reduce the need to develop strong motivation ties to the group and identification with the organization. A higher hierarchy from authority may hinder the performance of employee. Therefore, this study hypothesizes the following:

- Hypothesis 1a: Perceived cultural difference with respect to power distance between foreign employees and managers is negatively associated with task performance in the container shipping companies.
- Hypothesis 1b: Perceived cultural difference with respect to power distance between foreign employees and managers is negatively associated with contextual performance in the container shipping companies.

Uncertainty avoidance focuses on how a society deals with unknown aspects of the future (Nakata and Sivakumar, 1996). Uncertainty avoidance is 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 protecting conformity (Hofstede, 1985, p. 347). Thus, in a uncertainty avoidance culture where individuals are oriented toward tradition and stability, and are more concerned about keeping the status quo and are less willing to disturb the order once a state of equilibrium is attained (Hofstede, 1997b).

Shacketon and Ali (1990) demonstrated that people from the uncertainty avoidance culture are strongly and positively associated with formalization and motivation to acquire information such that the uncertainty during interpersonal communication can be reduced. In the social context characterized by high uncertainty avoidance, 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 posits the following:

- Hypothesis 2a: Perceived cultural difference with respect to uncertainty avoidance between foreign employees and managers is positively associated with task performance in the container shipping companies.
- Hypothesis 2b: Perceived cultural difference with respect to uncertainty avoidance between foreign employees and managers is positively associated with contextual performance in the container shipping companies.

Gabrenya et al. (1983) compared American and Chinese students and reported that the performance of Chinese students working in groups was significantly higher than that of Chinese students working alone. They suggested that the collectivist Chinese may have viewed their individual actions as an important contribution to their group's efforts and received greater level of satisfaction and feeling of accomplishment from group outcomes.

If an employee feels favorably about the job, it makes sense that he or she chooses to devote more time and energy to the job and is willing to exert additional effort to ensure that the work is done well. On the contrary, in a collectivistic culture, job performance may be a lesser determinant of job behavior compared to group norms or collective goals (Earley and Gibson, 1998; Ng et al., 2009).

Accordingly, managers with characteristics of collectivism can achieve better effects of cooperating with foreign employees compared to those who own characteristics of individualism. Consequently, this study hypothesis that:

Hypothesis 3a: Perceived cultural difference with respect to collectivism between foreign employees and managers is positively associated with task performance in the container shipping companies. Hypothesis 3b: Perceived cultural difference with respect to collectivism between foreign employees and managers is positively associated with contextual performance in the container shipping companies.

Masculinity can be defined as "the degree to which a society is characterized by assertiveness (masculinity) versus nurturance (feminity)" (Hofstede, 1980; Nakata and Sivakumar, 1996). Masculinity refers to a preference for achievement, heroism, assertiveness, and material success, whereas femininity stands for a preference for relationships, modesty, caring for the weak groups, and quality of life (Hofstede, 1984). High 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 any tasks is necessary in the context of shipping. Following this logic, it is reasonable to posit that a higher level of masculinity will have a negative impact on job performance in container shipping operations. Accordingly, this study hypothesizes that:

- Hypothesis 4a: Perceived cultural difference with respect to masculinity between foreign employees and managers is negatively associated with task performance in the container shipping companies.
- Hypothesis 4b: Perceived cultural difference with respect to masculinity between foreign employees and managers is negatively associated with contextual performance in the container shipping companies.

Long-term orientation at a high level refers to the degree to which a culture focuses on the future performance rather than on past- or present- benefits (Bearden et al., 2006). Employees having a high level of long-term orientation act thrifty, hardworking, persevering and having a sense of shame characteristics, while those with a low level of long-term orientation are respectful of tradition, fulfilling social obligation. According to Nataka and Sivakumar (1996), the positive values of long-term orientation such as persistence, hardworking, thrifty, shame, and regards for relationships. A higher level of perception of long-term orientation has a positive impact on the managerial performance (Neelankavil et al., 2000). Business with long-term orientation cultures are accustomed to working toward building up strong positions in their markets where employees are allowed time and resources to create their own contributions (Hofstede, 2001). Following this logic, it is reasonable to posit that a higher level of long-term orientation will have a positive impact on job performance in terms of task and contextual in container shipping operations. Accordingly, this study hypothesizes that:

- Hypothesis 5a: Perceived cultural difference with respect to long-term orientation between foreign employees and managers is positively associated with task performance in the container shipping companies.
- Hypothesis 5b: Perceived cultural difference with respect to long-term orientation between foreign employees and managers is positively associated with contextual performance in the container shipping companies.

Over the past years, transformational leadership has been widely identified as a reasonable explanation for organizational performance (Bass, 1985; Burns, 1978; Conger and Kanungo, 1988; Jermier, 1993). Transformational leadership raises the needs of employees and to promote positive change for individuals, groups, and organizations other than attempts to satisfy the current needs of employees by concerning on transactions or exchanges through contingent reward methods (Bass and Avolio, 1994). Further,

transformational leadership sets a direction, aligning people to that direction, and motivating and inspiring people (Kotter, 1996) argued. Bass and Avolio (1994) indicated transformational leaders have positive and direct effects on the development and performance as well as some intermediately indirect influences on employees.

Concerning different types of leaders, transformational leadership is more effective than transactional leadership (Bass, 1996, 1997). Fiol et al. (1999) addressed that leaders with transformational leadership have positive effects on their organizations. Pillai and Meindl (1998) founded collective orientated leadership style had a strongly positive effects on cultural groups. Leadership plays an important role among personnel and performance among organizations.

Casimir and Waldman's study (2007) compared supervisors from western and eastern countries indicated that supervisors employing transformational leadership increased employees' work satisfaction. Accordingly, this study proposes the hypothesis that:

- H6a: Transformational leadership is positively associated with task performance.
- H6b: Transformational leadership is positively associated with contextual performance.

Eylon and Au (1999) compared the effects of empowerment founded that participants from both high and low power distance cultures were more satisfied with their job in the empowered condition. This suggests that transformational leaders may need to be more participative to be effective in highly egalitarian societies. In contrast, in high power distance societies, transformational leadership may perform in a directive form (Den Hartog et al., 1997). Javidan and House (2001) also indicated managers by employing transformational leadership mitigate the discrepancy of employees' perception from higher hierarchical structure cultures and to improve their performance when working with other group's members. Accordingly, this study proposes the following moderation hypotheses:

- Hypothesis 7a: Transformational leadership weakens the negative relationship between power distance and task performance in container shipping companies; specially, low perceived differences of power distance will lead to higher task performance by employees in container shipping companies when transformational leadership is high rather than low.
- Hypothesis 7b: Transformational leadership weakens the negative relationship between power distance and contextual performance in container shipping companies; specially, low perceived differences of power distance will lead to higher contextual performance by employees in container shipping companies when transformational leadership is high rather than low.

Rauch et al. (2000) examined the success of planning for small business leaders in Germany and Ireland found a positive influence on small business success in the high uncertainty avoidance context but a negative influence in the low uncertainty avoidance context. Leaders with transformational leadership adopt adequate opinions from employees in high uncertainty avoidance companies and set up regulations to reduce the sense of uncertainty. The results revealed a significant improvement of these employees. Transformational leadership has an impact on relationship between uncertainty avoidance and performance. Accordingly, this study set hypothesis as follows.

- Hypothesis 8a: Transformational leadership strengthens the positive relationship between uncertainty avoidance and task performance in container shipping companies; specially, high perceived differences of uncertain avoidance will lead to higher task performance by employees in container shipping companies when transformational leadership is high rather than low.
- Hypothesis 8b: Transformational leadership strengthens the positive relationship between uncertainty avoidance and contextual performance in container shipping companies; specially, high perceived differences of uncertain avoidance will lead to higher contextual performance by employees in container shipping companies when transformational leadership is high rather than low.

According to Jung and Avolio's (1999) study, collectivists with a transformational leader generated more ideas, while individualists generated more ideas with a transactional leader. Group performance was generally higher than that of individuals working alone. In the study of House et al. (2004), several leader attributes that reflect differences in individualism were found to vary across cultures. Avolio et al. (1999) indicated in high collectivist cultures, employees showed higher performance with a transformational leader than with a transactional leader.

On the other hand, employees from high collectivist cultures can enhance their working performance by following the instruction of their leaders through the transformational leadership. People in individualist cultures are expected to be more motivated to satisfy their own self-interests and personal goals (Hofstede, 1980, 2001). In

such cultures, individuals take care of themselves and they tend to place higher priority on individual initiative and achievement, as well as on personal rewards based on satisfying transactional agreements.

In collectivist cultures, the strong tendency to support organizational values and norms should fit with a transformational leader's efforts to align followers' personal values with a new mission or vision (Avilio and Bass, 1988). Followers from collectivist cultures are expected to more readily internalize their leader's vision than will individualist followers. Collectivists tend to accept their leaders' beliefs (Hofstede, 1980). The study expects that a transformational leader's emphasis on achieving collective goals would be more readily accepted when group members' cultural orientation was more collectivist (Jung et al., 1995). Accordingly, this study posits that:

- Hypothesis 9a Transformational leadership strengthens the positive relationship between collectivism and task performance in container shipping companies; specially, high perceived differences of collectivism will lead to higher task performance by employees in container shipping companies when transformational leadership is high rather than low.
- Hypothesis 9b Transformational leadership strengthens the positive relationship between collectivism and contextual performance in container shipping companies; specially, high perceived differences of collectivism will lead to higher contextual performance by employees in container shipping companies when transformational leadership is high rather than low.

Helgstrand and Stuhlmacher (1999) compared leader prototypes of Danish and American participants and found leaders with transformational leadership behavior can mitigate the negative influence of masculine society's behaviors on employees' work effectiveness. Holtgraves (1997) revealed Koreans, for instance, were found to be more indirect in communication than did Americans in communication, which exists 'face saving' problem. (Brown and Levinson, 1987). Leaders with transformational leadership can reduce the impact of this problem (Brown and Levinson, 1987). Otherwise, people from western societies regarded cooperation as a sign of weakness. Therefore, leaders need to increase volition of employees to enhance employees' performance by employing transformational leadership. On the other hand, managers can also use transformational leadership to reduce the recognition conflicts of masculine behaviors between employees and managers. Accordingly, this study hypothesizes that:

- Hypothesis 10a Transformational leadership weakens the negative relationship between masculinity and task performance in container shipping companies; specially, low perceived differences of masculinity will lead to higher task performance by employees in container shipping companies when transformational leadership is high rather than low
- Hypothesis 10b Transformational leadership weakens the negative relationship between masculinity and contextual performance in container shipping companies; specially, low perceived differences of masculinity will lead to higher contextual performance by employees in container shipping companies when transformational leadership is high rather than low

The long-term orientation culture attaches more importance to stability on employees' working performance by persistence (perseverance) and thrift characteristics. People with higher level of long-term oriented culture are likely to perform better in their job, in spite of face saving (having a sense of shame) problem exists. Managers need to finds effective leading ways to prompt these employees performance. Therefore, transformational leadership can be employeed to increase the recognition benefits of long-term oriented behaviors between employees and managers. Accordingly, this study hypothesizes that:

- Hypothesis 11a Transformational leadership strengthens the positive relationship between long-term orientation and task performance in container shipping companies; specially, high perceived differences of long-term orientation will lead to higher task performance by employees in container shipping companies when transformational leadership is high rather than low.
- Hypothesis 11b Transformational leadership strengthens the positive relationship between long-term orientation and contextual performance in container shipping companies; specially, high perceived differences of long-term orientation will lead to higher contextual performance by employees in container shipping companies when transformational leadership is high rather than low.

3.3 Source and Collection of Data

3.3.1 Data Collection

Data collection methods are an integral part of research design. The research data can be collected from both primary and secondary resources. Primary data refers to information obtained firsthand by the researcher. In contrast, secondary data refer to information gather from sources already existing.

The sources of data in this study are primarily data, which collected by means of communication and observation (Iacobucci and Churchill, 2010). Communication means collecting data by questioning target samples with specific instrument. In contrast, observation involves obtaining data by recording the facts, actions and behavior relevant to the research objects without interaction with respondents. There are three types of communication data collection methods, namely, personal interviews, telephone interviews, and postal questionnaires (Iacobucci and Churchill, 2010) can be employed in the study.

Although interview approaches have the advantage of flexibility in terms of adapting, adopting, and changing questions as the researcher proceeds with the interviews, questionnaires have the advantages of obtaining data more efficiently in terms of research time, energy, and cost. Thus, the postal questionnaire survey was employed in his research as the main data collection method because questionnaires can be adapted to examine and explain relationship between variables, in particular cause-and-effect relations (Saunder et al., 1997). Using postal questionnaire approach can have several other reasons as follows: samples distributed in different geographical regions; cost-efficient; respondents have sufficient time to finish the questionnaire; avoiding asking personal sensitive information in person. Although the questionnaire survey approach has a disadvantage of low response rate, several techniques can be employed for increasing the response from respondents (Dillman, 2000). Dillman (2000) suggested the researchers should enclose a stamped addressed envelope with the questionnaire, assurances of confidentiality and anonymity, as well as a promise that a report of the results and managerial implications will be sent to respondents after completion of the study. Lagoudis et al. (2006) also suggested that a pre-notification

letter, cover letter with questionnaire, reminder letter is necessary for improving return rate. In addition, response inducement approaches such as monetary incentives, follow-up mailings, and pre-qualification of survey recipients have also shown effectively for increasing response rate (Larson, 2005).

3.3.2 Non-response Bias

Non-response has been a concern in the mail survey. Now-response bias is the difference between the answers of non-respondents and respondents (Lambert and Harrington, 1990). To deal with the potential problem of non-response bias in mail surveys, several approaches have been provided including (1) subjective estimates-selecting a panel of experts or judges and having them identify survey items regarding which they believe non-response bias is present, and state the direction of the bias based on at least two response waves; (2) extrapolation method - estimate the value of a population parameter by linear extrapolation based on the cumulative response rate over successive waves of replies; (3) comparing the composition of respondents to that of non-respondents on characteristics that are relevant to the study; and (4) sampling non-respondents after the planned waves are completed to determine the presence and direction of non-response bias (Armstrong and Overton, 1977; Lambert and Harrington, 1990; Hair et al., 2010).

While Lambert and Harrington (1990) suggested that a condensed version of the questionnaire containing critical variables be sent to a sample on non-response for detecting bias, a common and convenient approach is to compare first and second waves and assume non-bias is nonexistent if no significant differences exist between the survey variables. Many previous studies in maritime and logistics research (Fawcett et al., 1997; Zhao et al., 2001; Tsai, 2009) have employed the procedures recommended by Armstrong and Overton
(1977) to examine the potential non-response bias situation. A comparison of early (those responding to the first mailing) and late (those responding to the second mailing) respondents was conducted in this study to by means of t-test analysis test for non-response bias.

3.4 Questionnaire Design

The adequate questionnaire design has a crucial influence on research participants' response rate and on reliability and validity of collecting data. There are several criteria which researchers should follow during the process of formulating questionnaire. A step-by-step stage questionnaire design for the present study is conducted based on Iacobucci and Churchill's (2010) research.

The first step was the selection of national cultural attributes by reviewing the literature on cross cultural management research, followed by the design of the questionnaire, personal interviews with container shipping practitioners, and a content validity test. The questionnaire design followed the stages outlined by Iacobucci and Churchill (2010).

The stages consisted of (1) specify what information will be sought, (2) determine type of questionnaire and method of administration, (3) determine content of individual questions, (4) determine form of response of each question, (5) determine physical characteristics of questionnaire, (6) arrange sequence of questions, (7) examine physical characteristics of questionnaire, (8) reexamine the previous steps and revise if necessary, and (9) pretest the survey, revise where needed.

In order to ensure the instrument's accuracy and the content validity of the questionnaire, a comprehensive review of the literature and interviews with practitioners

will be conducted in this study. Each question items is based on previous studies and discussions with a number of executives and experts in liner shipping. Information obtained during the discussions resulted in some minor modifications of the questionnaire to ensure all items within the questionnaire are ultimately accepted as relevant and possessing content validity. The final measurement items employed for evaluating foreign employees' perceptions of national culture and perceptions of their managers' national culture.

After specifying the basic information that will be sought, the following step focus on the method of collecting data, which concerned with what primary data need to be considered in this study, and how to approach the target population, what degree of structure and disguise will be used, and how the questionnaire will be administrated (Iacobucci and Churchill, 2010). The type of data is a crucial consideration factor on the method of data collection. If question items used in the survey are all structured and undisguised, a mail survey method is regarded as an adequate approach of obtaining data (Iacobucci and Churchill, 2010). In this study, all question items are all structured which is recommended to use a mailing method to receive data.

The questionnaire is divided into four parts for the study survey. In order to eliminate respondent's bias from the vexing to the question items, demographic information is suggested to place at the end of the questionnaire according to Sekaran (2003). Thus, the first part of the questionnaire for this study describes the perceptions of cultural difference of oversea employees and their foreign managing directors. The second part of questionnaire is concerned with the perceptions of transformational leadership from the perspective of oversea employees. The evaluation of job performance is addressed in the third part and the final part elicit demographic. Detailed contents of questionnaire are described as below:

1. Culture difference measurement

The first part contains two subordinate parts (perceived cultural difference from oversea employees and perceived cultural difference of their foreign managing managers). Hofstede (1980) and Hofstede and Bond (1988) national cultural items and framework are adopted which covered five major dimensions (power distance, uncertainty avoidance, collectivism, masculinity, and long-term orientation). Every four measuring items are used in each dimension according to previous studies (Hofstede, 1980, 2001; Bond, 1988; Hosstede and Bond, 1988). The difference value between employees and managers of each items are subsequently used for evaluating the effects of cultural difference on employees' job performance. As displayed in Table 3.1, and Table 3.2, a total of 20 items are employed to evaluate the perceived cultural difference for oversea employees and their foreign managers separately.

2. Transformational leadership

Transformational factors are inter-correlated, which need to combines a variety of measuring variables to clarify the concepts (Bass, 1990). Three distinct factors, namely charisma-inspiration, individualized consideration, and intellectual stimulation are regards crucial when explaining the concept of transformational leadership. As illustrated in Table 3.3, there is a total 12 measuring item employed for measuring transformational leadership.

Items	Description	Previous studies
Power di	stance	
PD1:	I think employees should not hold too many	Hofstede (1980, 1993,
	personal opinions	2001); Lu et al. (1999);
PD2:	I think any work needs to be instructed by a	Ingehart and Barker (2000);
	supervisor	Schein (2003); House et al.
PD3:	I fear having a dispute with my supervisor	(2004); Schwartz (2010)
PD4:	I believe my supervisor would not consult with	
	other colleagues before making a decision	
Uncertai	nty Avoidance	
UN1:	I prefer to work with detailed job specifications	Hofstede (1980, 1993,
UN2:	I prefer to do routine work in order to avoid	2001); Lu et al. (1999);
	making mistakes	Ingehart and Barker (2000);
UN3:	I like to discuss my work with someone before	Schein (2003); House et al.
	doing it	(2004); Schwartz (2010)
UN4:	I would collect more information for	
~	decision-making	
Collectiv	vism	2
COL1:	I prefer team work better than doing work alone	Hofstede (1980, 1993,
COL2:	I keep harmony and avoid conflict with my	2001); Lu et al. (1999);
COLO	colleagues	Ingehart and Barker (2000);
COL3:	I think group interests are more important than	Schein (2003); House et al. (2004)
0014	personal benefits	(2004); Schwartz (2010)
COL4:	I think it is important to cooperate with other	
Magauli		<u> </u>
MASL	Itty I think individual comon achievement is more	Hafatada (1080, 1002
MASI.	important than life quality	2001: Ly et al. (1000):
MAS2.	Other than at work. I do not interact with my	2001), Lu Ct al. (1999), Ingehart and Barker (2000):
MAS2.	colleagues	Schein (2003): House et al
MAS3.	I think individual career achievement is more	(2004): Schwartz (2010)
WII 105.	important than good relationships with	(2007), Senwartz (2010)
	co-workers	
MAS4.	I strive for any promotional opportunity	
Long-ter	m orientation	
LT01:	I am willing to sacrifice present pleasure for	Bond (1988): Hofstede and
	future success	Bond(1988); House et al.
LTO2:	I feel ashamed when I have done something	(2004); Schwartz (2010)
	wrong	
LTO3:	I finish my job with perseverance	
LTO4:	I emphasize a long-term outlook rather than	
	immediate benefits	

Table 3.1 Measurement of Perceived Cultural Difference of Employees

Items	Description	Previous studies
Power dista	nce	
PDM1:	My supervisor thinks employees should not	Hofstede (1980, 1993,
	hold too many personal opinions.	2001); Lu et al. (1999);
PDM2:	My supervisor thinks that employees should	Ingehart and Barker (2000);
	work under his/her instruction.	Schein (2003); House et al.
PDM3:	My supervisor fears having a dispute with	(2004); Schwartz (2010)
	headquarters.	
PDM4:	Before making decisions, my supervisor never	
	acquires opinions from employees.	
Uncertainty	Avoidance	
UNM1:	My supervisor prefers to have routine work in	Hofstede (1980, 1993,
	order to avoid making mistakes	2001); Lu et al. (1999);
UNM2:	My supervisor likes to get employees' opinions	Ingehart and Barker (2000);
	before conducting his/ her work.	Schein (2003); House et al.
UNM3:	My supervisor prefers to work with detailed	(2004); Schwartz (2010)
	job specifications	
UNM4:	My supervisor collects sufficient information	
	before making decisions	
Collectivist	n see see see see see see see see see se	XX 2 + 1 (1000 1000
COLM1:	My supervisor emphasizes group interests	Hofstede (1980, 1993,
00110	rather than personal benefits.	2001); Lu et al. (1999);
COLM2:	My supervisor prefers to encourage team work	Ingehart and Barker (2000);
COLM3:	My supervisor keeps harmony and avoids	Schein (2003); House et al. (2004) S 1 (2004)
COLMA	conflicts with employees	(2004); Schwartz (2010)
COLM4:	My supervisor thinks it is important to	
Magaulinity	cooperate with employees	
Masculinity	Ma ann am i an thinla nam an 1 ann an	U. f.t. 1. (1000, 1002
MASMI	My supervisor thinks personal career	Holstede (1980, 1993, 2001): Ly at al. (1000):
	authevement is more important than me	2001), Lu et al. (1999), Ingehart and Parker (2000):
MASM2.	quality. My supervisor strives for any promotional	Schoin (2002): House et al
MASIM2.	opportunity	(2004): Schwartz (2010)
MASM3	My supervisor thinks individual career	(2004), Schwartz (2010)
MASNIS.	achievement is more	
MASMA	Other than at work, my supervisor does not	
1017 10101-	interact with employees	
Long-term	prientation	
	My supervisor emphasizes a long-term outlook	Bond (1988): Hofstede and
210111.	rather than immediate benefits	Bond(1988): House et al
LTOM2	My supervisor is willing to sacrifice present	(2004). Schwartz (2010)
<u></u>	pleasure for future success	((2010)
LTOM3.	My supervisor finished his job with	
	perseverance.	
LTOM4:	My supervisor feels ashamed when he/she has	
	done something wrong.	

Table 3.2 Measurement of Perceived Cultural Difference of Foreign Managers

Items	Description Pr	revious studies
Chari	sma inspiration	
CI1	My supervisor makes me proud to work with him/her.	Bass (1985);
CI2	I admire my supervisor's leadership behavior.	Bass (1997);
CI3	My supervisor clearly transmits his/her mission/vision to a	me. Avolio et al.
CI4	My supervisor sets high standards for my work	(1999)
	Individualized consideration	
IC1	My supervisor's encourages employees with a variety of n	methods Bass (1985);
IC2	I deeply feel encouragement from my supervisor.	Bass (1997);
IC3	My supervisor encourages employees to think about probl	lems in Avolio et al.
	innovative ways.	(1999)
IC4	My supervisor emphasizes the use of intelligent methods t	to solve
	problems on the job	
	Intellectual stimulation	
IS1	My supervisor supports reasonable opinions from employ-	vees. Bass (1985);
IS2	My supervisor shows personal concern for me.	Bass (1997);
IS3	My supervisor sets my goals and helps me to achieve then	m Avolio et al.
IS4	My supervisor expresses his/her appreciation when I do w	vell. (1999);

Table 3.3 Measurement of Transformational Leadership

3. Job performance

Job performance is an evaluation for specific task or achievement of individuals or group in organization. It is widely agreed that individual job performance is a multidimensional construct. Campbell's (1990) developed the job performance framework in terms of two general dimensions, namely task performance and contextual performance. Table 3.4 shows the measuring items (five items for each dimension) employed for evaluating employee's job performance in this study.

Items	Description	Previous studies
Task p	performance	
TP1	My foreign supervisor thinks my work quality is excelled	ent Campbell (1990);
TP2	I can finish any work assigned by my foreign superviso schedule.	r on Borman and Motowidlo
TP3	My foreign supervisor thinks I am one of the most effic colleagues	ient (1993)
TP4	My foreign supervisor acknowledges my performance.	
TP5	I actively learn specific job skills and knowledge sugge my foreign supervisor.	sted by
Conte	extual performance	
CP1	I help colleagues after I finish the work assigned by my	foreign Campbell (1990);
	supervisor.	Borman and
CP2	I can work independently to finish tasks assigned by my supervisor.	y foreign Motowidlo (1993)
CP3	My foreign supervisor acknowledges my work efficient	cy.
CP4	I like to cooperate with my foreign supervisor.	
CP5	I can quickly respond to client concerns that are propos	ed by
	my foreign supervisor.	

Table 3.4 Measurement of Job Performance

Having determined the content of individual questions, the next step is to decide on the particular form of response. Typically, the answering type of questions is divided into open-ended and fixed-alternative, and closed-ended questions. There is no wrong or right answer for open-ended and closed-ended questions. The choice of type of question depends on contents, respondent motivation, method of administration, type of respondents, the skills to code open-ended questions, and so forth (De Vaus, 2002). The advantage of using closed-ended questions are including quick to answer, do not discriminate against less articulate respondents, much easier to code and analyze and time and money saving, deal with variables that are sensitive topics. A closed-ended question design is an adequate selection when the questionnaire contents are long, the motivation of respondents is low and the questionnaire is self-administered rather than administered by skill researchers.

Attitude is one of the most pervasive notions to investigate respondents' behavior.

Scaled questions are frequently used to collect their attitudes. A variety of attitude scaling techniques can be employed in a questionnaire survey. Likert scale is one of the most commonly used scales, which asks respondents how strongly they agree or disagree with a statement or a series of statement, usually using a five-point or seven-point scale as a evaluating level. Sekaran (2003) has contended that a five point scale is just as good as any evaluating scale, and that an increase from five to seven points on a rating scale has no improvement on reliability of the ratings. In addition, from a respondents' perspective, a five point scale is easier for identifying the various service attributes than a seven point scale.

The aim of this study is to investigate respondents' attitude toward perceptions of cultural difference and transformational leadership. The Likert scale method is regarded as an adequate method for measuring the attitude of respondents and enjoys the advantages of closed-ended questions in this study. In this study, four pages contents with more than 60 items is delivered to ask respondents for answering; we decided to use a five point Likert scale, anchoring on very degree to very disagree, with closed-ended question design in our questionnaire. After determining the contents of all question items, we reexamine and revise the questionnaire to ensure that each question was not confusing or ambiguous, potentially offensive to the respondents, leading or bias including, and also easy to answer.

The final step of questionnaire design is to take a pre-testing and a pilot study. The purpose of the pre-test and pilot test is to understand how it performs under actual conditions of data collection. Through pre-testing a questionnaire, questionnaire design is improved so that respondents have no difficulties when answering the questions. In addition, some assessment of questions items' validity and reliability can be made. Three stages pre-test is conducted in this study. First, the draft questionnaire is discussed with and

examined by the author's research supervisor, Professor Lu. Second, since the sample collecting in this study are from different countries and using different languages, two types of questionnaire (Chinese (traditional/simple) version vs. English version) are developed for respondents. This study translates the question items from original version (English version) into Chinese version and then translates back them to English to ensure the accuracy of wording used in this questionnaire. Personal interviews with five shipping managers in London, Antwerp, Rotterdam, Xiamen, and Kaohsiung are conducted to ascertain the comprehension and wording of the questionnaire. In addition, 10 shipping expert are sent an e-mail to explain the aim of the pilot study for improving questionnaire design. Upon inspection, of this pilot questionnaire, no particularly confusion with respect to format or question type was found. Hence, question items employs in the questionnaire are considered as usable and eligible for data analysis.

3.5 Reliability and Validity Test

3.5.1 Reliability Test

Reliability testing is an estimation of the degree to which a measurement is free of random of unstable error (Cooper, 1995). It is commonly assessed in three forms: test-retest, alternate-form, and internal consistency (Litwin, 1995). Internal consistency reliability particularly is the most common technique for assessing survey instruments and scales. Internal consistency reliability is applied not to single items but to group of items that are thought to measure different aspects of the same concept. 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 (Nunnally, 1978; Iacobucci and Churchill, 2010).

Cronbach's alpha coefficient is calculated as follows (Iacobucci and Churchill, 2010)

$$\alpha = \left(\frac{k}{k-1}\right) \left(1 - \frac{\sum_{i=1}^{k} \sigma_i^2}{\sigma_i^2}\right)$$

Where

k=number of items in the scale; σ_i^2 = variance of scores on item i across subjects

3.5.2 Validity Test

Validity refers to whether what this study tried to measure was actually measured. It has increased important for national culture researchers to test the construct validity. Construct validity "examines the degree to which a scale measures what it intends to measure" (Garver and Mentzer, 1999). The dimensions of construct validity include unidimensionality, convergent validity, discriminate validity, and construct reliability. However, the traditional methods such as exploratory factor analysis, item-total correlations, and estimation of reliability using Cronbach's alpha do not allow for assessing unidimensionality, convergent validity, nor discriminate validity (Anderson and Gerbing, 1988).

A confirmatory factor analysis with a multiple-indicator measurement model suggested by several researchers was, therefore, employed to assess validity (Segars, 1997; Anderson and Gerbing, 1988; Gerbing, 1988). The hierarchy of procedures to assess validity would be discussed in the following section of confirmatory factor analysis. Since the lack of consensus on the measurement for these cultural values, a validity test is necessary.

3.6 Samples

3.6.1 Defining the Population

This study seeks to investigate the effects of perceived cultural difference on

employees' job performance. Perception of cultural difference from foreign employees is rather crucial. Three major Taiwan-based container shipping companies, namely, Evergreen Line, Yang Ming Line, and Wan Hai Line account for major part of container shipping business (over 90%) and hire numbers of employees work for their oversea branch offices. Hence, these foreign employees are adopted as investigating population in this research since the perceptions from these employees are valuable for identifying the actual influence of cultural difference on job performance.

3.6.2 Sample Frame and Size

The oversea employees in Taiwan-based container shipping companies are selected from their branch offices and agents working in oversea branch offices and agencies allocated in six countries of United Kingdom (UK), Germany, Belgium, Netherlands, China (Mainland China), and Taiwan. In European areas, questionnaire are sent to employees work in branch offices or agents located in Netherland, Germany, Belgium, and UK, since the four most important ports (e.g. Rotterdam, Hamburger, Antwerp, and Thames) for these three Taiwan-based container shipping companies operation in Europe are in these countries. In addition, China is serving as a crucial area for these three container shipping companies' business. Employees in China's branch offices where allocated in top 5 ranking ports are also received the questionnaire for answering. Hence, this study seeks to realize the perception of cultural difference to their managers from the perceptive of oversea employees.

3.7 Data Analysis Methods

3.7.1 Exploratory Factor Analysis

Exploratory factor analysis is a technique used to reduce a large variable set to a smaller, manageable set of underlying dimensions. Each variable that measure the same dimension will load on the same factor. These loading values indicate the correlation between the each variable and all other variables on a particular factor (Iacobucci and Churchill, 2010). Kim and Muller (1978) defined factor analysis as "a variety of statistical techniques whose common objective is to present a set of variables in terms of a smaller number of hypothetical variables". Thus, the purpose of factor analysis is identifying structure through data summarization and data reduction (Hair et al., 2010; Iacobucci and Churchill, 2010).

To perform the exploratory factor analysis, it first step is to ensure that the data matrix has sufficient correlations. Two measures were frequently used to examine the appropriateness of factor analysis. The Barlett Test of Sphericity is one such measure to test correlations among the variables. The test was significant indicating that correlations existed among at least some of the variables. Another measure to quantify the degree of intercorrelations among the variables and the appropriateness of factor analysis named the Kaiser-Meyer-Olin test. The value of KMO test ranges from zero to one. Value of one is attained when each variable is perfectly predicted without error by the other variables. Index above 0.8 is considered meritorious (Hair et al., 2010). In order to assist with interpretation, factor rotation was employed to minimize the distance of each individual variable from one of the factors. In practice, an orthogonal rotation is employed to simplify the rows and columns of the factor matrix so that the resulting factors are uncorrelated to facilitate interpretation. The VARIMAX rotation, an orthogonal rotation, centering on simplifying the columns of the factor matrix can reach maximum possible simplification if there are only

one and zero in a single column. That is, the VARIMAX method maximized the sum of variances of required loadings of the factor matrix (Hair et al., 2010). Principal component analysis with VARIMAX rotation therefore was employed to assess the underlying dimensions.

There are two major steps to perform exploratory factor analysis. The first step is relevant as to how to extract the factor loading. The second major step is to deter mine the number of factors that can adequately explain the observed correlation among the observed variable les. In the first step, a factor loading present the correlation between an original variable and its factor. Only variables loading on each factor at 0.50 or higher were extracted, which is a rather conservative criterion based on Hair et al. (2010). In addition, no variable are cross-loading which have loading of 0.5 or above in more than one factor. In the second step, a scree plot and the eigenvalue greater than one were used to determine the number of factors in each data set (Iacobucci and Churchill, 2010). The scree test employs a plot of the size of the eigenvalue against the number of factors in their order of extraction, and the sharp of the resulting curve is used to evaluate the cutoff point (Hair et al., 2010).

The exploratory factor analysis was employed to reduce national culture attributes of Taiwanese liner shipping firms to a smaller, manageable set of under lying factors. This assists to detect the presence of meaningful patterns among the original variables and was conducted to extract the crucial national culture dimensions in this study.

3.7.2 Confirmatory Factor Analysis

Before testing the hypotheses, the measurement model should be modified. To achieve higher levels of measurement quality, confirmatory factor analysis (CFA) was employed to assess the unidimensionality, reliability and validity of construct. 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).

Following the convention of AMOS analysis (Arbuclke, 2009), observed variables are represented by squares and labeled with letters X. Latent variables are represented by circles and labeled with the Greek letters ξ , which are also called common factors. The Greek letters δ are seen as errors in variables. A straight arrow pointing from a latent variable to an observed variable indicates the causal effect of the latent variable on the observed variable. The Greek letter Φ_{ij} represents the correlation between the latent variables, whereas the Greek letter λ coefficients are the factor loadings of the observed indicators on the latent variables. Curved arrows between two latent variables indicate that those variables are correlated. The statistical criteria for model modification decision include offending estimates, squared multiple correlations, standardize residual covariance, modification indices, and model fit indices.

There is an important note on the estimation of the measurement model for constructs with more than one variable. Because of the estimation procedure, the construct must be made 'scale invariant' meaning that the indicators of a construct must be 'standardized in a way to make constructs comparable' (Long, 1983; Koufteros, 1999). One of the loadings in each construct can be set to a fixed value of 1.0 in order to make the constructs comparable (Koufteros, 1999). The statistical criteria for model modification decisions include offending estimates, squared multiple correlations, standardized residual covariance, modification indices, and model fit indices. Once the proposed model was purified, test of validity, reliability, and unidimensionality were performed.

Further, fit indices for assessing model fit are commonly distinguished as either absolute or incremental. An absolute fit index indicates the degree to which the hypothesized model reproduces the sample data. On the other hand, incremental fit indices measure the extent of fit improved by comparing the proposed model to a restricted, nested baseline model (Shan and Goldstein, 2006). The most commonly indices used to measure model fit was chi-square (χ^2) statistic (Koufteros, 1999; Shah and Goldstein, 2006). Chi-square (χ^2) is a function of internal and external consistency. A non-significant result (p-value >0.05) presents that the proposed model is consistent with the data. Although the chi-square (χ^2) statistic is a global test of model's ability to produce the sample variance/covariance matrix, the significant levels are too sensitive to sample size.

Therefore, other measures of model fit should also be considered in assessing model adequacy (Koufteros, 1999). These fit indices are the ration of chi-square to degrees of freedom, GFI (goodness of fit index), AGFI (adjusted goodness of fit index), RMR (root mean square residual), RMSEA (root mean square of approximation), CFI(comparative fit index), and TLI (Tucker-Lewis index). The overall model fit indices and their criteria are summarized in Table 3.5

Fit indices	Criteria
χ^2 value	Non-significant
Ratio of χ^2 to degree of freedom	<4.00
Root mean square error of approximation (RMSEA)	< 0.05
Root mean square residual (RMR or SRMR)	< 0.05
Goodness of fit (GFI)	>0.90
Adjusted goodness of fit (AGFI)	>0.90
Normed fit index (NFI)	>0.90
Non-normed fit index (NNFI or TLI)	>0.90
Comparative fit index (CFI)	>0.90

Table 3.5 Goodness-of-fit Indexes and Acceptable Criteria

3.7.3 Convergent Validity

Convergent validity can be tested by t-values that are all statistically significant on the factor loadings (Dunn et al., 1994). The t-value, in the AMOS text output file, 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 (Segars, 1997; Byrne, 2001). The larger the factor loadings or coefficients, as compared with their standard errors, the stronger is the evidence that the measured variables or factors represent the underlying constructs(Koufferos, 1999)

3.7.4 Discriminate Validity

The test of discriminate validity is one of the important analyses to be performed (Koufteros, 1999). According to Koufteros' study, models are constructed for all possible pairs of latent variables within each instrument (measures of items). These models are run: (1) with the correlation between the latent variables fixed at 1.0, and (2) with the correlation with the latent variables free to assume any value. The difference in Chi-square vales for the fixed (for constrained) and free solutions indicate whether a one-dimensional model would be sufficient to account for the inter-correlation among the variables observed in each pair. A significant lower chi-square value for the model in which the trait correlations are not constructed to unity would indicate that the traits are not perfectly correlated and that discriminate validity can be inferred (Anderson, 1987).

3.7.5 Construct Reliability

Construct reliability mean that a set of latent indicators of construct are consistent in their measurement. In more formal terms, this reliability is the degree to which a set of two or more indicators share the measurement of a construct. Highly reliable constructs are those in which the indicators are highly inter-correlated, indicating that they are all measuring the same latent construct. The range of values for reliability is between 0 and 1.

3.7.6 Composite Reliability

Composite reliability indicates that a set of latent indicators of a construct is consistent in their measurement (Iacobucci and Chuchill, 2010). This method is the degree to which a set of two or more indicators shares the measurement of a construct. The reliability of the composite score should be assessed after unidimensionalilty has been acceptable established (Gerbing and Anderson, 1988). If the resultant composite score is determined primarily by measurement error, even a perfectly unidimensional scale will be of little or no practical use (Gerbing and Anderson, 1988). Estimates of the reliability and variance extracted measures for each construct are performed to evaluate whether the specified indicators sufficiently represent the constructs. Hair et al. (2010) asserted that the composite the value of reliability should be over 0.6. (Koufteros et al., 2002) suggesting employing the average variance extracted (AVE) as a complementary measure to composite reliability. The AVE measures the amount of variance for the specified indicators accounted for by the latent construct (Koufteros, 1999). When the indicators are truly representative of the latent construct they will have higher variance extracted value. It is suggested that the extracted variance value should exceed 0.5 for a construct (Hair et al., 2010). The equation of composite reliability value can be calculated as below

Composite Reliability = (sum of standardized loading) $^{2}/$ [(sum of standardized loading) $^{2}+$ (sum of indicator measurement error)]

where indicator measurement error = $1 - (\text{standardized loadings})^2$

3.7.7 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. Hierarchical regression refers to independent variables are not entered into the regression simultaneously, but in steps. A hierarchical regression examines the relationships between dependent variable and variables including demographics (such as age, gender, education etc.), which is taken as control variables in the first stage then enter other measuring variables in a second (and later) stage. In this study, we initially explore the relationship between cultural difference, transformational leadership and job performance, then considering 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.

Regression analysis stages are outline as follows. (1) After entering the measuring variables at the first stage, regression coefficient for each independent variable represents the change in the dependent variable for each unit change in the independent variable. For categorical variables, each coefficient represents the difference between that level and the reference level on the dependent variable. (2) Comparison of the standardized coefficients, significance levels and r-square value in each stage to the previous stage to investigate how the newly added variables in the second (or later) stage affect the relationships in the first stage. (3) Examination of at the entire model, containing all the stages. Look at the standardized coefficients and the significance levels for each variable and the R squared for the whole model. When conducting regression analysis, it is crucial to consider whether a group of variables is adopted in the proposed model, and whether a single coefficient of the variables differs from zero. The F ratio statics is employed to detect whether any

combination of a set of coefficients in different from zero, but never used to determine whether a single coefficient is different from zero. The t statistic is used for testing a single hypothesis. The p-value summarizes strengthen or weakness of the empirical evidence against the null hypothesis criterion 1.96 is employed as the critical value for the test (Wooldridge, 2003).

 R^2 of hierarchical regression is used to present the goodness-of-fit. R^2 value close to one indicates that explains much of the variance in explanatory variable (Wooldridge, 2003). The R^2 is interpreted as the proportion of the sample variation in an explanatory variable that is explained by the OLS regression line. Hierarchical regression analysis is therefore adopted in this study for examining the relationship between perceived cultural difference, transformational leadership and job performance as well as the moderating role of transformational leadership.

3.8 Summary

Based on the studies of Koufferos (1999) and Koufferos et al. (2002), the analytical steps include instrument development, exploratory study, confirmatory study, test of the proposed structural model (Lu et al., 2007; Tsai, 2009), and hierarchical regression analysis as shown below in Figure 3.2. Several research methods and techniques are employed to develop and evaluate the adequacy of measurement scales including item-total correlations, exploratory factor analysis (EFA), estimation of reliability using Cronbach's alpha value and. These techniques are useful in the early stages of empirical analysis, where theoretical models do not exist and the basic purpose is exploration. However, these traditional techniques do not assess unidimensionality (Segars, 1997; O'Leary-Kelly and Vokurka, 1998), nor can unidimensionality be demonstrated by either mathematical or practical

examinations (Gerbing and Anderson, 1988; Kouferos, 1999).

Several researchers have suggested the use of confirmatory factor analysis (CFA) with a multiple-indicator measurement model to assess unidimensionality (Anderson et al., 1987; Segars, 1997). Exploratory techniques can help to develop hypothesized measurement models that can subsequently be tested using confirmatory factor analysis (Koufteros, 1999). In addition, the study carried out a survey to collect data for testing the proposed model on the effects of national culture dimensions and transformational leadership on employees' job performance in the context of container shipping companies by utilizing hierarchical regression statistics technique. Analysis is conducted using the statistics software, SPSS

17.0 for Windows and AMOS 6.0 statistical package.



INSTRUMENT DEVELOPMENT

- Literature Review
- Theoretical Basis
- Interviews with Shipping Practitioners

EXPLORATORY STUDY

- Item-total Correlation
- Corrected Item-total Correlations >0.5
- Factor Analysis within Block of Loadings
- Exploratory Factor Analysis of Entire Group
- Reliability through Cronbach's alpha > 0.7

COMFIRMATORY STUDY

- Convergent Validity
- Fit indices and unidimensionality assessment
- Discriminate Validity
- Construct Reliability

HIERACHICAL REGRESSION ANALYSIS

- R^2 and F-statistics
- T-values
- Variance Inflation Factor (VIF)

Source: Lu et al. (2007); Tsai (2009).

Figure 3.2 Analytical Steps

CHAPTER 4 General Findings and Descriptive Statistics

This chapter presents the descriptive statistics and general findings resulting from the questionnaire survey. There are seven sections in this chapter. Section 4.1 provides information revealing the response rate and describes the non-respondent bias test results. Section 4.2 presents general information of respondents including personal information in terms of demographic characteristics. Their perceptions of agreement level on cultural difference, transformational leadership, and job performance variable are explained in Section 4.3. Section 4.4 describes the exploratory factor analysis undertaken to identify crucial factors. Examining results of corrected item-total correlation and reliability tests are presented in Section 4.5. ANOVA tests utilized to examine differences in between respondents' perception of national culture difference, transformational leadership and job performance dimensions based on respondents' characteristics are described in Section 4.6. A summary of this chapter's contents is provided in the final section.

4.1 Response Rate and Non-Response Bias Tests

The data collected for this study are obtained from a questionnaire survey distributed to employees of container shipping companies working in overseas branch or agents located at UK, Germany, Belgium, Netherlands, China, and Taiwan, respectively. Based on the population described in the last chapter, questionnaire are distributed to these employees via online e-mail surveying system and/or posted mail with a cover letter, a four-page questionnaire, and postage–paid return envelope. A total of 950 anonymous questionnaires are distributed to respondents in June 1st and August 1st in 2012, respectively. The effective population size is reduced to 927 as 23 employees had left the company or declared

promoted to other business departments. The initial mailing received 521 usable responses. A follow up mailing is sent two month after the initial mailing to employees who have not responded the questionnaire in the first mailing. An additional 219 usable response are returned. Therefore, the total usable response number is 740. Of which 100 are from UK, 215 from Germany, 85 from Belgium, 100 from Netherlands, 120 from China and 120 from Taiwan. The questionnaires are collected and mail back to Taiwan by the designated personnel who are in charge of delivering and receiving these questionnaires from employees in these six countries. As indicated in Table 4.1, the overall response rate for this study reached 79.82 percent.

Table 4.1 Response Rate							
Respondents	Number	Number	Effective	Response			
	Distributed	Cancelled	Population	Sample	Rate (%)		
	(1)	(2)	(3)=(2)-(1)	(4)	(4)/(3)		
UK	150	3	147	100	68.02		
Germany	250	5	245	215	87.76		
Belgium	100	3	97	85	87.63		
Netherlands	150	5	145	100	68.97		
China	150	5	145	120	82.76		
Taiwan	150	2	148	120	81.08		
Total	950	23	927	740	79.82		

Although the response rate in this research is nearly 80%, which is considered reasonable (Armstrong and Overton, 1977), it is important to consider the potential problem of nonresponse bias. A non-response bias refers to a failure to obtain information from some crucial elements of the population which are selected for the sample. (Iacobucci and Churchill, 2010).

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. An analysis of variance is used to test for any differences on the collected items between the first mailing responses and second mailing response. The 740 survey respondents are divided into two groups based on their response period (first: n=521, 70.4% and second: n=219, 29.6%), which the respondents returned the questionnaires.

T-tests are performed on the two groups' perceptions of the various cultural difference, transformational leadership, and job performance. The findings are presented in Table 4.2, 4.3 and 4.4, respectively. For the cultural difference measures, responses to two of twenty items are found to significantly differ between the two groups at the 5% significance level. These two measures are: "I keep harmony and avoid conflict with my colleagues" and "I finish my job with perseverance".

As depicted in Table 4.3, T-tests are employed on the two groups' responses to the transformational leadership related measures. Results indicated that, at a 5% significance level, there are no significant differences between the two groups' responses to the various measuring items. Further, Table 4.4 indicated that only one of ten job performance measures is found to significantly differ between the two groups at the 5% significantly level, namely, "my foreign supervisor thinks I am one of the most efficient colleagues". Test results suggested that non-response bias is not causing a problem in this study since late respondents' responses are similar to those of first wave respondents.

	National Culture Measures	Respondent (N=521)		Non-respondent (N=219)			
		Mean ^a	S.D. ^b	Mean	Ś.D.	F value	Sig.
1	I think employees should not hold too many personal opinions	3.72	1.00	3.69	0.99	0.36	0.55
2	I think any work needs to be instructed by a supervisor	2.71	1.23	2.63	1.23	0.15	0.70
3	I fear having a dispute with my supervisor	3.23	1.10	3.23	1.13	0.23	0.63
4	I believe my supervisor would not consult with other colleagues before making a decision	2.85	1.29	2.82	1.33	0.32	0.57
5	I prefer to do routine work in order to avoid making mistakes	3.23	1.14	3.26	1.15	0.13	0.72
6	I like to discuss my work with someone before doing it	3.31	1.23	3.34	1.21	0.08	0.78
7	I prefer to work with detailed job specifications	3.78	0.89	3.78	0.90	0.00	0.95
8	I would collect more information for decision-making	4.10	0.96	4.17	0.91	0.16	0.69
9	I think group interests are more important than personal benefits	3.02	1.00	3.09	1.02	0.74	0.39
10	I prefer team work better than doing work alone	3.11	0.72	3.17	0.69	0.26	0.61
11	I keep harmony and avoid conflict with my colleagues	3.14	1.25	3.02	1.15	6.33	0.01*
12	I think it is important to cooperate with other colleagues	3.53	1.42	3.30	1.37	2.34	0.13
13	I think individual career achievement is more important than life quality	2.93	0.81	3.01	0.82	0.10	0.75
14	I strive for any promotional opportunity	3.55	0.97	3.56	0.95	0.15	0.70
15	I think individual career achievement is more important than good relationships with co-workers	3.95	0.99	3.95	1.02	0.27	0.60
16	Other than at work, I do not interact with my colleagues	2.72	1.08	2.87	1.09	0.14	0.71
17	I emphasize a long-term outlook rather than immediate benefits	3.54	0.90	3.61	0.95	2.01	0.16
18	I am willing to sacrifice present pleasure for future success	3.71	1.25	3.76	1.25	0.03	0.87
19	I finish my job with perseverance	3 14	1 23	3 26	1 32	613	0.01*
20	I feel ashamed when I have done	3.40	1.25	3.45	1.26	0.23	0.63

Table 4.2 Comparison of Respondent and Non-Respondent Groups' Responses to Cultural Difference Measures.

something wrong Note: a. Mean: 1= strongly disagree, 5= strongly agree b. S.D. = standard deviation *: represents significant level P < 0.05.

		Respondent		Respondent Non-respondent			
	Transformational Leadership Measures	(N=5	521)	(N=219)			
		Mean ^a	S.D. ^b	Mean	S.D.	F value	Sig.
1	My supervisor makes me proud to work with him/her	3.86	0.57	3.84	0.60	2.46	0.12
2	I admire my supervisor's leadership behavior	4.05	0.62	4.06	0.63	0.84	0.36
3	My supervisor clearly transmits his/her mission/vision to me	3.86	0.67	3.84	0.67	0.01	0.92
4	My supervisor sets high standards for my work	3.96	0.61	3.94	0.60	0.00	1.00
5	My supervisor's encourages employees with a variety of methods	3.61	0.62	3.63	0.60	0.66	0.42
6	I deeply feel encouragement from my supervisor	3.69	0.74	3.69	0.73	0.08	0.78
7	My supervisor encourages employees to think about problems in innovative ways	3.89	0.70	3.95	0.68	1.29	0.26
8	My supervisor emphasizes the use of intelligent methods to solve problems on the	3.77	0.66	3.81	0.66	0.45	0.83
9	job My supervisor supports reasonable opinions from employees	3.80	0.67	3.84	0.70	0.04	0.85
10	My supervisor shows personal concern for me	3.79	0.81	3.82	0.81	0.37	0.55
11	My supervisor sets my goals and helps me to achieve them	3.76	0.75	3.84	0.69	2.42	0.12
12	My supervisor expresses his/her appreciation when I do well	3.86	0.82	3.89	0.85	0.00	0.98

Table 4.3 Comparison of Respondent and Non-Respondent Groups' Responses to Transformational Leadership Measures

Note: a. Mean: 1= strongly disagree, 5= strongly agree b. S.D. = standard deviation

	Job Performance Measures	Respond	Respondent		Non-respondent (N=219)		
		(N=521)		(N=219)			
		Mean ^a	S.D. ^b	Mean	S.D.	ratio	Sig.
1	My foreign supervisor thinks my work	4.11	0.45	4.05	0.43	0.43	0.80
	quality is excellent						
2	I can finish any work assigned by my	4.26	0.49	4.25	0.51	0.48	0.49
	foreign supervisor on schedule						
3	My foreign supervisor thinks I am one	3.94	0.55	3.89	0.60	5.71	0.02*
	of the most efficient colleagues						
4	My foreign supervisor acknowledges	3.89	0.63	3.88	0.60	0.58	0.45
	my performance						
5	I actively learn specific job skills and	4.20	0.61	4.11	0.60	3.71	0.06
	knowledge suggested by my foreign	H (L) H	HIC				
	supervisor						
6	I help colleagues after I finish the work	4.25	0.54	4.26	0.53	0.00	0.99
	assigned by my foreign supervisor	111	111				
7	I can work independently to finish tasks	4.28	0.51	4.29	0.48	1.01	0.31
	assigned by my foreign supervisor	X	36				
8	My foreign supervisor acknowledges	4.15	0.57	4.16	0.57	0.02	0.88
	my work efficiency						
9	I like to cooperate with my foreign	4.39	0.49	4.42	0.49	1.13	0.29
	supervisor						
10	I can quickly respond to client concerns	4.28	0.53	4.26	0.55	0.07	0.79
	that are proposed by my foreign						
	supervisor						

Table 4.4 Comparison of Respondent and Non-Respondent Groups' Responses to Job Performance Measures

 Note: a. Mean: 1= strongly disagree, 5= strongly agree

 b. S.D. = standard deviation

 *: represents significant level P < 0.05.</td>

4.2 Demographic Characteristics of Reponses

This section shows the demographic characteristics of respondents. Examination of the demographic variables indicates that a diverse range of employees completed the questionnaire. To realize the profile of respondents, personal information of respondents are collected which composed of respondents' nationality, age, job title, education level, religious affiliation, and work experience. According to the sources of data, demographic characteristics are compiled from the questionnaire survey.

4.2.1 Profile of Respondents

Respondents' profiles and their characteristics are displayed in Table 4.5. With respect to nationality, of all 740 respondents, 120 are from UK, 215 are from Germany, 85 are from Belgium, 100 are from Netherland, 120 are from China, and 120 are from Taiwan. Table 4.5 also reveals the respondents' age. The vast majority of respondents (56.5%) are aged between 31 and 40 years. More than twenty per cent (20.4%) of respondents are aged between 41 and 50 years, whereas 15.9 % are older than 51 years. Only 7.2 % of respondents are aged 30 years or under.

As regards to job title, results show a vast majority of survey participants (88.1%) are general employees, whereas 6.8 % hold the job title of supervisors at the time of this study. Only a few respondents are in position of director/vice director (2.3%), manager/assistant manager (1.4 %), and vice president or above (1.4 %) respectively.

Regarding the education level, employees graduated from undergraduate accounted for more than half (60.7%) of the respondents, whereas 37.7% employees earned their degrees in high school or under. Only less than 2 % of respondents held postgraduate degrees or

above.

In terms of religion affiliation, Table 4.5 depicts that more than one third (34.3%) of respondents are Catholic, whereas 34.1 % of respondents have not any religious affiliation, 19.3% are Christians, and 7.6 % are Buddhism. Only 35 respondents held Taoism religious affiliation which accounts for a minor portion (4.7 %) among all research participants.

Furthermore, Table 4.5 reveals that nearly half (49.7%) of respondents had worked in their present company between 11 and 15 years, whereas 35.9 % of respondents had worked for the current company between 6 and 10 years, and 13.1 % of respondents had worked for the current company less than five years. Only a few (1.2 %) respondents had working experience longer than 16 years or more. Results suggested that respondents obtained in this study owned abundant working experiences and adequate for responding relevant national

cultural difference questions.

Table 4.5 Profile of Respondents					
Characteristics	Number of	Percentage of			
	respondents	respondents			
Nationality					
Germany	120	13.5			
UK	215	29.1			
Belgium	85	11.5			
Netherland	100	13.5			
China	120	16.2			
Taiwan	120	16.2			
Total	740	100			
Age					
30 and under	53	7.2			
31-40	418	56.5			
41-50	151	20.4			
51 and above	118	15.9			
Total	740	100			
Job title					
Vice president or above	10	1.4			
Manager/assistant manager	10	1.4			
Director/vice director	17	2.3			
Supervisor	50	6.8			
General employee	653	88.1			
Total	740	100			
Education level					
High school or under	279	37.7			
Undergraduate	449	60.7			
Postgraduate	12	1.6			
Total	740	100			
Religious affiliation	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Catholic	254	34.3			
Christian	143	19.3			
Buddhism	56	7.6			
Taoism	35	4.7			
No religious belief	252	34.1			
Total	740	100			
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			

4.3 Respondents Perceived National Culture, Transformational Leadership, and Job Performance

As discussed in Chapter 3, the selection of national culture measuring items is extracted based on previous studies and personal interviews with shipping executives and personnel in container shipping companies. There are twenty national culture items, twelve transformational leadership related items, and ten job performance evaluating items are used in this study. In order to understand the relative agreement of each attributes, survey participants are asked to rate the agreement level on each of these measuring items using a Likert scale five point scale where 1 stands for "strongly disagree" and 5 stands for "strongly agree". Accordingly, a frequency analysis is conducted on the agreement ratings reported by the respondents. Results on this analysis, and means and rankings are presented as below:

4.3.1 Respondents' Agreement Level with Cultural Difference

Respondents are asked to evaluate the level of perceived agreement to these twenty cultural difference measures. Results, as shown in Table 4.6, indicates that all mean scores of measures ranged between 2.69 and 4.12. The five measures of national culture exhibiting most agreed with (those gained mean score all greater than 3.70) are: "I would collect more information for decision-making", "I think individual career achievement is more important than good relationships with co-workers", "I prefer to work with detailed job specifications", "I am willing to sacrifice present pleasure for future success", and "I think employees should not hold too many personal opinions".

In contrast, the measures of national culture with which respondents least agreed (their mean scores are below 3.00) containing "I think individual career achievement is more important than life quality", "I believe my supervisor would not consult with other

colleagues before making a decision", "other than at work, I do not interact with my colleagues", and "I think any work needs to be instructed by a supervisor". These four measures are ranked below the evaluation level of disagreement (mean score < 3.00).

National Culture Measure	Mean	S.D.	Rank
I would collect more information for decision-making	4.12	0.943	1
I think individual career achievement is more important than	3.95	0.997	2
good relationships with co-workers			
I prefer to work with detailed job specifications	3.78	0.892	3
I am willing to sacrifice present pleasure for future success	3.72	1.252	4
I think employees should not hold too many personal	3.71	0.999	5
opinions			
I emphasize a long-term outlook rather than immediate	3.56	0.915	6
benefits			
I strive for any promotional opportunity	3.55	0.963	7
I think it is important to cooperate with other colleagues	3.46	1.410	8
I feel ashamed when I have done something wrong	3.41	1.253	9
I like to discuss my work with someone before doing it	3.32	1.223	10
I prefer to do routine work in order to avoid making mistakes	3.24	1.145	11
I fear having a dispute with my supervisor	3.23	1.111	12
I finish my job with perseverance	3.18	1.256	13
I prefer team work better than doing work alone	3.13	0.712	14
I keep harmony and avoid conflict with my colleagues	3.11	1.218	15
I think group interests are more important than personal	3.04	1.006	16
benefits			
I think individual career achievement is more important than	2.96	0.816	17
life quality			
I believe my supervisor would not consult with other	2.84	1.301	18
colleagues before making a decision			
Other than at work, I do not interact with my colleagues	2.76	1.080	19
I think any work needs to be instructed by a supervisor	2.69	1.228	20

Table 4.6 Respondent's Perception of Cultural Difference

Note: Mean: 1=strongly disagree; 5=strongly agree; S.D. = standard deviation

4.3.2 Respondents' Agreement Level with Perceived Foreign Managing Directors' Cultural Difference

In order to evaluate the level of their foreign managing directors' cultural difference, who are delegated to container shipping carriers' oversea offices and/or agents, respondents are asked to rate their agreement level with each of the perceived measures of national culture. Table 4.7 displays there are only two measures with a mean score higher than 4.0, namely, "my supervisor prefers to work with detailed job specifications", "my supervisor thinks it is important to cooperate with employees".

Conversely, seven measures with least agreement (these measures gained mean scores less than 3.00) from survey participants are "my supervisor strives for any promotional opportunity", "my supervisor thinks employees should not hold too many personal opinions", "my supervisor fears having a dispute with headquarters", "my supervisor thinks personal career achievement is more important than life quality", "other than at work, my supervisor does not interact with employees", "before making decisions, my supervisor never acquires opinions from employees", and "my supervisor thinks that employees should work under his/her instruction".

An important finding is that the lowest agreement five measures are belong to masculinity and power distance related items, whereas the first four items are related to uncertainty avoidance and collectivism measuring.

Perceived Managing Directors' National Culture Measure	Mean	S.D.	Rank
My supervisor prefers to work with detailed job specifications	4.09	0.812	1
My supervisor thinks it is important to cooperate with employees	4.02	0.928	2
My supervisor prefers to encourage team work	3.97	0.778	3
My supervisor collects sufficient information before making	3.91	0.930	4
decisions			
My supervisor emphasizes group interests rather than personal	3.91	0.670	5
benefits			
My supervisor is willing to sacrifice present pleasure for future	3.89	0.838	6
success			
My supervisor feels ashamed when he/she has done something	3.82	0.709	7
wrong			
My supervisor prefers to have routine work in order to avoid	3.81	1.258	8
making mistakes			
My supervisor thinks individual career achievement is more	3.71	0.771	9
important than good relationships with co-workers			
My supervisor keeps harmony and avoids conflicts with	3.70	0.828	10
employees			
My supervisor finished his job with perseverance	3.35	0.668	11
My supervisor emphasizes a long-term outlook rather than	3.24	0.714	12
immediate benefits			
My supervisor likes to get employees' opinions before conducting	3.13	0.680	13
his/ her work			
My supervisor strives for any promotional opportunity	2.95	0.791	14
My supervisor thinks employees should not hold too many	2.90	0.833	15
personal opinions			
My supervisor fears having a dispute with headquarters	2.89	1.373	16
My supervisor thinks personal career achievement is more	2.75	0.617	17
important than life quality			
Other than at work, my supervisor does not interact with	2.59	1.037	18
employees			
Before making decisions, my supervisor never acquires opinions	2.49	1.175	19
from employees			
My supervisor thinks that employees should work under his/her	2.21	0.982	20
instruction			

Table 4.7 Respondent's Perceptions of Their Foreign Managing Director's Cultural Difference

4.3.3 Respondents' Perceptions of Transformational Leadership

Transformational leadership is measured utilizing 12 questions referring recognition of leader behavior practiced by those managing directors delegated by container shipping companies overseas. Respondents are also asked to rate the transformational leadership measures on the basis of a five point scale, where 1 = "strongly disagree" whereas 5 = "strongly agree". According to Table 4.8, 12 items are all gained mean values above 3.00 (their mean scores are between 3.62 and 4.05). The measure, "I admire my supervisor's leadership behavior" gained the highest mean score (mean = 4.05) on the agreement of these 12 measures.

Table 4.8 Respondent's Perceptions of Transformational Leadership Measure					
Transformational Leadership Measures	Mean	S.D.	Rank		
I admire my supervisor's leadership behavior	4.05	0.609	1		
My supervisor sets high standards for my work	3.96	0.606	2		
My supervisor encourages employees to think about	3.91	0.690	3		
problems in innovative ways					
My supervisor expresses his/her appreciation when I do well	3.87	0.830	4		
My supervisor makes me proud to work with him/her	3.86	0.578	5		
My supervisor clearly transmits his/her mission/vision to me	3.85	0.671	6		
My supervisor supports reasonable opinions from	3.81	0.681	7		
employees					
My supervisor shows personal concern for me	3.80	0.811	8		
My supervisor sets my goals and helps me to achieve them	3.79	0.729	9		
My supervisor emphasizes the use of intelligent methods to	3.79	0.659	10		
solve problems on the job					
I deeply feel encouragement from my supervisor	3.69	0.740	11		
My supervisor encourages employees with a variety of	3.62	0.614	12		
methods					

Note: Mean: 1=strongly disagree; 5=strongly agree; S.D. = standard deviation.

4.3.4 Respondents' Perception of Job Performance

In addition, as revealed in Table 4.9, ten measures are used to evaluate the agreement of employees' job performance in the context of container shipping companies. Respondents are asked to rate the level of agreement for each of these ten job performance items. Results indicated that mean scores of these measures are all above 3.00, which ranged between 3.89 and 4.40.

Job Performance Measures	Mean	S.D.	Rank
I like to cooperate with my foreign supervisor	4.40	0.490	1
I can work independently to finish tasks assigned by my foreign	4.28	0.502	2
supervisor			
I can quickly respond to client concerns that are proposed by my	4.28	0.531	3
foreign supervisor			
I can finish any work assigned by my foreign supervisor on	4.26	0.495	4
schedule			
I help colleagues after I finish the work assigned by my foreign	4.25	0.533	5
supervisor			
I actively learn specific job skills and knowledge suggested by my	4.16	0.609	6
foreign supervisor			
My foreign supervisor acknowledges my work efficiency	4.15	0.569	7
My foreign supervisor thinks my work quality is excellent	4.09	0.440	8
My foreign supervisor thinks I am one of the most efficient	3.92	0.567	9
colleagues			
My foreign supervisor acknowledges my performance	3.89	0.620	10

Table 4.9 Respondent's Level of Agreement with Job Performance

Eight items gained mean scores greater than 4.00, namely, "I like to cooperate with my foreign supervisor (mean = 4.40)", "I can work independently to finish tasks assigned by my foreign supervisor (mean = 4.28)", "I can quickly respond to client concerns that are proposed by my foreign supervisor (mean = 4.28)", "I can finish any work assigned by my
foreign supervisor on schedule (mean = 4.26)", "I help colleagues after I finish the work assigned by my foreign supervisor (mean = 4.25)", "I actively learn specific job skills and knowledge suggested by my foreign supervisor (mean = 4.16)", "My foreign supervisor acknowledges my work efficiency (mean = 4.15)". It is noted that the first three most agreed measuring items are all contextual task related measures.

4.4 Exploratory Factor Analysis

Factor analysis stands a unique role in the application of other multivariate technique. Broadly speaking, factor analysis provides the tools for analyzing the structure of the interrelationships (correlations) among a large number of variables (e.g., test scores, test items, questionnaire responses) by defining sets of variable that are largely interrelated, known as factors (Hair et al., 2010). In order to identify the key national culture, transformational leadership, and job performance dimensions in the container shipping context, exploratory factor analysis technique is initially utilized in this study, which is considered as a useful method in searching for structure among a set of variables or as a data reduction approach. Exploratory factor analysis can help researchers to reduce a large group of variables to a smaller, manageable set of underlying dimensions, which helps to detect the presence of meaningful patterns among original variables (Lu and Shang, 2005; Yang, 2008; Hair et al., 2010).

It is important to ensure that whether data obtained from this research are suitable for carrying out factor analysis. Hair et al. (2010) indicated that if the Barlett Test of Sphericity is significant and the Kaiser-Meyer-Olkin value is greater than value of 0.8, then data used in this research are deemed suitable for performing exploratory factor analysis. Further, the reliability of the exploratory analysis is dependent on the sample size. As a general rule of

thumb, a minimum of five subjects per variable or a sample of 100 subjects is required for factor analysis (Coakes and Steed, 1999). This study contained 740 samples can meet the sampling size requirement. Criteria used to extract factors are: (1) eigenvalues greater than 1; (2) minimum of 5% variance per factor; and (3) examination of the scree plot. Hence, factors with loadings of 0.5 or above are retained in this study (Nunnally, 1978).

4.4.1 Exploratory Factor Analysis to Identify Key Dimensions of Perceived Cultural Difference

Factor analysis with VARIMAX rotation is employed to identify the key perceived cultural difference dimensions in the context of container shipping companies. The Kaiser-Meyer-Olkin value of 0.855 indicated that the data are adequate for conducting factor analysis (Hair et al., 2010). The Barlett Test of Sphericity (Chi-square = 4922.58, P < 0.00) suggested that correlations existed among some of the response categories. Eigenvalues greater than one are adopted to determine the number of factors in each data set (Iacobucci and Churchill, 2010).

Results revealed in Table 4.10 indicate that five factors accounted for approximately 65.8% of the total variance. To aid interpretation, only factors with a loading of 0.5 or higher are extracted (Hair et al., 2010) and these loadings may be considered to be a conservative criterion based on Kim and Mueller (1978). Hence, five dimensions are subsequently identified to underline national culture on the basis of this survey participants' response. These factors are labeled and are described as below.

Factor 1, a long-term orientation dimension, comprised four items with factor loading ranging from 0.815 to 0.597, namely "I am willing to sacrifice present pleasure for future success", "I feel ashamed when I have done something wrong", "I finished my job with

perseverance", and "I emphasize a long-term outlook rather than immediate benefits". These items are related to long-term orientation recognition (Bond et al., 1987; Hofstede, 1991, 2001). This factor is therefore labeled a long- term orientation dimension with eigenvalue equals to 3.697. It accounted for 18.485 % of the total variance. I am willing to sacrifice present pleasure for future success had the highest factor loading on this factor.

Table 4.10 Explorator	v Factor Anal	vsis to Identif	v Cultural Differe	nce Dimensions
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National Culture Measures	F1	F2	F3	F4	F5
I am willing to sacrifice present pleasure for future success	0.828	0.105	0.143	0.047	0.108
I feel ashamed when I have done something wrong	0.774	0.138	-0.113	-0.113	0.052
I finished my job with perseverance	0.760	0.096	0.146	0.032	0.020
I emphasize a long-term outlook rather than immediate benefits	0.757	-0.014	0.190	0.079	0.159
I prefer to work with detailed job specifications	0.092	0.859	0.017	0.021	0.069
I prefer to do routine work in order to avoid making mistakes	0.069	0.806	0.068	0.008	0.095
I like to discuss my work with someone before doing it	-0.011	0.767	0.055	0.000	-0.011
I would collect more information for decision-making	0.180	0.752	-0.162	0.003	0.010
I think individual career achievement is more important than life	0.115	0.051	0.850	0.161	-0.039
Other than at work, I do not interact with my colleagues	-0.063	0.070	0.820	0.078	0.091
I think individual career achievement is more important than good	0.133	0.047	0.757	-0.012	0.006
relationships with co-workers					
I strive for any promotional opportunity	0.161	-0.187	0.741	0.042	-0.006
I think employees should not hold too many personal opinions	0.151	-0.068	0.014	0.832	-0.060
I think any work needs to be instructed by a supervisor	-0.208	-0.015	0.099	0.788	0.097
I fear having a dispute with my supervisor	-0.114	0.175	0.104	0.777	-0.002
I believe my supervisor would not consult with other colleagues	0.203	-0.051	0.044	0.755	-0.113
before making a decision					
I prefer team work better than doing work alone	-0.015	0.065	0.021	-0.027	0.860
I keep harmony and avoid conflict with my colleagues	0.016	0.027	0.067	0.000	0.806
I think group interests are more important than personal benefits	0.240	0.009	-0.003	-0.082	0.739
I think it is important to cooperate with other colleagues	0.084	0.051	-0.029	0.020	0.723
Eigenvalues	3.697	2.983	2.431	2.143	1.912
Percentage variance (%)	18.485	14.915	12.153	10.716	9.559
Cumulative percentage variance (%)	18.485	33.401	45.554	56.270	65.829
Mean	2.309	1.761	2.186	1.729	2.263
S.D.	0.761	1.014	0.856	0.912	1.006

Factor 2, an uncertainty avoidance dimension, consisted of four items with factor loading ranging from 0.752 to 0.859, namely, "I prefer to work with detailed job specifications", "I prefer to do routine work in order to avoid making mistakes", "I like to discuss my work with someone before doing it", and "I would collect more information for decision-making". These four national culture items are associated with uncertainty avoidance based on the study of Hofstede (1980); therefore, this dimension is identified as an uncertainty avoidance dimension. I prefer to work with detailed job specification had the highest factor loading on this factor. This factor gained an eigenvalue of 2.983 and accounted for 14.915% of the total variance.

Factor 3, a masculinity dimension, consisted of four items with factor loading ranging from 0.741 to 0.850, i.e. "I think individual career achievement is more important than life quality", "other than at work, I do not interact with my colleagues", "I think individual career achievement is more important than good relationships with co-workers", and "I strive for any promotional opportunity". These four items are related to masculinity (Hofstede, 1980, 2001; Nakaata and Sivakumaar, 2003). This factor had an eigenvalue of 2.431 and accounted for 12.153% of the total variance.

Factor 4, a power distance dimension, comprised four items, namely, "I think employees should not hold too many personal opinions", "I think any work needs to be instructed by a supervisor", "I fear having a dispute with my supervisor", and "I believe my supervisor would not consult with other colleagues before making a decision". These four items are associated with power distance based on the national culture theory developed from Hofstede (1980, 2001). Therefore, this dimension is identified as power distance dimension. "I think employees should not hold too many personal opinions" had the highest factor loading on this factor. Factor 4 had an eigenvalue of 2.143 and accounted for 10.716 of

the total variance.

Factor 5, a collectivism dimension, contained four items with factor loading ranging from 0.723 to 0.860. These four items are "I prefer team work better than doing work alone", "I keep harmony and avoid conflict with my colleagues", "I think group interests are more important than personal benefits", and "I think it is important to cooperate with other colleagues". These four items are associated with collectivism (Hofstede, 1980, 1991; House, 2004). Among these four items, "I prefer team work better than doing work alone" gained the highest factor loading on this factor. Factor 5 had an eigenvalue of 1.912 and account for 9.559 % of the total variance.

Of these five dimensions, long-term orientation dimension had the highest average mean score (mean=2.31), followed by collectivism dimension (mean=2.26), masculinity dimension (mean=2.19), uncertainty avoidance dimension (mean=1.76) and the power distance dimension (mean=3.32).

4.4.2 Exploratory Factor Analysis to Identify Key Dimensions of Transformational Leadership

Regarding to key evaluating dimensions of transformational leadership, 12 measuring items employed in the container shipping overseas branch offices context. Exploratory factor analysis with VARIMAX rotation is conducted to reduce these items of transformational leadership into a smaller and manageable set of underlying measures. The Kaiser-Meyer-Olkin value of 0.856 indicated that the data are appropriate for applying in factor analysis. The Barlett Test of Sphericity (Chi-square = 3840.618, P < 0.000) also suggested that correlations existed among some of the response categories. Results displayed in Table 4.11 suggested that three factors accounted for approximately 67.287% of

the total variance and therefore, are considered to represent transformational leadership in the container shipping context. Further, Table 4.11 reveals that all items on each transformational leadership factors gained a factor loading scores higher than 0.5. Consequently, three factors are found to underlie safety culture sets based on survey participants' response. These are labeled and are described as below.

Factor 1, a charisma-inspiration dimension, comprised four items, namely "my supervisor clearly transmits his/her mission/vision to me", "my supervisor makes me proud to work with him/her", "I admire my supervisor's leadership behavior", and "my supervisor sets high standards for my work". These measuring items are associated with managers' charisma-inspiration leader activities. Therefore, this dimension is identified as charisma-inspiration dimension (Avolio et al., 1999). "My supervisor clearly transmits his/her mission/vision to me" had the highest factor loading score on this factor. Factor 1 had an eigenvalue of 5.484 and account for 45.698 of the total variance.

Factor 2, an individualized consideration dimension, consisted of four items, i.e. "my supervisor shows personal concern for me", "my supervisor supports reasonable opinions from employees", "my supervisor sets my goals and helps me to achieve them", and "my supervisor expresses his/her appreciation when I do well". These four measuring items are related to leader's individualized consideration behaviors (Avolio et al., 1999); therefore, this factor is identified as individualized consideration dimension. "My supervisor gives personal concern to me" had the highest factor loading score on this factor. Factor 2 had an eigenvalue of 1.417 and accounted for 11.804 of the total variance.

Factor 3, an intellectual stimulation dimension, contained four items, namely, "I deeply feel encouragement from my supervisor", "my supervisor emphasizes the use of intelligent

methods to solve problems on the job", "my supervisor encourages employees to think about problems in innovative ways", and "my supervisor encourages employees with a variety of methods". These items are associated with leaders' behaviors to employees' intellectual stimulation (Avolio et al., 1999). Therefore this factor is identified as intellectual stimulation dimension. "I deeply feel the encouragement from my supervisor" gained the highest factor loading scores on this factor. Factor 3 had an eigenvalue of 1.174 and accounted for 9.84 of the total variance.

Table 4.11 Exploratory factor analysis to Identify Key Transformational Leadership Dimensions

Transformational Leadership Measures	F1	F2	F3
My supervisor clearly transmits his/her mission/vision to me	0.815	0.194	0.244
My supervisor makes me proud to work with him/her	0.803	0.375	0.001
I admire my supervisor's leadership behavior	0.794	0.194	0.198
My supervisor sets high standards for my work	0.597	0.130	0.320
My supervisor shows personal concern for me	0.056	0.843	0.087
My supervisor supports reasonable opinions from employees	0.219	0.767	0.244
My supervisor sets my goals and helps me to achieve them	0.302	0.726	0.227
My supervisor expresses his/her appreciation when I do well	0.446	0.682	0.135
I deeply feel encouragement from my supervisor	0.001	0.081	0.811
My supervisor emphasizes the use of intelligent methods to	0.182	0.244	0.742
solve problems on the job			
My supervisor encourages employees to think about	0.354	0.238	0.701
problems in innovative ways			
My supervisor encourages employees with a variety of	0.438	0.107	0.626
methods			
Eigenvalues	5.484	1.417	1.174
Percentage variance (%)	45.698	11.804	9.784
Cumulative percentage variance (%)	45.698	57.502	67.287
Mean	3.930	3.751	3.817
S.D.	0.617	0.677	0.765

Of these three transformational leadership dimensions, the charisma-inspiration dimension gained the highest average mean score (mean=3.93), followed by the intellectual stimulation dimension (mean= 3.82), and the individualized consideration dimension (mean= 3.75).

4.4.3 Exploratory Factor Analysis to Identify Dimensions of Job Performance

In terms of evaluating employees' individual job performance, ten measuring items are employed in the container shipping context. Exploratory factor analysis with VARIMAX rotation is also used to identify key factors. Results reveal that two factor is extracted from the ten job performance items. The Kaiser-Meyer-Olkin value of 0,814 and the Barlett Test of Sphericity (Chi-square = 2558.757, P<0.000) indicated that the data are suitable for conducting exploratory factor analysis. Eigenvalues greater than one are considered to determine the number of factors in each data set (Iacobucci and Churchill, 2010). Results shown in Table 4.12 reveal that these two extracted factors accounted for approximately 59.035% of the total variance and hence represented job performance in the context of container shipping companies. Further, all items on each of the factors gained a factor loading value of 0.5 or above. These two factors are labeled and described as below.

Factor 1, a task performance dimension, comprises five items with factor loading ranging from 0.659 to 0.804, i.e. "my foreign supervisor thinks I am one of the most efficient colleagues", "my foreign supervisor thinks my work quality is excellent", "my foreign supervisor acknowledges my performance", "I can finish any work assigned by my foreign supervisor on schedule", and "I actively learn specific job skills and knowledge suggested by my foreign supervisor". These items are associated with task orientation performance activities (Motowidlo and Schmit, 1999); therefore, this factor is identified as

task performance dimension. "My foreign supervisor thinks I am one of the most efficient colleagues" had the highest factor loading score on this factor. Factor 1 had an eigenvalue of 4.183 and accounted for 41.827 of the total variance.

\mathbf{F}		
Job Performance Measures	F1	F2
My foreign supervisor thinks I am one of the most efficient colleagues	0.804	-0.012
My foreign supervisor thinks my work quality is excellent	0.781	0.131
My foreign supervisor acknowledges my performance	0.744	-0.068
I can finish any work assigned by my foreign supervisor on schedule	0.683	0.394
I actively learn specific job skills and knowledge suggested by my	0.659	0.380
foreign supervisor		
I help colleagues after I finish the work assigned by my foreign	0.053	0.848
supervisor		
I can work independently to finish tasks assigned by my foreign	0.424	0.736
supervisor		
I like to cooperate with my foreign supervisor	0.424	0.708
My foreign supervisor acknowledges my work efficiency	0.145	0.669
I can quickly respond to client concerns that are proposed by my foreign	-0.201	0.500
supervisor		
Eigenvalues	4.183	1.721
Percentage variance (%)	41.827	17.208
Cumulative percentage variance (%)	41.827	59.035
Mean	4.064	4.272
S D	0 550	0.526

Table 4.12 Exploratory factor analysis to Identify Key Job Performance Dimensions

Factor 2, a contextual performance dimension, contained five items with factor loading ranging from 0.500 to 0.848, namely, "I help colleagues after I finish the work assigned by my foreign supervisor", "I can work independently to finish tasks assigned by my foreign supervisor", "I like to cooperate with my foreign supervisor", "My foreign supervisor acknowledges my work efficiency", and "I can quickly respond to client concerns that are proposed by my foreign supervisor". These five items are related to employees' behavior toward contextual oriented performance (Motowidlo and Schmit, 1999; Befort and Hattrup,

2003). Therefore, this factor is identified as contextual performance dimension. "I help colleagues after I finish the work assigned by my foreign supervisor" had the highest factor loading score on this factor. Factor 2 gained an eigenvalue of 1.721 and accounted for 17.208 of the total variance. These two extracted dimensions are consistent with those developed by Borman and Motowidlo (1993), and Motowidlo and Van Scotter (1994).

Of these two job performance dimensions, the contextual performance dimension had the highest average mean score (mean=4.72), whereas task performance dimension gained the average mean scores of 4.06.

4.5 Correlated Item-Total Analysis and Reliability Test

The reliability of a measure or construct indicates the extent to which it measures without bias and hence ensures consistent measurements across time and across the variety of items in the instrument (Sekaran, 2003). Having completed the exploratory factor analysis, a reliability test is conducted to determine whether the factors identified are consistent and reliable. The corrected item-total correlation (CITC) and Cronbach's alpha coefficient are employed to measure the internal consistency and stability of each factor for perceived cultural difference, transformational leadership, and job performance.

Corrected item-total correlation has been widely employed in academic fields such as psychology, social science, marketing, and manufacturing for the development of unidimensional scales. Since corrected item-total correlation excludes the score of the particular item in question in calculating the composite score, it is labeled 'corrected' (Koufteros, 1999; Lauder et al., 2000). If the items in a measure are drawn from the domain of a single construct, responses to these items should be highly inter- correlated (Iacobucci and Chruchill, 2010). The criteria used to make this determination are: (1) a minimum

corrected inter-item correlation value of 0.30; and (2) an increase in the estimate of alpha if the item is dropped (Lauder et al., 2000). The corrected item-total correlation analysis is carried out for each construct (dimension). Results in Table 4.13 show the ranges of corrected item-total correlations of construct of national culture are from 0.559 to 0.761. All the values of corrected item-total correlations are greater than the recommended value of 0.3 implying that their items are suitable for measuring the same underlying construct.

In addition to corrected item-total correlation coefficients, Cronbach's alpha coefficient is wildly employed and suitable for measuring internal consistency reliability among a set of items combined to formulate a single construct (dimension) (Koufteros, 1999). Cronbach's alpha coefficient varies between 1 (denoting perfect internal reliability) and 0 (denoting no internal reliability). In previous researches, a recommended value of 0.7 or higher is considered to indicate a satisfactory level of reliability (Nunnally, 1978; Hair et al., 2010; Iacobucci and Chrchill, 2010).

The Cronbach alpha values for all perceived cultural difference dimensions are shown in Table 4.13. Results show the reliability values of all perceived cultural difference dimensions are all well above 0.8 except Factor 1, long-term orientation, which gain Cronbach alpha value slightly less than 0.8 (α = 0.795). Moreover, Table 4.13 shows no items need to be removed from the perceived cultural difference dimension to significantly increase the Cronbach's alpha value. Hence, the results are considered adequate for confirming a satisfactory level of reliability.

Dimensions of National culture	Cronbach Alpha	Corrected Item-total correction	Alpha if item deleted
Factor 1: Long-term Orientation	0.795		
(Mean=2.309; S.D.= 0.761)			
LTO1: I am willing to sacrifice present pleasure for future success		0.649	0.721
LTO2: I feel ashamed when I have done something		0.599	0.743
LTO3. I finish my job with perseverance		0.610	0 733
LTO4: I emphasize a long-term outlook rather than immediate benefits		0.559	0.759
Factor 2: Uncertainty Avoidance	0.825		
(Mean = 1.761; S.D. = 1.014)			
UN1: I prefer to work with detailed job specifications		0.668	0.770
UN2: I prefer to do routine work in order to avoid		0.595	0.803
making mistakes			
UN3: I like to discuss my work with someone before doing it		0.733	0.739
UN4: I would collect more information for		0.603	0.800
decision-making			
Factor 3:Masculinity (Mean=2.186; S.D.=0.856)	0.810		
MAS1:I think individual career achievement is more		0.611	0.764
important than life quality			
MAS2:Other than at work, I do not interact with my colleagues	2	0.725	0.712
MAS3:I think individual career achievement is more important than good relationships with	7.	0.606	0.766
co-workers		0.5(2	0.700
MAS4:1 strive for any promotional opportunity		0.563	0.790
Factor 4: Power Distance (Mean=1.729; S.D.=0.912)	0.827	0.7(1	0.505
PD1: I think employees should not hold too many personal opinions		0.761	0.725
PD2: I think any work needs to be instructed by a supervisor		0.601	0.796
PD3: I fear having a dispute with my supervisor		0.602	0.798
PD4: I believe my supervisor would not consult with other colleagues before making a decision		0.650	0.783
Factor 5: Collectivism (Mean=2.263; S.D.=1.006)	0.840		
COL1: I prefer team work better than doing work alone		0.673	0.799
COL2: I keep harmony and avoid conflict with my colleagues		0.742	0.767
COL3: I think group interests are more important than personal benefits		0.675	0.798
COL4: I think it is important to cooperate with other colleagues		0.612	0.824

Table 1 13 Item Analysis and Palial	bility Tests of Cul	Itural Difference	Dimensions
Table 4.15 Itelli Alialysis allu Kella	Diffly Tests of Cu	nulai Difference	Dimensions

Consequently, as shown in Table 4.14, the ranges of corrected item-total correlations of constructs of transformational leadership are from 0.531 to 0.748. All values of corrected item-total correlations of these 12 items are greater than the recommended value of 0.3 implying that their items are suitable for measuring the same underlying construct.

Dime	ansions of Transformational Leadership	Cronbach	Corrected	Alpha if
Ding	chistons of mansformational Leadership	Alpha	Itom total	Alpha II
		Alplia		delated
T		0.050	correction	deleted
Facto	or 1: Charisma-Inspiration	0.852		
(Mea	n = 3.930; S.D. = 0.617)			
CI1:	My supervisor clearly transmits his/her mission/vision to me		0.744	0.721
CI2:	My supervisor makes me proud to work with him/her		0.748	0.743
CI3:	I admire my supervisor's leadership behavior		0.730	0.733
CI4:	My supervisor sets high standards for my work	2	0.556	0.759
Facto	or 2. Individualized Consideration	0 800		
(Mea	n=3.751·S D =0.677)	0.000		
$\frac{(IIIII)}{IC1}$	My supervisor shows personal concern for me		0.612	0 744
IC2:	My supervisor supports reasonable opinions from employees	2	0.531	0.787
IC3:	My supervisor sets my goals and helps me to achieve them		0.687	0.703
IC4:	My supervisor expresses his/her appreciation when I do well		0.610	0.743
Facto	or 3: Intellectual Stimulation	0.810		
(Mea	n=3.817; S.D.=0.765)			
ÌS1:	I deeply feel encouragement from my supervisor		0.611	0.764
IS2:	My supervisor emphasizes the use of intelligent		0.725	0.712
	methods to solve problems on the job			
IS3:	My supervisor encourages employees to think		0.606	0.766
-	about problems in innovative wavs			
IS4:	My supervisor encourages employees with a		0.563	0.790
~	variety of methods			

Table 4.14 Item Analysis and Reliability Tests of Transformational Leadership

The Cronbach alpha values for all national culture dimensions are shown in Table 4.14. The reliability values of all transformational leadership dimensions are all well above 0.8. Moreover, Table 4.14 indicates that no items need to be removed from the transformational leadership dimension to significantly increase the Cronbach's alpha value. Hence, the results are considered adequate for confirming a satisfactory level of reliability.

Table 4.15 displays the ranges of corrected item-total correlations of each item of job performance are from 0.315 to 0.718. All the values of corrected item-total correlations are greater than the recommended value of 0.3 implying that their items are suitable for measuring the same underlying construct.

Dimensions of Job Performance	Cronbach	Corrected	Alpha	
	Alpha	Item-total	if item	
	-	correction	deleted	
Factor 1: Task Performance	0.820			
(Mean = 4.064; S.D. = 0.550)				
TP1: My foreign supervisor thinks I am one of the most efficient colleagues	N.	0.659	0.766	
TP2: My foreign supervisor thinks my work quality is excellent		0.609	0.774	
TP3: My foreign supervisor acknowledges my performance		0.644	0.761	
TP4 I can finish any work assigned by my foreign supervisor on schedule	E	0.542	0.797	
TP5: I actively learn specific job skills and knowledge suggested by my foreign supervisor	2	0.592	0.779	
Factor 2: Contextual Performance (Mean= 4.272 : S D = 0.526)	0.769			
CP1: I help colleagues after I finish the work assigned by my foreign supervisor		0.718	0.655	
CP2: I can work independently to finish tasks assigned by my foreign supervisor		0.676	0.675	
CP3: I like to cooperate with my foreign supervisor		0.525	0.728	
CP4 My foreign supervisor acknowledges my work efficiency		0.603	0.701	
CP5: I can quickly respond to client concerns that are proposed by my foreign supervisor		0.315	0.727	

Table 4.15 Item Analysis and Reliability Tests of Job Performance

The Cronbach alpha values for all job performance dimensions are shown in Table 4.15.

The reliability values of these two job performance dimensions are either well above 0.8 or slightly less than 0.8 (α = 0.7969), which is regard as an acceptable value when evaluating

internal consistency within a construct. Further, Table 4.15 reveals no items need to be removed from the job performance dimension to significantly increase the Cronbach's alpha value. Hence, the results are considered adequate for confirming a satisfactory level of reliability.

However, these reliability evaluating techniques do not provide information such as unidimensionaligy, convergent validity, and discriminant validity of a construct (Anderson and Gerbing, 1988). Confirmatory factor analysis with a multiple-indicator measurement model is therefore used to ensure validity (Anderson and Gerbing, 1988) and is discussed in the later section.

4.6 Comparisons of National Culture, Transformational Leadership, and Job Performance

Exploratory factor analysis and reliability test have identified and examined five dimensions of cultural difference (power distance, uncertain avoidance, masculinity, collectivism, and long-term orientation), three dimensions of transformational leadership (charisma-inspiration, individualized consideration, and intellectual stimulation), and two dimensions of job performance (task performance and contextual performance). Given that difference in respondents' characteristics might have influenced their perception on cultural difference dimensions, these identified constructs are submitted to ANOVA test to examine whether differences existed. ANOVA test results are described in the following subsections.

4.6.1 Comparison of Respondents' Perceived Cultural Difference Dimensions between Employees and Foreign Managing Directors

To evaluate the perceived cultural differences between employees and their foreign managing directors, one-way analysis of variance (ANOVA) is performed in this study. Respondents are initially asked to evaluate the perceived differences of national culture between them and their foreign managing directors. The mean difference value of each national culture dimension and measuring items is subsequently compared. As shown in Table 4.16, the evaluation results revealed statistically differed on each perceived cultural difference items and dimensions, which suggested that the cultural difference exists between employees and foreign managing directors from the perspective of employees

The employees' agreement in regard to masculinity (mean = 3.31) as well as power distance (mean = 3.12) dimension tended to gain higher mean scores than that of foreign managing directors. In contrast, the results suggested that employees had significantly lower mean scores than those of foreign managing directors on the uncertainty avoidance (mean = 3.61), collectivism (mean = 3.18), long-term orientation (mean = 3.47) dimensions.

It is noted that the employees perceived their foreign managing directors (with lower scores on power distance and masculinity as well as higher mean scores on uncertainty avoidance, collectivism, and long-term orientation) are having the tendency of working with their colleagues and making any decision with acquiring employee opinions when in dealing with the operations.

*	PEMI	E ¹	PFMD ¹		Mean		
National culture variables and dimensions –		S.D	Mean	S.D	Difference	t-value	p-value ³
Power distance (PD)	3.12	0.84	2.62	0.60	0.496	12.24	0.00*
I think employees should not hold too many personal opinions	3.71	0.99	2.90	0.83	0.814	16.01	0.00^{**}
I think any work needs to be instructed by a supervisor	2.69	1.23	2.21	0.98	0.481	9,66	0.00^{**}
I fear having a dispute with my supervisor	3.23	1.11	2.89	1.37	0.337	4.36	0.00^{**}
I believe my supervisor would not consult with other colleagues before	2.84	1.30	2.49	1.18	0.353	7.72	0.00^{**}
Uncertainty avoidance (UN)	3.61	0.79	3.74	0.60	-0.121	4.60	0.00**
I prefer to do routine work in order to avoid making mistakes	3.24	1.15	3.81	1.26	-0.570	- 11.84	0.00^{**}
I like to discuss my work with someone before doing it	3.32	1.22	3.13	0.68	0.192	3.26	0.00^{**}
I prefer to work with detailed job specifications	3.78	0.89	4.09	0.81	-0.302	- 6.73	0.00^{**}
I would collect more information for decision-making	4.12	0.94	3.91	0.93	0.204	4.64	0.00^{**}
Collectivism (COL)	3.18	0.67	3.90	0.54	-0.715	-22.49	0.00**
I think group interests are more important than personal benefits	3.04	1.01	3.91	0.67	-0.869	-20.44	0.00^{**}
I prefer team work better than doing work alone	3.13	0.71	3.97	0.79	-0.839	- 23.53	0.00^{**}
I keep harmony and avoid conflict with my colleagues	3.11	1.22	3.70	0.83	-0.597	-9.94	0.00^{**}
I think it is important to cooperate with other colleagues	3.46	1.41	4.02	0.93	-0.553	-8.37	0.00^{**}
Masculinity (MAS)	3.31	0.60	2.99	0.61	0.308	10.163	0.00**
I think individual career achievement is more important than life quality	2.96	0.82	2.75	0.62	0.211	5.70	0.00^{**}
I strive for any promotional opportunity	3.55	0.96	2.95	0.79	0.607	16.47	0.00^{**}
I think individual career achievement is more important than good	3.95	0.99	3.71	0.77	0.241	6.38	0.00^{**}
Other than at work, I do not interact with my colleagues	2.76	1.08	2.59	1.04	0.173	2.99	0.00^{**}
Long-term Distance (LTO)	3.47	0.95	3.57	0.47	-0.104	-2.678	0.00**
I emphasize a long-term outlook rather than immediate benefits	3.56	0.92	3.24	0.71	0.324	7.77	0.00^{**}
I am willing to sacrifice present pleasure for future success	3.72	1.25	3.89	0.84	-0.161	-2.52	0.01^{*}
I finish my job with perseverance	3.18	1.26	3.35	0.67	-0.172	-3.55	0.00^{**}
I feel ashamed when I have done something wrong	3.41	1.25	3.82	0.71	-0.410	-7.75	0.00^{**}

Table 4.16 Perceptions of Cultural Difference between Employees and Foreign Managing Directors

Note: 1. PEME: perceptions of employees' national culture; PFMD: employees' perceptions of their foreign managing directors' national culture 2. The ratings are based on the mean scores obtained from a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree)

3. *=P<0.05; **=P<0.01

4.6.2 Comparison of National Cultural according to Respondents' Nationalities

Respondents are categorized into six groups according to their nationalities: UK, Germany, Belgium, Netherland, China (Mainland China), and Taiwan. Respondents from UK have the highest mean scores on dimension of collectivism (mean = 4.16), followed by uncertainty avoidance, long-term orientation, masculinity, and power distance. As for respondents from Germany, collectivism is perceived as the highest perceived difference dimension (mean = 3.92), followed by uncertainty avoidance, long-term orientation, masculinity, and power distance. Belgium's respondents gain the highest mean score (mean = 4.09) on long-term orientation dimension, followed by uncertainty avoidance, collectivism, masculinity, and power distance, while Netherlands' participants have the highest difference mean score on dimension of collectivism (mean = 4.00), followed by uncertainty avoidance, long-term orientation, masculinity, and power distance, while Netherlands' participants have the highest difference mean score on dimension of collectivism (mean = 4.00), followed by uncertainty avoidance, long-term orientation, masculinity, and power distance.

As for respondents from China (Mainland China), uncertainty avoidance is rated as the most differed national culture dimension from their foreign managing directors, followed by collectivism, long-term orientation, masculinity, and power distance. Results also revealed that collectivism is perceived as the most differed national culture dimension by respondents of Taiwan, followed by uncertainty avoidance, long-term orientation, masculinity, and power distance.

ANOVA test is subsequently conducted to ascertain whether differences existed in perceptions of the five national culture dimensions according to the different nationality group. Table 4.17 shows the perceptions of the six nationality groups all reveal significantly different on these perceived national culture dimensions, i.e. uncertainty avoidance, collectivism, masculinity, and long-term orientation except dimension of power distance at

	Nationalities of employees								
Dimensions	U (1) (100)	G (2) (215)	B(3) (85)	N (4) (100)	C (5) (120)	T (6) (120)	F	P value	Scheffe
Power Distance	2.64 ^a (0.61) ^b	2.62 (0.60)	2.61 (0.60)	2.63 (0.59)	2.60 (0.61)	2.63 (0.61)	0.53	0.99	-
Uncertainty Avoidance	3.68 (0.64)	3.67 (0.63)	3.65 (0.64)	3.93 (0.53)	3.88 (0.47)	3.68 (0.64)	4.73	0.00**	(2,4) (2,5) (3,4)
Collectivism	4.16 (0.50)	3.92 (0.48)	3.56 (0.56)	4.00 (0.41)	3.63 (0.55)	4.09 (0.53)	24.32	0.00**	(1,2) (1,3) (1,5) (2,3) (2,5) (3,4) (3,6) (4,5) (5,6)
Masculinity	3.00 (0.62)	2.87 (0.61)	2.90 (0.61)	3.39 (0.36)	2.98 (0.63)	3.00 (0.62)	11.74	0.00**	(1,4) (2,4) (3,4) (4,5) (4,6) (1,2) (1,2)
Long-term Orientation	3.51 (0.47)	3.33 (0.46)	4.09 (0.32)	3.87 (0.25)	3.55 (0.28)	3.48 (0.47)	57.48	0.00**	(1,2) (1,3) (1,4) (2,3) (2,4) (2,5) (3,5) (3,6) (4,5) (4,6)

Table 4.17 Cultural Differences between Respondents' Nationalities

Note: a. represents mean, 1= strongly disagree, 5 = strongly agree; b. represents standard deviation. * presents significance at the 0.05 level; ** presents significance at the 0.01 level U: UK; G: Germany; B: Belgium; N: Netherlands; C: China; T: Taiwan

Consequently, scheffe tests are employed to test differences in national culture dimensions between these six nationalities of employees. With regards to the power distance dimension, no significant differences are found between these six nations in the dimension of power distance. In terms of uncertainty avoidance, results suggested that respondents from UK are significantly differed from those of Netherlands and China. Respondents from Belgium also reveal significantly difference from those from Netherland in uncertainty avoidance dimension. Respondents from Netherland have the highest perceived difference compared to their foreign managing directors, which indicate that employees in Netherland perceive their supervisors' attitude and behavior are more concerned about keeping the present condition and are less willing to disturb the order. In dimension of collectivism, UK's research participants reveal significantly difference from those of Germany, Belgium, and China. As regard to Germany, respondents showed significant difference from those of Belgium and China in the dimension of collectivism while Belgium's participants indicated there are existing differences between Netherlands and Taiwan. Respondents from Netherlands and China also reveal significantly difference. Table 4.17 also indicates that, in the collectivism dimension, respondents from China and Taiwan existed different perception. Results reveal respondents from UK have the highest perceived difference compared to their foreign managing directors, which suggest that respondents living in more individualistic societies much rely on their personal attitudes and feelings when working together with their supervisor.

In the long-term orientation dimension, UK's respondents are significantly differed from employees of Germany, Belgium, and Netherlands, while employees from Germany are also found significantly different from employees of Belgium, Netherland, and China. Respondents from Belgium reveal significant perceived difference compared to those from China and Taiwan in the long-term orientation dimension. As shown in Table 4.17, in the long-term orientation dimension, respondents from Netherlands, China and Taiwan exist different perception to each other. Results indicate that Belgium's respondents perceived the highest difference to their supervisors on this dimension, which suggest that they perceive their supervisors are more likely to engage in future-oriented operation behaviors.

4.6.3 Comparison of National Culture Dimensions according to Respondents'

Based on religious affiliation, respondents are categorized into five groups, namely Catholic, Christian, Buddhism and Taoism, and no religion. As shown in Table 4.18, respondents with Catholic affiliation have the highest perceived difference mean scores on dimension of long-term orientation (mean = 2.54), followed by masculinity, uncertainty avoidance, power distance, and long-term orientation. As for respondents with Christian affiliation, uncertainty avoidance is perceived as the highest perceived difference dimension (mean = 3.19), followed by long-term orientation, masculinity, power distance, and uncertainty avoidance.

	Types of religious affiliation							
Dimensions	Catholic (1) (397)	Christian (2) (91)	Buddhism (3) (252)	Taoism (4) (252)	No religion (5) (252)	F	P value	Scheffe test
Power Distance	1.67 ^a (1.27) ^b	1.82 (1.34)	3.37 (1.34)	3.19 (1.37)	1.82 (1.35)	27.71	0.00**	(1,3) (1,4) (2,3) (2,4) (3,5) (4,5)
Uncertainty Avoidance	1.74 (0.93)	2.63 (0.83)	1.58 (0.70)	1.67 (0.90)	1.68 (0.75)	36.83	0.00**	(1,2) (2,3) (2,4) (2,5)
Collectivism	1.32 (0.82)	1.31 (0.62)	1.27 (0.70)	1.42 (0.88)	1.30 (0.71)	0.26	0.93	N/A
Masculinity	1.90 (1.22)	1.86 (1.20)	1.94 (1.22)	1.89 (1.19)	2.01 (1.23)	0.44	0.81	N/A
Long-term Orientation	2.54 (1.09)	2.20 (0.71)	2.12 (0.60)	2.14 (0.57)	2.26 (0.61)	6.84	0.00**	(1,2) (1,3) (1,4) (1,5)

Table 4.18 Cultural Differences between Respondents' Religious Affiliations

Note: a. represents mean, 1= strongly disagree, 5 = strongly agree

b. represents standard deviation.

* presents significance at the 0.05 level; ** presents significance at the 0.01 level

Buddhism's believers gain the highest difference mean score (mean = 3.37) on power distance dimension, followed by long-term orientation, masculinity, uncertainty avoidance, and collectivism, while Taoism's followers also have the highest difference mean score on dimension of power distance (mean = 4.00), followed by uncertainty avoidance, long-term orientation, masculinity, and collectivism. Further, long-term orientation is regarded as the

most differed dimension by respondents without any religious affiliation, followed by masculinity, power distance, uncertainty avoidance, and collectivism.

ANOVA analysis is utilized to examine differences in respondents' perceptions of national culture dimensions between these five groups of religious affiliation. Table 4.18 depicts these five groups' perceptions are significantly differed in the dimensions of power distance, uncertainty avoidance, and long-term orientation, while reveals no significantly difference in the dimensions of collectivism and masculinity.

Further, Scheffe tests are employed to test differences in cultural difference dimensions among these five religious affiliation groups. With regards to the power distance dimension, results indicate the employees with Catholic affiliation are perceived higher difference to their supervisors compared to employees with Buddhism and Taoism religious affiliation. Respondents with Christian religion show significant difference from those of having Buddhism and Taoism religious affiliation. Results also reveal that respondents with Buddhism and Taoism religious affiliation reveal difference from those without any religious affiliation. Buddhism's respondents perceived the highest difference to their supervisors on this dimension. As regard to uncertainty avoidance, respondents with Catholic religion show significantly different from those with Christian religion. Respondents holding the faith of Christian reveal significant difference from those with Buddhism, Taoism, and no religious beliefs on difference perception of uncertainty avoidance dimension. Christian's respondents have the highest difference to their supervisors on this dimension.

Further, the five groups' perceptions did not significantly differ on collectivism and masculinity dimensions. In terms of long-term orientation dimension, Catholic religious

affiliation groups are significantly differed from employees with religious affiliation of Christian, Buddhism, and Taoism as well as those without any religious affiliation. As shown in Table 4.18, in the dimension of long-term orientation, respondents without any religious beliefs gain the highest difference score among these five types of religious affiliation.

4.6.4 Comparison of National Cultural Dimensions according to Respondents' Job Title

Regarding the comparison of perceived cultural difference between research participants' job title, respondents are categorized into two groups (see Table 4.19). Respondents with job title such as supervisor, foreman, director/vice director, manager/assistant manager, and above vice president are considered into the group of supervisor, whereas those without any management title (i.e. clerk) are classified into the group of general employee. Employees with managerial job titles had the highest difference mean scores (mean = 2.64) on the dimension of power distance, whereas general employee have the highest difference perception on the dimension of long-term orientation (mean=2.32).

As shown in Table 4.19, ANOVA test are carried out to examine whether respondents' perceptions on national culture dimensions differed based on employee's job title. Results indicate that respondents' perceptions on dimensions of power distance and uncertainty avoidance are significantly differed at the 5 % significance level. Further, results reveal respondents in the group of supervisor have the highest mean scores (mean = 2.64), which suggest that employees with managerial titles perceived the inequality condition between them and their foreign managing directors. General employee gained the higher difference

scores (mean = 1.92) than the supervisor group respondents in the dimension of uncertainty avoidance. This result suggests that general employees perceived their foreign supervisors are more concerned about keeping current condition of operation.

Job title of employees						
Dimensions	Supervisor (91)	General employee (252)	F value	P value		
Power Distance	2.64 (1.51)	1.86 (1.38)	23.996	0.00**		
Uncertainty Avoidance	1.61 (0.64)	1.92 (0.94)	8.455	0.00**		
Collectivism	1.30 (0.73)	1.31 (0.74)	0.021	0.885		
Masculinity	2.04 (1.24)	1.91 (1.21)	0.849	0.357		
Long-term Orientation	2.35 (0.86)	2.32 (0.83)	0.101	0.750		

 Table 4.19 National Cultural Differences among Different Job Title of Employees

Note: a. represents mean, 1= strongly disagree, 5 = strongly agree; b. represents standard deviation. * presents significance at the 0.05 level; ** presents significance at the 0.01 level

4.6.5 Comparison of National Dimensions according to Respondents" Work

Experience

In consideration of employees' work years, respondents are categorized into three groups; five years or less, between 6 years and 10 years, and 11 years or more. Table 4.20 depicts respondents with working experiences less than five years have the highest mean difference scores on dimension of uncertainty avoidance (mean = 2.69), followed by power distance, long-term orientation, masculinity, and collectivism. Respondents with working experience between six to ten years gained the highest mean score on long-term orientation (mean = 2.46), followed by masculinity, power distance, uncertainty avoidance, and collectivism. Further, respondents work more than11 years obtain the highest difference mean score on dimension of long-term orientation (mean = 2.24), followed by power distance, uncertainty avoidance, masculinity, and collectivism.

ANOVA analysis is used to examine differences in respondents' perceptions of national culture dimensions between these three groups of work years. As indicated in Table 4.20, these three groups' perceptions are significantly differed in the four national culture dimensions, namely, power distance, uncertainty avoidance, masculinity and long-term orientation, while reveal no significantly difference in the dimension of collectivism at the 5% significance level.

Years of work experience							
Dimensions	<5 (1) (97)	6-10 (2) (266)	>11 (3) (377)	F	P value	Scheffe test	
Power distance	2.34^{a} (1.52) ^b	1.95 (1.43)	1.86 (1.36)	4.41	0.01**	(1,3)	
Uncertainty avoidance	2.69 (1.15)	1.64 (0.85)	1.85 (0.73)	54.22	0.00**	(1,2) (1,3) (2,3)	
Collectivism	1.34 (0.81)	1.24 (0.63)	1.35 (0.79)	1.87	0.16	-	
Masculinity	1.79 (1.23)	2.12 (1.25)	1.84 (1.17)	5.10	0.00**	(2,3)	
Long-term Orientation	2.29 (0.72)	2.46 (0.66)	2.24 (0.96)	5.41	0.00**	(2,3)	

Table 4.20 Cultural Differences between Respondents' Work Experience

Note: a. represents mean, 1= strongly disagree, 5 = strongly agree; b. represents standard deviation. * presents significance at the 0.05 level; ** presents significance at the 0.01 level

Scheffe tests are also employed to test differences in national culture dimensions between these three groups of work years. With regards to the power distance dimension, results indicated the employees working less than five years are significantly differed from employees with working experience more than 11 years. Respondents working less than five years have the highest difference mean score in this dimension. In dimension of uncertainty avoidance, groups between working "less than five years" and "six and ten years", working "less than five years" and "more than 11 years", and "six and ten years" and "more than 11 years" are significant difference to each other. Respondents working less than five years also have the highest difference scores in this dimension. As regards for masculinity dimension, respondents with work year between six and ten years are significantly differed from employees with work years over 11 years. Employees working between six and ten years have the highest difference perception in this dimension.

In dimension of long-term orientation, results also show the perception of six and ten work year group is significant differed from the group of working year more than 11 years. The results indicate that employees working between six and ten years perceive their foreign supervisors are willing engaging in future-oriented behavior when operating oversea business.

4.6.6 Comparison of National Cultural Dimensions according to Respondents'

Education Level

Based on employees' educational level, respondents are classified into three groups; i.e. High School, Undergraduate, and Post Graduate. As depicted in Table 4.21, respondents graduated from high school have the highest difference mean score (mean = 2.08) on dimension of long-term orientation, followed by power distance, masculinity, uncertainty avoidance, and collectivism. Respondents with undergraduate degree gain the highest difference mean score on long-term orientation dimensions (mean = 1.32), followed by uncertainty avoidance, power distance, masculinity, and collectivism. Masculinity is regarded as the most differed dimension (mean = 3.06) in the perception of national culture by respondents gaining post graduate degrees, followed by long-term orientation, power distance, uncertainty avoidance, and collectivism.

ANOVA tests are subsequently used to examine differences in respondents' perceptions of national culture dimensions between these three groups of educational level. As indicated in Table 4.21, these three groups' perceptions are significantly differed in the three perceived

cultural difference dimensions, namely uncertainty avoidance, masculinity and long-term orientation, while the remaining two dimensions (power distance and collectivism) reveal no significantly difference at the 1% significance level.

	Educational level of employees					
	High School	Undergraduate	Post Graduate	- F		Scheffe
Dimensions	(1)	(2)	(3)	Ratio	P value	test
	(279)	(449)	(12)	Ratio		test
Power Distance	1.90 (1.36)	1.98 (1.43)	2.25 (1.56)	0.52	0.60	-
Uncertainty	1 62	2.04	1.42	18.89	0.00**	(1,2)
Avoidance	(0.87)	(0.92)	(0.67)			(2,3)
Collectivism	1.31	1.32	1.10	0.51	0.60	_
	(0.72)	(0.76)	(0.31)	0.51		-
Masculinity	1.88	1.94	3.06	5 54	0.00**	(1,3)
	(1.19)	(1.22)	(1.36)	0.01		(2,3)
Long-term	2.08	2.46	2.94	22.17	0.00444	(1,2)
Orientation	(0.74)	(0.84)	(1.22)	22.17	0.00**	(1,3)

Table 4.21 Cultural Differencesbetween Respondents' Education Level

Note: a. represents mean, 1= strongly disagree, 5 = strongly agree

b. represents standard deviation.

* presents significance at the 0.05 level; ** presents significance at the 0.01 level

Scheffe tests are also employed to test differences in each perceived cultural difference dimension between these three groups of education level. With regards to the uncertainty avoidance dimension, results indicate that employees graduated from college/university are significantly differed from employees with those had high school or post graduate degree, which gain the highest difference mean scores in this dimension. The results suggest employees with higher education regards their foreign managing directors prefer working with principle and regulation.

In addition, in masculinity dimension, respondents graduated from post graduate are

significantly differed from those of high school and college/university, which have the highest difference mean score in this dimension. Employees obtaining post graduate degrees regard their foreign managing directors prefer for individual achievement rather than caring for or cooperating with others.

Finally, in the dimension of long-term orientation, respondents owned high school degree are significantly differed from those graduated from college/university and post graduate. Employees with post graduate degrees have the highest perceived difference in this dimension, which suggest that they regards their foreign managing directors as preferring pursuing future-oriented values such as persistence and thrift.

4.7 Summary

This chapter summarized the general findings revealing from the initial analysis of questionnaires as follows. Firstly, the total usable response sample for this study is 740, of which 100 are from UK, 215 from Germany, 85 from Belgium, 100 from Netherlands, 120 from China, and 120 from Taiwan. The overall response rate for this study reaches to 79.82 %. After performing a t-test statistical technique, non-response bias did not exist within the sample obtained, suggesting survey responses are considered representative of the total and generalized to the population.

In the sequent survey, results reveal that a vast majority of survey participants (88.1%) are general employees, whereas nearly half (49.7%) of respondents have worked in their present company between 11 and 15 years as well as 35.9 % of respondents have worked for the current company between 6 and 10 years for the current company. This indicates that respondents had abundant practical experience to recognize the questions for the study and endorse the reliability of the survey's findings.

Further, an evaluating of respondents' agreement level with cultural difference, transformational leadership, and job performance is carried out. Respondents acknowledged most with the cultural difference related measure is "I would collect more information for decision-making". As regard to transformational leadership, respondents agreed most with the measure, "I esteem my supervisor's leadership behavior". The job performance related item, "I like to cooperate with my foreign supervisor", is deemed the item with which respondents most agreed.

Exploratory factor analysis is performed to identify key dimensions of cultural difference, transformational leadership, and job performance. Results indicate that five key perceived cultural difference related dimensions are identified; i.e. power distance, uncertainty, collectivism, masculinity, and long-term orientation. Transformational leadership is identified as three dimensions, namely, charisma-inspiration, individualized consideration, and intellectual stimulation. In terms of job performance, two dimensions are subsequently identified; i.e. task job performance and contextual job performance.

Finally, ANOVA test initially examined the perceptions of perceived cultural difference between employees and foreign managing directors. Results suggested that perceived cultural difference dimensions statistically differed between employees and foreign managing directors from the perspective of employees in the container shipping companies' oversea branch office and agents. When examining the influence of respondents' nationality on perceived cultural difference dimensions, results reveals that all dimensions have been significantly influenced by the perception of residents from different countries with the exception of masculinity dimension. As regards to respondents' religious affiliation, which reveal respondents with different religious affiliation or without any religious affiliation have significantly influence on the dimension of power distance, uncertainty avoidance, and long-term orientation.

Respondents' job tile have an influence on the dimensions of power distance and uncertainty while their work experience have a significant impact on all national culture related dimensions except for collectivism. Finally, results also found that respondents' education had significant effect on dimensions of uncertainty avoidance, masculinity, and long-term orientation in this study.

With the introduction of sampling resource in this study, this chapter has presented the descriptive statistics results (i.e. employees' personal demographic characteristics), which are derived from obtaining data. Exploratory factor analysis is then employed to identify key dimensions on national culture, transformational leadership, and job performance. Further empirical analysis (e.g. confirmatory factor analysis) and statistical methods (e.g. hierarchical regression analysis) are employed to examine the goodness of fit of these dimensions and the relationship between perceived cultural difference, transformational leadership, and job performance.

CHAPTER 5 Empirical Results of Analyses

The previous chapter has investigated the general findings of demographic characteristics and summarized analysis of variance (ANOVA) results based on respondents' perceptions. This chapter displays the empirical results of analysis and is classified into three sections. Section 5.1 reveals the empirical results of confirmatory factor analysis (CFA) of perceived cultural difference, transformational leadership, and job performance. The evaluation procedures to test the adequacy of validity, reliability, and unidimensionality of proposed models are also depicted in this section.

Subsequently, the relationships between perceived cultural difference and job performance as well as transformational leadership are examined by employing hierarchical regression analysis in Section 5.2. A summary of the empirical results of analyses are provided in the final section.

5.1 Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) refers to an approach of examining how well measure variables represent a smaller number of constructs involving the specification and estimation of one or more hypothesized models of factor structure (Koufteros, 1999; Hair et al., 2010). Each construct proposes a set of latent variables (factors) to account for covariance among a set of observed variables (Koufteros, 1999).

The unidimensionality of each construct needs to be examined. Assessing unidimensionality indicates determining whether a set of indicators reflect one, as opposed to more than one, unique factor (Gerbing and Anderson, 1988; Chen and Paulraj, 2004).

Hence, two implicit conditions for establishing unidimensionality need to be satisfied; (1) empirical items must be significantly associated with the empirical representation of a construct and (2) it must be associated with only one construct (Anderson and Gerbing, 1987; Phillips and Bagozzi, 1986; Chen and Paulraj, 2004; Hair et al., 2010). Thus, unidimensionality is examined employing confirmatory factor analysis in this study.

The hypothesized models for perceived cultural difference, transformational leadership, and job performance are displayed in Figure 5.1, Figure 5.2, and Figure 5.3, respectively. Each measuring model comprises latent constructs, which are composed of related corresponding multiple indicators (measures or items). These measuring models are discussed in the following sub-sections.

5.1.1 Confirmatory Factor Analysis of the Initial National Culture Dimensions

The measurement model of national culture dimensions, as shown in Figure 5.1, contains five latent variables, namely, long-term orientation, uncertainty avoidance, masculinity, power distance and collectivism. These latent constructs are intercorrelated and indicated by two-headed curved arrows. A total of twenty observed variables, which are enclosed in the square shape, are considered in the measuring model. Four observed variables (LTO1, LTO2, LTO3, and LTO4) are loaded onto long-term orientation dimension; four observed variables (UN1, UN2, UN3, and UN4) are loaded onto power distance dimension; four observed variables (MAS1, MAS2, MAS3, and MAS4) are loaded onto masculinity dimension; four observed variables (PD1, PD2, PD3, and PD4) are loaded onto power distance dimension; and four observed variables (COL1, COL2, COL3, and COL4) are loaded onto collectivism dimension.

It should be noted that in consideration of the "scale invariant" of construct during the

estimation procedure, the estimation of the measurement model are necessary to ensure that each construct has at least two variables. The indicators of a construct are 'standardized in such a way as to make constructs comparable' (Jöreskog and Sörbom, 1996; Koufteros, 1999).





Dimensions

- LTO1: I am willing to sacrifice present pleasure for future success. MAS3: I think individual career achievement is more important...
- LTO2: I feel ashamed when I have done something wrong.
- LTO3: I finish my job with perseverance.
- LTO4: I emphasize a long-term outlook rather than immediate...
- UN1: I prefer to work with detailed job specifications.
- UN2: I prefer to do routine work in order to avoid making....
- UN3. I like to discuss my work with someone before doing it.
- UN4: I would collect more information for decision-making.
- MAS1: I think individual career achievement is more important MAS2: Besides work, I am less interactive with my colleagues
- MAS4: I strive for any promotional opportunity.
- PD1: I think employees should not hold too many personal...
- PD2: I think any work needs to be instructed by a supervisor.
- PD3: I fear having a dispute with my supervisor.
- PD4: I believe my supervisor would not consult with other...
- COL1: I prefer team work better than doing work alone.
- COL2: I keep harmony and avoid conflict with my colleagues.
- COL3: I think group interests are more important than personal...
- COL4: I think it is important to cooperate with other colleagues.

To maintain the scale invariant, each loading coefficient in each construct (long-term orientation, uncertainty avoidance, masculinity, power distance and collectivism) is set to a fixed value of 1.0 (Koufteros, 1999; Hair et al., 2010). The statistical criteria for model modification decisions contain indices such as model fit indices, offending estimates, squared multiple correlations, and standardized residual covariance (Koufteros, 1999; Min and Mentzer, 2004).

Once the proposed model has been purified, test of validity, reliability can subsequently be conducted. (Koufteros, 1999, Hair et al., 2010). As shown in Table 5.1, results reveal the initial model of perceived cultural difference are found defective in measurement.

An indication of examining acceptable goodness of fit is the ratio of the Chi-square statistic to degrees of freedom (Chen and Paulraj, 2004, Hair et al., 2010). Previous research suggests the use of ratio of less than two as an indication of good fit (Koufteros, 1999). However, the ratio of Chi-square statistic value is sensitive to sample size (Shah and Goldstein, 2006; Hiar et al., 2010), the other measures of model fit are therefore adopted in evaluating the goodness of the measuring model including goodness of fit (GFI), adjusted goodness of fit (AGFI) (Jöreskog and Sörbom, 1999), root mean square residual (RMR) (Jöreskog and Sörbom, 1999), and comparative fit index (CFI) (Bentler, 1986), root mean square error of approximation (RMSEA), and tucker lewis index (TLI). Adequate goodness of fit value is suggested for models exhibiting GFI indices greater than 0.9, AGFI indices greater than 0.9 and TLI greater than 0.9. Values for RMR and RMSEA of less than 0.08 are recommended in evaluating the adequacy of the measuring model (Hair et al., 2010).

Latent item	Unstandardized	Completely	Standard	Critical	R^2		
variable	factor loading	standardized	error ^a	Ratio ^b			
		factor loading					
ξ1 Long-term Orient	ation						
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	_c	-	0.267		
ξ2 Uncertainty Avoidance							
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		
ξ3 Masculinity		T. 2.8					
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	1. 1 . 1	-	0.442		
ξ4 Power Distance		2845					
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		
ξ5 Collectivism							
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		

Table 5.1 Parameter Estimate, Standard Errors, Critical Ratios, and R² for the Initial National Culture Dimensions

Goodness-of-fit indicators

 χ^2 (135) =390.440, p = 0.000; χ^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.

The Chi-square value (χ^2 (135) =390.440, p = 0.000) is statistically significant at the

0.05 significance level indicating that large differences exist between the model-implied covariance matrix and data-observed. Accordingly, results indicate that the initial national culture dimensions need to be modified. The necessary model modification procedure is adopted by utilizing previously mentioned statistical examining criteria.

In consideration the sensitivity of Chi-square statistic value to sample size (Shah and Goldstein, 2006), the model modification decision is not merely based on this goodness-of-fit index. Referring to other goodness-of-fit indices, $\chi^2/df = 2.892$, GFI=0.951; AGFI=0.923; CFI=0.958; RMR=0.032; RMSEA=0.051; TLI=0.941, in Table 5.1 reveals that the initial model of perceived cultural difference is acceptable. However, the results indicate that not all squared correlation values exceed the recommended cut-off value of 0.3 (Carr and Pearson, 1999; Hair et al., 2010). The observed variables with a squared correlation value of less than the 0.3 threshold are LTO4. Accordingly, results imply that the initial model of national culture dimensions needs to be modified.

5.1.1.1 Assessment of the Fit and Unidimensionality of the Initial National Culture Dimensions

The initial national culture dimensions are then modified by examining the standardized residuals and the modification indices. A test of the standardized residuals and modification indices assist to achieve the object of measuring internal quality of a model (Bagozi and Yi, 1998; Hair et al., 2010). The standardized residuals represent the difference between the observed correlation/covariance and the estimated correlation/covariance matrix. The residuals are divided by the asymptotic standard errors (standardized or normed) and this can ease the interpretation (Jöreskog, 1993). Smaller fitted residuals indicate a good fit.
	LTO1	LTO2	LTO3	LTO4	COL1	COL2	COL3	COL4	MAS1	MAS2	MAS3	MAS4	UN1	UN2	UN3	UN4	PD1	PD2	PD3	PD4
LTO1	0.00																			
LTO2	0.47	0.00																		
LTO3	0.77	0.05	0.00																	
LTO4	-0.86	0.77	0.30	0.00																
COL1	0.37	-0.27	0.28	0.10	0.00															
COL2	2.00	0.47	1.30	0.05	0.17	0.00														
COL3	0.76	0.45	1.53	-0.31	0.12	-0.70	0.00	100												
COL4	0.18	-0.21	-0.44	-1.45	-0.07	0.32	0.20	0.00	711	144	0	3								
MAS1	1.25	-0.01	-0.91	0.76	-0.73	1.30	0.67	0.37	-0.00	21										
MAS2	0.45	-1.57	-1.44	-1.01	-0.24	-0.60	-0.91	1.87	-0.11	0.00	100									
MAS3	0.43	-1.06	-2.31	-1.90	-0.09	1.21	1.02	2.50	0.33	-0.03	0.00									
MAS4	1.48	-0.28	0.05	0.82	-0.30	0.71	-0.07	1.73	-0.57	0.14	0.00	0.00								
UN1	-2.04	0.60	-0.72	-0.29	-0.63	-0.39	0.99	-0.01	1.28	1.12	0.87	1.10	0.00							
UN2	-2.06	-1.14	-1.07	0.35	0.59	0.07	-1.14	0.76	-0.90	-1.18	-1.23	0.34	-0.15	0.00						
UN3	2.84	0.32	0.11	1.14	-0.74	-0.91	-0.59	-1.04	-0.29	0.32	0.61	0.39	-0.39	-0.02	0.00					
UN4	-1.60	1.21	2.03	1.87	-0.13	-0.87	0.34	-1.14	0.29	0.04	-0.78	1.87	-0.40	-0.01	0.31	0.00				
PD1	0.72	0.41	-0.76	-2.12	1.97	-1.38	-0.58	-0.51	-0.78	-1.47	0.30	-0.75	-1.38	-0.29	-0.22	1.26	0.00			
PD2	1.51	-0.89	0.25	-2.36	0.26	0.07	-0.80	2.02	-0.91	2.20	1.50	2.14	1.17	0.51	0.16	-1.08	-0.02	0.00		
PD3	-0.14	0.10	-0.76	3.95	1.11	-1.95	-0.78	2.32	-1.69	0.75	0.97	0.43	1.11	1.34	0.65	-1.01	-0.56	0.63	0.00	
PD4	0.94	1.31	1.05	-1.85	1.22	1.30	1.11	0.43	-0.38	-1.95	-0.99	-0.43	0.73	0.19	1.44	1.16	-0.22	0.44	0.01	0.00

Table 5.2 Standardized Residual Covariance (Initial Model of Perceived Cultural Difference)

The AMOS statistic software provides the estimated correlation/covariance matrix to evaluate the residuals of each item in the measuring model. Residuals gained values larger than 2.58 in absolute values are considered statistically significant at the level 0.05 level indicating that significant amount of variances remain unexplained and exists a un-specification error. (Hair et al., 2010). Significant residuals indicate substantial error for a pair of indicators.

An examination of the standardized residuals reveals that the pairs (LTO4 and PD3) and (LTO1 and UN3) have residual values of 3.95 and 2.84, respectively, in absolute terms shown in Table 5.2. Comparing the other residual values to that of PD3 and UN3, no other pairs of residual values are greater than 3.95. The item LTO1 and LTO4 are therefore discarded in the initial model (Hair et al., 2010) for further examining adequacy of measurement model.

5.1.1.2 Convergent Validity and Item Reliability of National Culture Dimensions

Convergent validity can be tested by observing t-values that reveals statistically significant on the factor loading (Dunn et al., 1994). The t-value is identified as critical ratio (C.R.) in the output content of AMOS statistics analysis software, which represents the parameter estimate divided by its standard error. The larger the factor loadings as compared with their standard errors and expressed by the corresponding critical ratio (C.R.) values, the stronger are the evidence that the measured factors stand for the underlying construct (Bollen, 1989; Koufteros, 1999). From previous research suggestion, the recommendation value of C.R. needs to be greater than 1.96 or smaller than -1.96 for the estimate to be adequate (Koufteros, 1999; Byrne, 2001; Hair et al., 2010). The parameter estimate, standard errors, critical ratio (C.R.), and R^2 for the national culture dimensions are displayed

in Table 5.3. The results suggest that all C.R. values are significant at the 0.05 level, confirming in effect that all indicators measured the identical construct and providing satisfactory evidence to the convergent validity and unidimensionality of each construct (Anderson and Gerbing, 1988).

 R^2 values are employed to measure the reliability of a particular observed variable (Kouferos, 1999). The item, reliability, refers to the R^2 value in the observed variables that are accounted for by the latent variables influencing them. R^2 values typically above 0.3 provide evidence of acceptable reliability (Carr and Person, 1999; Hair et al., 2010). Table 5.13 shows the correlations for these indicators. Results reveal that the R^2 values of all items in these three dimensions are greater than the recommended value of 0.3, implying that this model had an acceptable convergent validity.

Further, the factor loadings can be regarded as an important index for examining the convergent validity of a construct (Hair et al, 2010). High loadings on a factor indicate that these observed items converge on a common point, the latent construct. A good rule of thumb is that standardized loading estimate should be 0.5 or greater and ideally 0.7 or higher (Hair et al., 2010). From reviewing previous factor analysis results, factors loadings of each item in these three factors are all greater than 0.5, which indicates these items are adequate for formatting these constructs.

Table 5.3 also shows the item reliability which refers to the R^2 value in the observed variables that are accounted for by the latent variables. Therefore, R^2 values are deemed as a measurement of reliability of a particular observed variable (item) (Koufteros, 1999). R^2 gained values of exceeding 0.3 typically provide sufficient evidence of acceptable reliability (Carr and Pearson, 1999; Hair et al., 2010).

Latent item	Unstandardized	Completely	Standard	Critical	R^2
variable	factor loading	standardized	error ^a	Ratio ^b	
		factor loading			
ξ1 Long-term Orienta	ation				
LTO2	1.228	0.702	0.104	11.751	0.704
LTO3	1.000 ^c	0.839	-	-	0.493
ξ2 Uncertainty Avoid	lance				
UN1	0.921	0.675	0.054	17.037	0.456
UN2	0.743	0.551	0.053	13.966	0.304
UN3	1.285	0.929	0.068	18.934	0.862
UN4	1.000	0.704	-	-	0.495
ξ3 Masculinity					
MAS1	1.165	0.940	0.041	18.109	0.883
MAS2	0.898	0.695	0.054	16.745	0.484
MAS3	0.696	0.613	0.064	17.152	0.376
MAS4	1.000	0.656	2	-	0.430
ξ4 Power Distance	(EE)	(1)			
PD1	1.030	0.641	0.067	15.410	0.411
PD2	1.587	0.760	0.127	12.474	0.578
PD3	1.392	0.767	0.113	12.368	0.589
PD4	1.000	0.536		-	0.387
ξ5 Collectivism					
COL1	0.874	0.675	0.058	15.092	0.446
COL2	1.009	0.551	0.061	16.536	0.662
COL3	0.987	0.929	0.064	15.420	0.578
COL4	1.000	0.704	-	-	0.500

Table 5.3 Parameter Estimate, Standard Errors, Critical Ratios, and R² for Cultural Difference Dimensions

Goodness-of-fit statistics

 χ^2 (109) =290.243, p = 0.000; χ^2 /df =2.663; GFI=0.958; AGFI=0.934; CFI=0.964; RMR=0.028; RMSEA=0.039; TLI=0.950

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 5.3 shows the correlations for the remaining 18 indicators which indicates that all item's R^2 values are greater than 0.3. It implies that all items adopted are adequate for the

measurement model (Carr and Pearson, 1999; Hair et al., 2010). The evaluation of national culture dimensions is therefore established and the modification processes are summarized in Table 5.4.

	Table	e 5.4 Cultu	ral Diffe	rence D	imensio	ns Modi	fication	Process	es
Model	Variable	χ^2	χ^2/df	Р	GFI	AGFI	CFI	RMR	RMSEA
	deleted			value					
Initial		390.440	2.892	0.000	0.951	0.923	0.958	0.032	0.051
Final	LTO1,	290.243	2.663	0.000	0.958	0.934	0.964	0.028	0.039
	LTO4								

Table 5.4 Cultural Difference Dimensions Modification Processes

5.1.1.3 Standardized Residuals and Modification Indices of National Culture Dimensions

A test of the standardized residuals and modification indices further conduct on the basis of the remaining 18 indicators. Table 5.5 reveals the results of final perceived cultural difference model, which found no any pairs of items has standardized residual covariance values greater than the recommended value of 2.58. The modification index (MI) is a measure employed to determine the expected decreases in the Chi-square value that results if a single parameter (fixed or constrained) is free (relaxed) and the model re-estimated, with all the other parameters maintaining their present values (Bagozzi and Yi, 1988; Jöreskog, 1993; Sörbom, 1996; Reisinger and Turner, 1999).

The output of AMOS statistics provides the modifications indices and values of the completely standardized expected changes. As can be seen in Table 5.6, the modification indices of each pair in the perceived cultural difference model are not greater than four. The results indicate that the measurement model can be considered acceptable.

	LTO2	LTO3	COL1	COL2	COL3	COL4	MAS1	MAS2	MAS3	MAS4 UN1	UN2	UN3	UN4	PD1	PD2	PD3	PD4
LTO2	0.00																
LTO3	0.79	0.00															
COL1	-0.25	0.60	0.00														
COL2	0.56	1.59	-0.05	0.00													
COL3	0.79	1.83	0.02	-0.63	0.00												
COL4	-1.09	-1.01	-0.10	0.45	-0.04	0.00											
MAS1	0.61	-1.07	-0.34	1.60	0.95	-1.23	0.00										
MAS2	-0.91	-0.66	0.22	-0.24	-0.58	-1.01	-0.10	0.00									
MAS3	-0.52	-1.66	-0.05	1.24	1.05	0.36	0.31	-0.23	0.00								
MAS4	0.29	0.72	-0.25	0.75	-0.02	-0.23	-0.43	0.13	-0.06	0.00							
UN1	0.59	-0.57	-0.19	0.56	1.32	1.53	.077	0.49	-0.04	0.27 0.00	1						
UN2	-1.32	-1.08	1.24	0.72	-0.68	1.26	-1.20	-1.55	-1.87	-0.26 -0.09	0.00						
UN3	-0.59	-0.46	-0.12	0.40	-0.14	-0.54	-0.99	0.76	-0.64	-0.76 -0.06	-0.42	0.00					
UN4	0.32	1.40	0.13	0.10	0.49	-0.97	-0.30	-0.70	-1.76	0.94 -0.77	0.97	-0.12	0.00				
PD1	2.00	0.66	1.34	0.74	-0.96	-0.91	-1.30	-2.09	-0.01	-1.05 -1.51	-0.47	-0.37	1.20	0.00			
PD2	-1.31	-2.17	-0.73	-0.63	-1.39	1.34	-1.43	1.52	1.17	2.39 1.10	0.35	0.08	-1.06	-0.34	0.00)	
PD3	-1.02	-1.70	0.28	0.16	-1.27	1.81	-2.28	0.04	0.62	0.09 0.66	1.20	0.03	-1.60	-0.23	0.09	0.00)
PD4	1.79	0.74	2.17	1.39	0.72	0.02	-0.77	-2.42	-1.22	-0.66 0.68	0.70	1.35	1.13	0.12	-0.25	-0.20	0.00

Table 5.5 Standardized Residual Covariance (Final model of cultural difference)

To follow the modification index statistic criteria with the completely standardized expected changes in the loading with other latent variables is crucial. The modification index value would show how much the overall model Chi-square value would be reduced by also estimating a loading for specific lambda X to one construct. Modification indices of approximately 4.0 or greater suggest that the fit could be improved significantly be freeing the corresponding path to be estimated (Hair et al., 2010). Table 5.6 shows all modification indices for the measures are smaller than 0.885 and insignificant, indicating the measurement model is adequate (Andersen et al., 1987; Koufteros, 1999).

Further, it is also important to examine the modification index statistic with the completely standardized expected changes in the loading with other latent variables. As regarding the completely standardized expected changes of each item, values of items

exhibiting changes in lambda X greater than 0.3 are deemed as lack of unidimensionality (Kuoftero, 1999).

Items	ξ1	ξ2	ξ3	ξ4	ξ5
	Long-term	Uncertainty	Masculinity	Power	Collectivism
	Orientation	Avoidance	_	Distance	
LTO2	-	0.179	0.098	0.046	0.099
LTO3	-	0.066	0.885	0.043	0.068
UN1	0.023	-	0.235	0.045	0.147
UN2	-0.054	-	0.049	0.030	0.038
UN3	0.062	-	0.038	0.048	0.199
UN4	0.072	-	-0.199	0.038	-0.033
MAS1	0.099	0.055	-	-0.037	-0.099
MAS2	0.047	-0.118	-	-0.025	0.000
MAS3	0.149	0.234	-	-0.023	0.042
MAS4	-0.062	0.021		0.029	0.055
PD1	0.038	-0.142	0.098	5 m () -	0.068
PD2	-0.084	-0.156	0.885	181 -	0.155
PD3	0.290	0.085	0.235		0.832
PD4	0.062	0.221	0.016	-	-0.030
COL1	0.047	0.031	0.667	-0.030	-
COL2	-0.033	0.122	0.435	0.049	-
COL3	0.035	0.242	0.000	0.034	-
COL4	0.000	0.029	0.752	-0.025	-
		621	5211		

Table 5.6 Modification Indices for the Final Model of Perceived Cultural Difference

As can be seen in Table 5.7, the highest completely standardized expected change in lambda X is 0.131 in terms of item COL2 in ξ 2, and this result do not justify an alternative specification. All other changes are reveal values less than 0.15. If modification are made, the model is deemed as cross-validated (i.e. estimated on a separate set of data) before the modified model can be accepted (Anderson et al., 1987, Kouftero, 1999).

Items	ξ1 Long-term	ξ2 Uncertainty	ξ3 Masculinity	ξ4 Power	ξ5 Collectivism
	Orientation	Avoidance	-	Distance	
LTO2	-	0.016	0.038	0.026	0.009
LTO3	-	0.006	0.800	0.010	0.003
UN1	0.002	-	0.201	0.004	0.101
UN2	-0.052	-	0.009	0.000	0.104
UN3	0.032	-	0.012	0.080	0.100
UN4	0.066	-	0.110	0.033	0.001
MAS1	0.089	0.001	-	-0.001	-0.008
MAS2	0.007	0.114	-	-0.021	0.000
MAS3	0.029	0.200		-0.044	0.004
MAS4	0.062	0.020		0.075	0.029
PD1	0.038	-0.071	0.068	71	0.005
PD2	-0.084	0.140	0.005	50	0.112
PD3	0.090	0.064	0.013	-	0.002
PD4	0.032	0.001	0.001	1.1 ÷	0.020
COL1	0.017	0.021	0.062	-0.009	-
COL2	0.006	0.131	0.035	0.004	-
COL3	0.005	0.002	0.000	0.001	-
COL4	0.000	0.009	0.002	-0.020	-

Table 5.7 Completely Standardized Expected Changes in Λ_x in the Final Cultural Difference Model

5.1.1.4 Assessment of Discriminant Validity for Cultural Difference Dimensions

Discriminant validity can be justified by employing structural equation modeling methodology (Bagozzi and Phillips, 1982). Discriminant validity is the extent to which a construct is truly distinct from other constructs (Hair et al., 2010). High discriminant validity provides evidence that a construct is unique and captures some phenomena other measures do not (Hair et al., 2010), which means that individual measured items should represent only one latent construct to avoid the presence of cross-loading problem to discredit CFA goodness of fit (Hair et al., 2010).

In this study, a Chi-square test is initially utilized to examine whether the chi-square value of the unconstrained model is significantly lower than that of the constrained model. Models with significant Chi-square differences suggest the achievement of discriminant validity. According to Koufteros (1999), models are constructed for all possible pairs of latent variables. These models are run: (1) with the correlation between the latent variables free to assume any value at 1.0; and (2) with the correlation between the latent variables free to assume any value. The difference in chi-square values for fixed (for constrained) and free solutions indicate whether a unidimensional model will be sufficient to account for the inter-correlations among the observed variables in each pair of latent variables. A significantly lower (Chi-square) value for the model in which the trait correlations are not constrained to unity will indicate that the traits are not perfectly correlated and that discriminant validity can be inferred (Bagozzi and Phillips, 1982; Anderson et al., 1987; Hair et al., 2010), which means if the fit of the two-construct model is significantly different from that of the one-construct model, then discriminant validity is supported.

For the five cultural difference dimensions (factors), a total of ten different discriminant validity checks are conducted. Table 5.8 depicts that all the differences between the fixed and free solutions in Chi-square values are significant at the p value = 0.05 significance level. The results provided evidence of discriminant validity among the theoretical constructs.

Further, a more rigorous test is to compare the average variance-extracted (AVE) values between any two factors (Hair et al., 2010). The method to identify discriminant validity is employing average variance extracted to compare its values with the squared correlation between constructs. Discriminant validity exists if the items share more common variance with their respective construct than any variance that the construct shares with other constructs (Fornell and Larcker, 1981; Koufteros 1999).

			Pair of Constructs					
			(Φ=1)					
Compared model	χ^2 (d.f. free)	χ^2 (d.f.fixed)	χ^2 difference					
Long-term orientation vs.	148.026(10)	104.586(9)	43.44**					
Uncertainty avoidance								
Long-term orientation vs.	118.888(10)	78.783(9)	40.105**					
Masculinity								
Long-term orientation vs. Power	339.926(10)	147.370(9)	192.556**					
Distance								
Long-term orientation vs.	205.450(10)	93.127(9)	112.323**					
Collectivism								
Uncertainty avoidance vs	295 988(21)	256 539(20)	39 449**					
Masculinity	STUA							
Uncertainty avoidance vs. Power	484.119(21)	290.092(20)	194.027**					
Distance	E1/1	m						
Uncertainty avoidance vs.	305.222(21)	192.819(20)	112.403**					
Collectivism	- FXH	and a second						
Masculinity vs. Power Distance	432.919(21)	247.687(20)	185.232**					
Masculinity vs. Collectivism	256.290(21)	143.136(20)	113.154**					
Power Distance vs. Collectivism	469.379(21)	358.714(20)	110.665**					
Note: ** if χ^2 difference > χ^2 (1), 0.05=3.84								

Table 5.8 Assessment of Discriminant Validity between Cultural Difference Dimensions

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As depicted in Table 5.9, 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. The highest squared correlation is observed between uncertainty avoidance and power distance dimension, which presents a value of 0.362. This is significantly lower than their individual AVE value 0.609. The results demonstrated evidence of discriminate validity for the study variables.

Measures	AVE ^a	Long-term Orientation	Uncertainty Avoidance	Masculinity	Power Distance	Collectivism
Long-term Orientation	0.609	1				
Uncertainty Avoidance	0.635	0.502** (0.252) ^c	1			
Masculinity	0.629	0.582** (0.339)	0.590** (0.348)	1		
Power Distance	0.622	-0.551** (0.303)	-0.602** (0.362)	0.532** (0.283)	1	
Collectivism	0.615	0.412** (0.170)	-0.510** (0.260)	0.510** (0.260)	0.570** (0.325)	1

Table 5.9 Assessment of Average Variance Extracted fo Cultural Difference Model

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)^{2.}

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

c. Squared correlation.

5.1.1.5 Composite Reliability and Variance Extracted Measures of National Culture

Dimensions

Composite reliability indicates that a set of latent construct indicators is consistent in the measurement (Hair et al., 2010). Estimations of the reliability and variance extracted measures for each construct are necessary to evaluate whether the specified indicators sufficiently represent the constructs. This reliability refers to the degree to which a set of two or more indicators shares in their measurement of a construct (Hair et al., 2010). Highly reliable constructs mean those in which the indicators are highly inter-correlated, indicating that these selected indicators are measuring the identical latent construct. The values of reliability range between 0 and 1. As shown in Table 5.10, the composite reliability of the constructs of long-term orientation, uncertainty avoidance, masculinity, power avoidance, and collectivism scales are 0.861, 0.874, 0.871, 0.868, and 0.864, respectively. All measures exceed the suggested level of 0.60 (Bagozzi and Yi, 1998; Hair et al., 2010).

Measures	Mean	S.D.	Composite reliability
Long-term Orientation	3.117	0.844	0.861
Uncertainty Avoidance	3.615	0.794	0.874
Masculinity	3.185	0.665	0.871
Power Distance	3.306	0.660	0.868
Collectivism	3.469	0.955	0.864

Table 5.10 Descriptive Statistics and Composite Reliability for Each National Culture Dimensions

Further, average variance extracted (AVE) is employed to evaluate the composite reliability. The average variance extracted measures the total amount of variance in the specified indicators accounted for by the latent measures. Higher variance extracted values indicate that indicators are truly representative of the latent constructs. The AVE of each measuring construct gains values greater than 0.5 is recommended (Fornell and Larcker, 1981). Table 5.9 shows that the AVE values of uncertainty avoidance have the highest value of 0.635, indicating that 63.5% of the variance in the specified indicators is account for by this construct, while long-term orientation had the lowest value of 0.609, indicating that 60.9% of the variance in the specified indicators is account for by the perceived cultural difference model, all constructs in this model is higher than the recommended value of 0.5 (Fornell and Larker, 1981).

The proposed national culture dimensions are yielded through modification and a string of tests, e.g. the standardized covariance residuals, the modification indices, convergent validity, discriminant validity, composite reliability, and average variance extracted. The results provide evidence that these dimensions are purified and satisfactory for the study.

5.1.2 Confirmatory Factory Analysis of the Initial Transformational Leadership Dimensions

Figure 5.2 shows the hypothesized transformational leadership evaluating dimensions. There are three latent variables contained in the measurement model; i.e. charisma inspiration, individualized consideration, and intellectual stimulation. These latent variables are inter-correlated, as indicated by the two-headed arrows. The 12 observed variables are enclosed in squares. Four observed variables (CI1, CI2, CI3, and CI4) are loaded onto charisma inspiration; four observed variables (IC1, IC2, IC3, and IC4) are loaded onto individualized consideration; and four observed variables (IS1, IS2 IS3, and IS4) are loaded onto intellectual stimulation.

These constructs are analyzed as "scale invariant" during the estimation procedure. Hence, each construct needs to contain more than one variable when conducting examination. Indicators within a construct are treated as standardized for the purpose of making each construct can be compared (Jörekog and Sörbom, 1996; Kouftero, 1999). One of the indicators in each construct (C14, IC4, and IS4) is set to a fixed value of 1.0 to remain the measuring scale invariant (Kouftero, 1999). The statistical criteria (i.e. offending estimates, square multiple corrections, standardized residual covariance, and model fit indices) for model modification decisions are considered (Kouftero, 1999; Min and Mentzer, 2004). Goodness of fit test such as validity, reliability, and unidimensionality can be performed once the proposed model has been established.





Leadership

- CI1: My supervisor clearly transmits his/her mission/vision to me
- CI2: My supervisor makes me proud to work with him/her
- CI3: I admire my supervisor's leadership behavior
- CI4: My supervisor sets high standards for my work
- IC1: My supervisor shows personal concern for me
- IC2: My supervisor supports reasonable opinions from employees
- IC3: My supervisor sets my goals and helps me to achieve them
- IC4: My supervisor expresses his/her appreciation when I do well
- IS1: I deeply feel encouragement from my supervisor
- IS2: My supervisor emphasizes the use of intelligent methods to solve problems on the job
- IS3: My supervisor encourages employees to think about problems in innovative ways
- IS4: My supervisor's encourages employees with a variety of methods

Table 5.11 reveals the results of the initial transformational leadership dimensions. The Chi-square value (χ^2 =260.126, p=0.000) is statistically significant at the 0.05 level of significance, indicating that differences between the model-implied covariance matrix Σ and data-observed S are significant. Referring to other goodness-of-fit indices, $\chi^2/df = 2.797$,

GFI=0.944; AGFI=0.859; CFI=0.953; RMR=0.021; RMSEA=0.080; TLI=0.901, in Table 5.11 suggests that the initial evaluating national culture dimensions are acceptable. However, the results indicate that not all squared correlation values exceed the recommended value of 0.3. The observed variable IC2 gains a squared correlation value (R^2 =0.270) and need to be eliminated. In consideration of the importance for explaining the dimension of charisma inspiration, IC2 (mean= 4.02) is preserved in the model for following examination in this study.

Latent item	Unstandardized	Completely	Standard	Critical	R^2						
variable	factor loading	standardized	error ^a	Ratio ^b							
	S S	factor loading	223								
ξ1Charisma Ir	spiration		201								
CI1	1.227	0.767	0.224	5.485	0.737						
CI2	1.336	0.793	0.082	16.307	0.629						
CI3	1.585	0.846	0.108	14.675	0.690						
CI4	1.000 ^c	0.593	anning and		0.351						
ξ2Individualiz	ed Consideration	BAS									
IC1	1.147	0.742	0.056	17.213	0.550						
IC2	0.832	0.520	0.080	10.350	0.270						
IC3	0.972	0.772	0.087	13.192	0.596						
IC4	1.000	0.705	-	-	0.497						
ξ3Intellectual	Stimulation										
IS1	0.732	0.718	0.037	19.794	0.515						
IS2	0.774	0.634	0.045	17.172	0.402						
IS3	0.845	0.781	0.039	21.874	0.610						
IS4	1.000	0.871	-	-	0.668						

Table 5.11 Parameter Estimate, Standard Errors, Critical Ratios, and R² for the Initial Transformational Leadership Dimensions

Goodness-of-fit statistics

 χ^2 (93) =260.126, P = 0.000; χ^2 /df =2.797; GFI=0.944; AGFI=0.859; CFI=0.953; RMR=0.021; RMSEA=0.080; TLI=0.901

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.

Accordingly, results imply that the initial transformational leadership dimensions need to be modified. The model modification decision is based on the aforementioned statistical criteria (standardized residuals <2.58).

5.1.2.1 Assessment of the Fit and Unidimensionality of the Initial Transformational Leadership Dimensions

The evaluation of the standardized residuals for transformational leadership variables is subsequently conducted. According to the standardized residual matrix shown in Table 5.12, the standardized residual value of 4.89 of the pair (IC4 and CI4) exceeded the cut-off value of 2.58 in absolute terms, and the residual value of CI4 is higher than those of IC4. The item CI4 is therefore eliminated in the revised model. The Chi-square value (χ^2 =94.285, p = 0.000) of the final model is found statistically significant at the 0.05 level of significance.

Table 5.12 Standardized Residual Covariance of Initial Transformational Leadership Variables

	IS1	IS2	IS3	IS4	IC1	IC2	IC3	IC4	CI1	CI2	CI3	CI4
IS1	0.00				-1	B	VC					
IS2	-1.37	0.00										
IS3	0.14	0.59	0.00									
IS4	0.76	0.37	-0.19	0.00								
IC1	0.11	-1.53	0.18	0.61	0.00							
IC2	-1.88	-1.75	-1.44	-1.35	-1.30	0.00						
IC3	-0.68	-1.78	1.07	-0.43	0.07	-0.14	0.00					
IC4	-0.19	-1.78	0.01	0.58	0.35	1.16	-1.34	0.00				
CI1	-0.54	0.41	0.68	0.15	-0.88	-0.93	1.19	-0.58	0.00			
CI2	0.98	-0.49	-1.05	0.19	-0.61	-1.01	-1.05	0.25	0.05	0.00		
CI3	-1.96	-1.53	0.25	0.85	-0.52	-1.72	0.50	-1.23	0.30	-0.27	0.00	
CI4	2.42	-1.08	0.23	1.62	2.62	0.87	2.28	4.89	-1.37	2.20	-0.51	0.00

5.1.2.2 Convergent Validity and Item Reliability of Transformational Leadership Model

Convergent validity of transformational leadership dimensions are subsequently conducted by testing t-values which reveals significant on the factor loading. The t-value is the C.R. presented in the AMOS statistical software, and needs a recommended value of greater than 1.96 or less than -1.96 in absolute terms for the estimation to regards as acceptable (Byrne, 2001; Hair et al., 2010; Koufteros, 1999).

The parameter estimate, standard errors, critical ratios (C.R.), and R² for the final model of transformational leadership are displayed in Table 5.13. The results show that all C.R. values are significant at the 0.05 level, confirming in effect that all the indicators measured the same construct and providing satisfactory evidence of the convergent validity and unidimensionality of each construct (Anderson and Gerbing, 1988). Finally, the results of the final transformational dimensions, shown in Table 5.13 provide an adequate model fit (χ^2 =94.285, p=0.000), indicating that the proposed transformational leadership dimensions are purified and acceptable.

 R^2 values are also employed to measure the reliability of a particular observed variable in transformational leadership constructs. Results, as shown in Table 5.13, reveal that the R^2 values of all items in these three dimensions are greater than the recommended value of 0.3, implying that this model had an acceptable convergent validity. Further, from reviewing factor analysis results, factors loadings of each item in these three factors are all greater than 0.5, which indicates these items are adequate for formatting transformational leadership constructs.

Latent item	Unstandardized	Completely	Standard	Critical	R^2
variable	factor loading	standardized	error ^a	Ratio ^b	
		factor			
		loading			
ξ1Charisma I	nspiration				
CI1	1.372	0.686	0.321	4.281	0.753
CI2	1.184	0.772	0.293	4.042	0.596
CI3	1.000 ^c	0.809	-	-	0.682
ξ2Individuali	zed Consideration	l			
IC1	1.059	0.726	0.065	16.277	0.527
IC2	0.787	0.445	0.087	9.071	0.398
IC3	1.303	0.791	0.106	12.270	0.625
IC4	1.000	0.644	-	-	0.415
ξ3Intellectual	Stimulation		2.000		
IS1	0.744	0.737	0.036	20.399	0.544
IS2	0.787	0.648	0.045	17.479	0.420
IS3	0.840	0.779	0.038	22.120	0.607
IS4	1.000	0.815	11111	1	0.664

Table 5.13 Parameter Estimate, Standard Errors, Critical Ratios, and R2 for the Final Transformational Leadership Dimensions

Goodness-of-fit statistics

 χ^2 (46) =94.285, p = 0.000; χ^2 /df =2.049; GFI=0.978; AGFI=0.924; CFI=0.983; RMR=0.012; RMSEA=0.073; TLI=0.952

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.

Results shown in Table 5.13 reveals the correlations for the remaining 11 indicators which indicates that all item's R^2 values are greater than 0.3., which implies that all items remained are adequate for the measurement model. The final model for evaluating transformation leadership is therefore established and the model modification processes are summarized in Table 5.14.

	Table 5.14 Transformational Leadership Dimensions Modification Process							
	Variable	χ^2	χ^2/df	P value	GFI	AGFI		
Model	deleted							
Initial		260.126	2.797	0.000	0.944	0.859		
Final	CI4	94.285,	2.049	0.000	0.978	0.924		

 Table 5.14 Transformational Leadership Dimensions Modification Process

5.1.2.3 Standardized Residuals and Modification Indices of the Transformational Leadership Dimensions

Table 5.15 shows the standardized residuals matrix of the transformational leadership final variables. Results indicate that the pair (CI3 and IS1) had the highest standardized residual value (value = 1.85) among each pair of measuring items. Moreover, item CI3 on average had highest residual values. The results indicate that all pairs of standardized residuals are lower than the threshold value of 2.58.

Tab	le 5.15	Stand	lardized	F	lesidual	(Covariances	of	Transt	format	ional	Leac	lersh	ip `	Vari	iab	les
-----	---------	-------	----------	---	----------	---	-------------	----	--------	--------	-------	------	-------	------	------	-----	-----

	IS1	IS2	IS3	IS4	IC1	IC2	IC3	IC4	CI1	CI2	CI3
IS1	0.00			25		RI	35				
IS2	-0.70	0.00			13	F-1)	00				
IS3	-0.85	-0.43	0.00								
IS4	0.44	0.37	-0.22	0.00							
IC1	0.08	0.06	0.36	0.74	0.00						
IC2	-1.03	-1.20	-0.36	-0.61	0.34	0.00					
IC3	-0.77	-0.60	0.82	-0.76	0.08	0.02	0.00				
IC4	0.62	-0.34	-0.45	0.04	0.49	0.09	-0.29	0.00			
CI1	-0.79	0.16	0.67	0.07	-0.94	0.59	0.67	-0.47	0.00		
CI2	0.86	0.22	-0.94	0.23	-0.22	1.17	0.38	0.44	-0.20	0.00	
CI3	1.85	-1.44	0.64	1.17	-0.18	-0.18	0.39	-0.26	-0.11	0.16	0.00

The modification index (MI) is subsequently employed to determine the expected decreases in the Chi-square value that result if a single parameter (fixed or constrained) is freed (relaxed) and the model is re-estimated, with all the other parameters maintaining their present values (Bagozzi and Yi, 1988; Joreskog and Sorbom, 1996; Reiginger and Turner, 1999). The modifications indices and the values of the completely standardized expected changes are provided from using the analysis results of AMOS statistics software.

As can be seen in Table 5.16, the modification indices of items, No items in these three latent constructs ξ 1(charisma inspiration), ξ 2(individualized consideration), and ξ 3(intellectual stimulation) are greater than 4.0 and are significant. These findings indicate that the measurement model is considered to be acceptable. To follow the modification index statistic with the completely standardized expected changes in the loading with other latent variables is rather crucial. Items exhibiting change in lambda X with other latent variables is important. Values of lambda X, which are greater than 0.3, are deemed as lacking of unidimensionality (Koufteros, 1999).

			r r
	ξ1	ξ2	ξ3
	Charisma Inspiration	Individualized Consideration	Intellectual Stimulation
CI1	-	-0.026	0.018
CI2	-	0.187	0.015
CI3	-	0.162	-0.022
IC1	0.089	-	0.162
IC2	0.097	-	0.049
IC3	0.144	-	-0.020
IC4	-0.089	-	0.066
IS1	0.059	-0.047	-
IS2	-0.072	0.078	-
IS3	0.029	0.065	-
IS4	0.110	0.145	-

 Table 5.16 Modification Indices for the Transformational Leadership Dimensions

Table 5.17 shows the highest completely standardized expected change in lambda X is 0.187 for item CI2 in ξ^2 (Individualized Consideration). This result did justify an alternative specification. Results indicate that all completely standardized expected changes are below 0.3, suggesting that the model should be cross validated and the modified model could be accepted (Anderson et al., 1987; Koufteros, 1999).

Table 5.17 Completely Standardized Expected Change in Ax in Transformational Leadership Dimensions

	ξ1	ξ2	ξ3
	Charisma Inspiration	Individualized Consideration	Intellectual Stimulation
CI1	-	-0.097	0.005
CI2	-	0.065	0.003
CI3	-	0.039	-0.001
IC1	0.029	唐	0.060
IC2	0.023		0.119
IC3	0.020	が変に	-0.023
IC4	-0.032	~13111	0.030
IS1	0.021	0.003	
IS2	0.046	0.080	-
IS3	0.023	0.042	-
IS4	0.072	0.053	-

5.1.2.4 Assessment of Discriminant Validity for Transformational Leadership Dimensions

Discriminant validity is evaluated by constraining the correlation parameters between construct to 1.0. The difference in Chi-square values for fixed (for constrained) and free solutions indicate whether a unidimensional model is sufficient to account for the intercorrelations among the observed variables in each pair. A significantly lower chi-square value for the model in which the trait correlations are not constrained to unity will indicate that the traits are not perfectly correlated and that discriminant validity can be inferred (Bagozzi and Phillips, 1982; Anderson et al., 1987; Bagozzi et al., 1991).

For the three transformational leadership constructs (factors), three separate discriminant validity examinations are conducted. Table 5.18 shows that all the Chi-square differences between the fixed and free solutions in Chi-square are significant at the p=0.05 significance level. The result provided evidence of discriminant validity for the transformational leadership variables.

Table 5.18 Assessment of Discriminant Validity between Transformational Leadership Dimensions

Compared model	am	Ĩ.	Pair of Constructs (Φ=1)	
	χ^2 (d.f)	$\chi^2(d.f.)$	χ ² difference	
Individualized Consideration vs.	764 821(15)	602 601(14)	161 220**	
Charisma Inspiration	704.831(13)	003.001(14)	101.230	
Individualized Consideration vs.	28/ 121(15)	370.022(14)	12 100**	
Intellectual Stimulation	384.121(13)	370.933(14)	15.100	
Charisma Inspiration vs.	651 526(21)	506 552(20)	57 07/**	
Intellectual Stimulation	034.320(21)	390.332(20)	37.974	
2 2 2	<u>.</u>			

Note: ****** if χ^2 difference $>\chi^2_{(1, 0.05)} = 3.84$

Further, discriminant validity is to compare the average variance-extracted values for any two constructs to compare its values with the squared correlation between constructs. As depicted in Table 5.19, the AVE for a construct is considered substantially higher than the squared correlation between the construct and all other constructs. The highest squared correlation is observed between charisma inspiration and intellectual stimulation dimension, which presents a value of 0.372. This is significantly lower than their individual AVE value of 0.645 and 0.532, respectively. Evidence of discriminant validity is therefore provided by the AVE method. The results proposed evidence of discriminate validity for the study variables of transformational leadership.

Measures	AVE ^a	Charisma	Individualized	Intellectual
		Inspiration	Consideration	Stimulation
Charisma	0.645	1		
Inspiration				
Individualized	0.573	0.577**	1	
Consideration		$(0.332)^{c}$		
Intellectual	0.523	0.610**	0.503**	1
Stimulation		(0.372)	(0.253)	

Table 5.19 Assessment of Discriminant Validity for Transformational Leadership Dimensions

Note: a. Average variance extracted (AVE) = (sum of squared standardized loadings)/ [(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)².

- b. * correlation is significant at the 0.01 level; ** correlation is significant at the 0.01 level.
- c. Squared correlation

5.1.2.5 Composite Reliability and Variance Extracted Measures of the Transformational

Leadership Dimensions

Composite reliability is subsequently utilized to measure the consistency of a set of latent construct indicators. The reliability evaluates the degree to which a set of two or more indicators shares in the same measurement of a construct. High reliable constructs indicate that variables selected in a measurement measure the identical latent construct. Computations for each measure of transformational leadership are shown in Table 5.20. The composite reliability of the constructs of charisma inspiration, individualized consideration, and intellectual stimulation scales are 0.846, 0.842, and 0.813, respectively. All constructs exceeded the recommended level of 0.60 (Hair et al., 2010). These results

provided evidence that the measurement model of transformational leadership is satisfactory.

The variance extracted values for each measure displayed in Table 5.19 shows that intellectual stimulation had the lowest value of 0.523, indicating that 52.3% of the variance in the specified indicators is accounted for by the construct, while charisma inspiration dimension had the highest value of 0.645 indicating that 64.5% of the variance is accounted for by the construct. No constructs with variance-extracted values are lower than the recommended level of 0.5, which deems as acceptable criterion (Fornell and Larcker, 1981). These findings suggest that overall results of the goodness-of-fit of the model and the assessment of the measurement model well support the proposed model of transformational leadership which comprised the three dimensions of charisma inspiration, individualized consideration, and intellectual stimulation.

Table 5.20 Descriptive Statistics and Composite Reliability for Each Transformational leadership Dimension

Measures	Mean	S.D.	Composite Reliability
Charisma Inspiration	3.930	0.617	0.846
Individualized Consideration	3.751	0.677	0.842
Intellectual Stimulation	3.817	0.765	0.813

Hence, the final model of transformational leadership is yielded through modification and a string of tests, e.g. the standardized covariance residuals, the modification indices, convergent validity, discriminant validity, composite reliability, and variance extracted. The results provided evidence that the revised model is purified and satisfactory for the study.

5.1.3 Confirmatory Factory Analysis of the Job performance

Figure 5.3 displays the hypothesized model of employees' job performance. Two latent

variables are adopted in the measurement model, namely task performance and contextual performance. These latent variables are inter-correlated, as indicated by the two-headed arrows. Ten observed variables are selected in squares. Five observed variables (TP1, TP2, TP3, TP4, and TP5) are loaded onto task performance. Another five observed variables (CP1, CP2, CP3, CP4 and CP5) are loaded onto contextual performance.



Figure 5.3Path Diagram Representing the Measurement Model of Job Performance

- TP1: My foreign supervisor thinks I am one of the most efficient colleagues
- TP2: My foreign supervisor thinks my work quality is excellent
- TP3: My foreign supervisor acknowledges my performance
- TP4 I can finish any work assigned by my foreign supervisor on schedule
- TP5: I actively learn specific job skills and knowledge suggested by foreign supervisor
- 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: I like to cooperate with my foreign supervisor
- CP4: My foreign supervisor acknowledges my work efficiency
- CP5: I can quickly respond to client concerns that are proposed by my foreign supervisor

To maintain the scale invariant, each loading coefficient in each construct (task and contextual performance) is set to a fixed value of 1.0 (Koufteros, 1999; Hair et al., 2010). The statistical criteria such as offending estimates, square multiple corrections, standardized residual covariance, and model fit indices are utilized for model modification decisions in this study. Examinations of validity, reliability, and unidimensionality are to be performed once the measuring model has been established

Table 5.21 displays the results of the model of job performance. The Chi-square value $(\chi^2 \ (11) = 29.443, P=0.00)$ is statistically significant at the 0.05 level of significance, indicating that differences between the model-implied covariance matrix Σ and data-observed S are not reveal significantly large.

Table 5.21 Parameter Estimate, Standard Errors, Critical Ratios, and R2 for the InitialModel of Job Performance

Latent item	Unstandardized	Completely	Standard	Critical	R ²
variable	factor loading	standardized	error ^a	Ratio ^b	
		factor loading		ŧ.	
ξ1Taxk Perfo	rmance	nt- 23	had Some and		
TP1	0.679	0.743	0.041	16.545	0.552
TP2	0.756	0.755	0.046	16.716	0.570
TP3	0.775	0.632	0.050	14.998	0.400
TP4	0.745	0.451	0.057	10.190	0.303
TP5	1.000 ^c	0.789	_ ^c	-	0.623
ξ2Contextual	Performance				
CP1	1.041	0.649	0.038	16.993	0.404
CP2	1.215	0.731	0.071	17.107	0.534
CP3	1.460	0.930	0.082	17.875	0.864
CP4	1.071	0.603	0.074	14.554	0.364
CP5	1.000	0.654	-	-	0.428

Goodness-of-fit statistics

 χ^2 (11) =29.443, p = 0.002; χ^2 /df =2.677; GFI=0.992; AGFI=0.960; CFI=0.994;

RMR=0.007; RMSEA=0.048; TLI=0.976

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.

A number of goodness of fit indices has been recommended to assess the fit and unidimensionality of the measurement model (Bagozzi and Yi, 1998; Koufteros, 1999). Table 5.21 shows that the goodness-of-fit index (GFI) and comparative fit index (CFI) have a value of 0.992 and 0.994, respectively. Both measures of incremental fit all exceed the recommended level of 0.9. The adjusted goodness-of-fit (AGFI) is 0.960, also exceed the recommended level of 0.90; thus, this measure could be marginally accepted. In addition, the root mean residual (RMR) and the root-mean-square error of approximation (RMSEA) are 0.007 and 0.048, respectively, both below the threshold level of 0.05. The normed Chi-square (χ^2 /df) also has a value of 2.677. This fell well within the recommended range for model parsimony (Hair et al., 2010). The results also indicate that all squared correlation values exceed the recommended cut-off value of 0.3, which implied that the initial model is adequate for job performance and does not need to be modified. Accordingly, the various overall goodness-of-fit measures for the model provide sufficient support for the results to be deemed as an acceptable representation of the hypothesized constructs. The test of validity, reliability, and unidimensionality are discussed and described below.

5.1.3.1 Assessment of the Fit and Unidimensionality of the Job Performance Dimensions

An inspection of the standardized residuals is subsequently conducted. According to the standardized residual matrix shown in Table 5.22, the residual value of each items in task and contextual performance are contained. The model modification decision is based on the aforementioned statistical criteria (standardized residuals <2.58).

Results of examining the standardized residual matrix indicate that the pair (TP3 and CP5) had the highest standardized residual value (value = -2.21). All paired items with

values are less than the recommended cut-off value of 2.5 in the model, which indicate that the proposed model is purified and acceptable.

	CP1	CP2	CP3	CP4	CP5	TP1	TP2	TP3	TP4	TP5
CP1	0.00									
CP2	-0.03	0.00								
CP3	0.12	-0.01	0.00							
CP4	0.10	-0.03	0.15	0.00						
CP5	0.24	0.00	0.09	0.18	0.00					
TP1	-0.91	-0.19	-0.56	-1.12	-1.26	0.00				
TP2	-0.08	0.01	-0.05	-0.05	-0.08	0.28	0.00			
TP3	-0.11	0.20	-0.65	-0.26	-2.21	0.72	0.12	0.00		
TP4	0.29	0.03	-0.14	-0.57	-2.16	0.17	0.10	0.04	0.00	
TP5	0.76	0.11	0.60	0.81	0.82	0.00	-0.24	0.55	0.13	0.00

Table 5.22 Standardized Residuals for Job Performance Variables

5.1.3.2 Convergent Validity and Item Reliability of Job Performance

Convergent validity of job performance is subsequently conducted by examining statistical significance of t-values on the factor loading. The parameter estimate, standard errors, critical ratios (C.R.), and R^2 for the proposed model of job performance are displayed in Table 5.21. The results show that all C.R. values are significant at the 0.05 level, confirming in effect that all the indicators measured the same construct and providing satisfactory evidence of the convergent validity and unidimensionality of each construct (Anderson and Gerbing, 1988). R2 values are also employed to measure the reliability of a particular observed variable in the construct of job performance. As revealed in Table 5.21, all items have R^2 values above 0.3 provide evidence of acceptable reliability in the construct implying that this model had an acceptable convergent validity.

Further, the factor loadings for each job performance dimension are regarded as indices for examining the convergent validity of a construct (Hair et al, 2010). Factor loading values

which are greater than 0.5 are recommended (Hair et al., 2010). From reviewing previous factor analysis results, factors loadings of each item in these two job performance-related factors are all greater than 0.5, which indicates these items are adequate for formatting these two job performance measuring constructs.

5.1.3.3 Standardized Residuals and Modification Indices of Job Performance

The proposed model is subsequently conducted the examination of modification indices for each item. As can be seen in Table 5.23, no items in these two latent constructs $\xi 1$ (task performance), and $\xi 2$ (contextual performance) are greater than 4.0 and significant. These findings indicate that the measurement model is considered to be acceptable. To follow the modification index statistic with the completely standardized expected changes in the loading with other latent variables is rather crucial. Items exhibiting change in lambda X with other latent variables is important. Lambda X with values greater than 0.3 is deemed as lacking of unidimensionality (Koufteros, 1999).

Items	ξ1	ξ2
	Task Performance	Contextual Performance
TP1	-	0.062
TP2	-	0.142
TP3	-	0.156
TP4	-	0.051
TP5	-	0.103
CP1	0.116	-
CP2	0.066	-
CP3	-0.128	-
CP4	0.070	-
CP5	0.017	-

Table 5.23 Modification Indices of Job Performance

Table 5.24 shows the highest completely standardized expected change in lambda X is

0.113 for item CP1 in ξ 1 (Task Perforamnce). This result does justify an alternative specification. Results indicate that all completely standardized expected changes are below 0.3, suggesting that the model should be cross validated and the modified model could be accepted (Anderson, 1987; Koufteros, 1999).

Items	ξ1	ξ2
	Task Performance	Contextual Performance
TP1	-	0.002
TP2	-	0.003
TP3	-	0.004
TP4	-	0.021
TP5	-	0.100
CP1	0.113	1217.61
CP2	-0.034	
CP3	0.019	ある王
CP4	0.019	EN/NM
CP5	0.012	

Table 5.24 Completely Standardized Expected Change inAx Job Performance Model

5.1.3.4 Assessment of Discriminant Validity for the Job Performance

Discriminant validity measures the extent to which the individual items of a construct are unique and do not measure any other constructs (Chen and Paulraj, 2004). The job performance model is urn on each selected pair allowing for correlation between the two constructs and fixing the correlation between the construct at 1.0. A significantly lower chi-square value for the model in which the trait correlations are not constrained to unity will indicate that the traits are not perfectly correlated and that discriminant validity can be inferred (Bagozzi and Phillips, 1982; Anderson et al., 1987; Bagozzi et al., 1991). For the two constructs, one different discriminant validity check (job performance vs. contextual performance) is conducted in this study.

As displayed in Table 5.25, results shows that all the chi-square differences between the fixed and free solutions in Chi-square are significant at the p=0.05 significance level. The result proposed evidence of discriminant validity for the job performance measures.

Table 5.25 Assessment of Discriminant Validity for the Job Performance				
Common ad model	Pair of Constructs (Φ=1)			
Compared model	χ^2 (d.f.)	$\chi^2(d.f.)$	χ^2 difference	
Job Performance vs. Contextual	1364.513(36)	1093.200(35)	271.313**	
Performance				
$N_{24} * * : 6 \cdot 2 : 1: 66 \dots > 2^{2} - 2.04$				

T 11 5 95 4 0.....

Note: ****** if χ^2 difference $>\chi^2_{(1, 0.05)} = 3.84$

Discriminant validity can also be examined using the average variance-extracted values (AVE) for any two constructs to compare its values with the squared correlation between constructs. As can be seen in Table 5.26, the AVE for a construct is considered substantially higher than the squared correlation between the construct and all other constructs. The highest squared correlation is observed between task performance and contextual performance dimension, which presents a value of 0.198. This is significantly lower than their individual AVE value of 0.542 and 0.492, respectively. Therefore, the results propose evidence of discriminate validity for the study variables of job performance.

Table 5.26 Assessment of Discriminant Validity for the Job Performance Model

Measures	AVE ^a	Task Performance	Contextual Performance
Task	0.542	1	
Performance			
Contextual	0.492	0.445**	1
Performance		$(0.198)^{c}$	

Note: a. Average variance extracted (AVE) = (sum of squared standardized loadings)/ [(sum of squared standardized loadings)/ (sum of squared standardized loadings) + (sum of indicator measurement error)]; Indicator measurement error can be calculated as $1-(\text{standardized loading})^{2}$

b. * correlation is significant at the 0.05 level; ** correlation is significant at the 0.01 level

c. Squared correlation.

5.1.3.5 Composite Reliability and Variance Extracted Measures of the Job Performance Measurement Model

Computations for each measure of job performance to evaluate composite reliability are shown in Table 5.27. The composite reliability of the constructs of task performance and contextual performance are 0.85 and 0.825, respectively. All constructs attended the recommended level of 0.70 (Hair et al., 2010). These results provide evidence that the measurement model of job performance is adequate.

Further, the variance extracted values for each measure displayed in Table 5.26 shows that contextual performance has value of 0.492, indicating that 49.2% of the variance in the specified indicators is accounted for by the construct, which is slightly lower than the recommended level of 0.5 (Fornell and Larcker, 1981), while task performance gains value of 0.542 suggesting that 54.2% of the variance in the specified indicators is accounted for the task dimension. These findings suggest that overall results of the goodness-of-fit of the model and the assessment of the measurement model well support the proposed model of job performance which comprised the two dimensions of task performance and contextual performance.

Table 5.27 Descriptive Statistics and Composite Reliability for Each Job Performance Measure

	Mean	S.D.	Composite Reliability
Task Performance	4.064	0.550	0.855
Contextual Performance	4.272	0.526	0.825

5.2 Hierarchical Regression Analysis and Hypotheses Testing

After constructing and examining the measurement models for each construct, the results reveal that the scales for the multi-item constructs of perceived cultural difference, transformational leadership and job performance possesses goodness-of-fit of models from indices such as convergent validity, discriminant validity and composite reliability. Hierarchical regression analysis is subsequently conducted to investigate the research hypotheses of this study. Several steps suggested in Cohen and Cohen (1983) and Jaccard et al. (1990) are followed in the analysis. First, the control variable, such as respondent's age, educational level and work experience are entered into the regression (Model A and Model D) (see Table 5.28). Since the control variable can confound the effects of other variables, age is a commonly employed control to account for personal effects that may affect the hypothesized relationships. Further, employee's educational level reflects the degree to which respondents realized the actual meanings of each questions, while a long working years suggests that the respondents have abundant experience to follow leader's instruction and improve personal job performance in the container shipping context (Model A and Model D).

In the second step, the perceived culture difference and transformational leadership variables are entered into the regression to test the effects on each dimension of job performance (Model B and Model E). The evaluation of effects of transformational leaders is treated as a second-order factor structure that contains two layers of latent constructs in this study. Third, the interaction variables of national culture variables and transformational leadership are entered into the regression as a moderator to examine the moderating effects of transformational leadership between perceived national difference and job performance (Model C and Model F). If the interactions between transformational leadership and

perceived cultural difference variables are found to be significant, then there existed evidence to support that there is a significant moderating effect of transformational leadership on the relationships between perceived cultural differences and job performance (Jaccard et al., 1995).

Table 3	.28 Reglessi	on Analysi	s Result (st	andard p c	benncients)	
	Task performance		Contextual Performance			
	Model A	Model B	Model C	Model D	Model E	Model F
Control Variables						
Age	0.067	0.055	0.024	0.025	-0.013	-0.621
Education 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
Main effects			20			
Long-term		0.171**	0.074*	28	0.244**	0.109*
Orientation(LTO)		$\overline{Q} =$				
Uncertainty		0.273**	0.169**		0.294**	0.177**
avoidance (UN)		5111	1111			
Masculinity (MAS)		-0.128**	-0.105**		-0.090**	-0.081*
Power distance (PD)	27	-0.103**	-0.073*		-0.148*	-0.128**
Collectivism (COL)		0.183*	0.054*		0.096*	0.082*
Transformational		0.364**	0.286**		0.386**	0.307**
leadership (TL)						
Moderating						
Variables						
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^2	0.019	0.243	0.302	0.022	0.213	0.261

Table 5.28	Regression .	Analysis Result	(standard	β coefficients)
	0	2	\	

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

5.2.1 The Effects of Cultural Difference on Job Performance

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

As shown in Table 5.28, in the initial regression model set, Model A and Model D, only control variables are taken as independent variables, which showed no significant influence on each job performance (task and contextual performance). These results suggest that the control variable, namely age, educational level, and working experience do not significantly influence task and contextual performance in the container shipping context.

Further, in Model B and Model E, variables such as perceived cultural difference and transformational leadership dimensions are entered into the second regression set to test the effects on task and contextual performance, respectively. The results show that long-term orientation (β =0.171, P<0.01), uncertainty avoidance (β = 0.273, P<0.01), masculinity (β = -0.128, P<0.01), power distance (β = -0.103, P<0.01), collectivism (β = 0.183, P<0.05), and transformational leadership (β = 0.364, P<0.01) are all significant in Model B (task performance). Accordingly, research hypotheses H1a, H2a, H3a, H4a, H5a, and H6a are supported in this study. In addition, results indicate that variables such as long-term orientation (β =0.244, P<0.01), uncertainty avoidance (β = 0.294, P<0.01), masculinity (β = -0.090, P<0.01), power distance (β = -0.148, P<0.01), collectivism (β = 0.096, P<0.05), and transformational leadership (β = 0.386, P<0.01) are all revealed significant to contextual performance in Model E. Hence, research hypotheses H1b, H2b, H3b, H4b, H5b, and H6b

are also supported in this study.

In general, the results indicate that perceived cultural difference with respect to long-term orientation, uncertainty avoidance, and collectivism are positively associated with job performance (task and contextual performance), whereas the perceived differences of national culture with respect to power distance and masculinity are negatively related to job performance in terms of task and contextual.

The results also indicate that perceived cultural difference and transformational leadership influence employees' job performance in the context of container shipping companies. The results suggested that transformational leadership had a positive influence on employee's job performance in term of task (β =0.364, P<0.01) and contextual (β =0.386, P<0.01), which is consistent with the previous studies of Jung and Avolio, (1999), Kuchinke (1999), Dickson et al. (2003), and Scandura and Dorfman (2004).

5.2.2 Moderating effects of Transformational Leadership and Hypotheses Testing Results

The third regression model set, Model C and F, considers the moderating effect of transformational leadership. Regarding the moderating effect of transformational leadership, on task performance and contextual performance, the interaction between long-term orientation and transformational leadership is positive and significant (β =0.123, P<0.01) and (β =0.163, P<0.01). To present the moderating effect, this study graphically shows the effects on task and contextual performance for two levels of transformational leadership; "low": minus one standard deviation from the mean, and "high": plus one standard deviation from the mean. Figure 5.4 and Figure 5.5 displays the plot of the interaction between these two variables. Therefore, hypothesis H11a and H11b is supported in this study.




Figure 5.5 The Effect of Long-term Orientation on Contextual Performance by the Level of Transformational Leadership

Consistent with hypothesis H11a and H11b, Figure 5.4 and Figure 5.5 shows a higher level performance with high transformational leadership is when long-term orientation is also high. This reveals that employees perceiving a high level of long-term orientation are associated with high task and contextual performance when transformational leadership is high rather than low.

Regarding the relationship between uncertainty avoidance and transformational leadership, the moderating effects on task and contextual performance are positive and significant (β =-0.242, P<0.01) and (β =-0.257, P<0.01). Hypotheses H8a and H8b are supported in this study. As shown in Figure 5. 6 and Figure 5.7, results indicate that a higher level performance with high transformational leadership is when uncertainty avoidance is also high. This suggests that employees perceiving a high level of uncertainty avoidance are associated with high task and contextual performance when transformational leadership is high rather than low.



Figure 5.6 The Effect of Uncertainty Avoidance on Task Performance by the level of Transformational Leadership



Figure 5.7 The Effect of Uncertainty Avoidance on Contextual Performance by the Level of Transformational Leadership

As shown in Model C and Model F for the relationship between masculinity and job performance, the effects on task and contextual performance are negative and significant (β =-0.065, P<0.05) and (β =-0.066, P<0.05). Hypotheses H10a and H10b are also supported in this study.



Figure 5.8 The Effect of Masculinity on Task Performance by the Level of Transformational Leadership



Transformational Leadership

In consideration of moderating effect of transformational leadership, as plotted in Figure 5.8 and Figure 5.9, a higher level performance with high transformational leadership is when masculinity is at lower level. This suggests that the negative effects of masculinity on job performance can be decreased when transformational leadership is at high level.

Regarding the relationship between power distance and job performance, the effects on task and contextual performance are revealed negative and significant (β =-0.056, P<0.05) and (β =-0.102, P<0.01) (see Figure 5.10 and Figure 5.11). Hypotheses H7a and H7b are supported in this study. As shown in Figure 5.10 and Figure 5.11, the moderating effects between these two variables are displayed. Results suggest that a higher level performance with high transformational leadership is when power distance is at lower level. This indicates that the negative effects of power distance on job performance can be decreased when transformational leadership is at high level.



Figure 5.10 The Effect of Power Distance on Task Performance by the level of Transformational Leadership



Figure 5.11 The Effect of Power Distance on Contextual Performance by the Level of Transformational Leadership

Further, as seen in Model C and Model F, the results indicate the interaction effects of collectivism and transformational leadership are positively associated with task performance (β =0.101, P<0.01) and contextual performance (β =0.148, P<0.01). Thus, H9a and H9b are

supported in this research. As displayed in Figure 5. 12 and Figure 5.13, results indicate that a higher level performance with high transformational leadership is when collectivism is also high. This reveals that employees perceiving a high level of collectivism are associated with high task and contextual performance when transformational leadership is at high level.

The regression results suggest that transformational leadership mitigates the negative influence of power distance and masculinity, whereas it facilitates the positive effects of long-term orientation, uncertainty avoidance and collectivism on employees' job performance (task and contextual). All hypotheses are supported in this study.



Figure 5.12 The Effect of Collectivism on Task Performance by the Level of Transformational Leadership



Figure 5.13 The Effect of Collectivism on Contextual Performance by the Level of Transformational Leadership

5.3 Summary

This chapter has primarily presented the empirical results of confirmatory factor analysis and statistical analysis. The results reveal that (1) cultural difference are comprised five dimensions, i.e. long-term orientation, uncertainty avoidance, masculinity, power distance, and collectivism. This finding is consistent with previous study (Nakata and Sivakumar, 1996; Hofstede, 2001; Kirman, 2006; Tsai, 2009; Lu et al., 2012). (2) Three transformational leadership dimensions, namely, charisma inspiration, individualized consideration, and intellectual stimulation are also examined. The results is consistent with prior studies (Bass, 1990); (3) Job performance consists of two dimensions, i.e. task performance and contextual performance, which are employed as dependent variables in this study; (4) The results of hypotheses testing reveal that all perceived national culture and transformational leadership variables have significant effects on job performance, and (5) transformational leadership plays moderating roles between national culture dimensions and job performance. In the final chapter, the conclusions drawn from the results, theoretical and practical findings, contributions of this study, the implication for practitioners and managers in container shipping companies as well as limitation and future research suggestions will be introduced in the next chapter.



CHAPTER 6 Conclusions and Implications

In the final chapter, five sections are discussed by summarizing the primary study findings. Section 6.1 summaries the theoretical and empirical findings drawn from this study. Section 6.2 details the contributions of this study from both methodological and empirical perspectives. Section 6.3 states a variety of implications of the findings in this thesis for container shipping practitioners. Section 6.4 reveals the limitations of the study, suggestions, and directions for future research areas are also discussed.

6.1 Conclusions

The objective of this study is to examine the relationship between cultural differnce and employee job performance as well as the moderating effects of transformational leadership in the context of container shipping companies. The main findings are briefly summarized below according to the study's six primary research objectives as follows:

The results reveal that the most agreed upon attributes of perceived cultural differences are related to the uncertainty avoidance-related dimension. The results indicate that employees believe that their foreign managing directors prefer to work while abiding by company rules. Clear and definite regulation is important to ensure good organizational performance from the perspective of foreign managing directors. It is also important to note that there was less agreement regarding the perception of national culture attributes, as indicated by the masculinity-related dimension, by employees who work for container shipping companies.

Further, with respect to transformational leadership, all the measurement items were

Objective 1: <u>To recognize overseas employee perceptions of national culture,</u> <u>transformational leadership, and job performance</u>.

perceived with high levels of agreement. The item "I admire my supervisor's leadership behavior." gained the highest mean score in the questionnaire. Results of this measurement indicate that employees recognize the importance of transformational leadership from foreign managing directors.

In addition, based on employees' perceived level of agreement with job performance, it is interesting to note that the three most agreed upon measurement items were related to contextual performance-related measures. These three items included "I like to cooperate with my foreign supervisor"; "I can work independently to finish tasks assigned by my foreign supervisor", and "I can quickly respond to client concerns that are proposed by my foreign supervisor".

Objective 2: To examine perceived cultural differences between employees and foreign managing directors based on employee perceptions in the container shipping context.

This study compares the perceived cultural difference between employees and their foreign managing directors based on Hofstede's national culture dimensions. The result indicated differences with regard to each perceived cultural difference dimension, which suggested that the cultural differences exist between employees and foreign managing directors from the perspective of employees.

Considering all the employees, the results of the comparison of the employees' level of agreement in regard to the masculinity and power distance dimension tended to have higher mean scores than those of their foreign managing directors, while employees had lower mean scores than those of foreign managing directors in the uncertainty avoidance, collectivism, and long-term orientation dimensions. This indicates that employees perceive a higher difference with regard to power distance and masculinity and a lower difference with regard to uncertainty avoidance, collectivism, and long-term orientation as compared to their foreign managing directors.

Objective 3: <u>To compare the perceived cultural difference between employees and</u> <u>foreign managing directors according to employee nationality, religious</u> affiliation, and job title.

Respondents from the UK, Germany, and the Netherlands had their highest difference mean scores in the dimension of collectivism, which indicates that employees from these nations perceive their foreign managing directors to be more collective-oriented. Hofstede (1980, 2001) revealed that employees in these countries have tended to gain higher national cultural scores in the area of individualism. These results are consistent with the findings of Smith et al. (2002) and House (2004), who contend that people from western-type cultures are viewed as more individualist-oriented compared to those with an eastern-type culture. These results imply that foreign managers with highly collectivist cultures may facilitate their employees' work performance as a result of this emphasis. It is expected that foreign managing directors' emphasis on achieving collective goals will be more prevalent when perceived cultural orientation is more collectivist. Belgium's respondents had the highest mean score in the long-term orientation dimension, which implies that these employees perceive their supervisors to have high levels of long-term orientation. Hofstede's (2001) investigational report also indicated that employees from Belgium had relatively lower long-term orientation in regard to their national cultural scores.

As for respondents from China (Mainland China), uncertainty avoidance is rated as showing the most variance in the national culture dimension from their foreign managing director. This implies that employees from China are less concerned about the importance of conducting their work following a precise and definite set of company rules as compared to their superiors (Smith et al., 2002; Casimir and Waldman, 2007; Dong and Liu, 2010). Thus, foreign managing directors assuming the responsibility to maintain service quality and organizational performance are suggested to set clear and definite job regulations for these employees. Thus, foreign managing directors with higher level of uncertainty avoidance culture are characterized as oriented toward stability and thus may have a positive impact on employee job performance

While comparing employees' perceptions of the national culture dimensions according to their religion affiliation, the results indicate that employees with Catholic and Christian religious affiliation to have the highest difference in mean scores on the dimensions of uncertainty avoidance. These results infer that employees with western religious beliefs prefer definite regulations from their foreign managing directors. As regards to Buddhism, employees had the highest mean scores on the dimension of power distance. Foreign managing directors may try to decrease the influence of the hierarchical relationship existing in the organization in the case of employees who are Buddhists. Taoist employees had the highest difference mean scores in the collectivism dimensions. Foreign managing directors are suggested to facilitate collective-oriented leadership behavior, which may have positive effects on the job performance of Taoist employees. Compared to other groups, research participants without any religious affiliation had the highest difference in mean scores in the dimension of masculinity. Foreign directors therefore need to decrease the impacts resulting from masculinity-related behaviors.

Further, the comparison according to employee job title indicates employee perceptions of the cultural dimensions of power distance and uncertainty avoidance to be significantly different from those of their foreign managing directors. In addition, employees with supervisory titles had the highest difference in mean scores on power distance. This indicates that employees with supervisory title are intensely and pervasively concerned about the influence of hierarchy. General employees (e.g. clerks) had the highest difference in scores in the dimension of uncertainty avoidance, which infers that they regard complete and clear company regulations provided from their foreign managing directors to be important for their work.

Objective 4: To explore the relationships between national culture and job performance in the container shipping context.

The results indicate that national culture in terms of long-term orientation, uncertainty avoidance, and collectivism are positively associated with job performance, whereas the cultural dimensions with respect to power distance and masculinity are negatively related to job performance. Accordingly, the hypotheses that posit effects of national culture on job performance proposed in this study are all supported. These results suggest that higher perceived long-term orientation, uncertainty avoidance, and collectivism from foreign managing directors and lower power distance and masculinity will improve employee job performance.

Objective 5: To examine the relationship between transformational leadership and job performance.

The research further explores the relationship between national culture, transformational leadership, and employee job performance in the context of container shipping companies. The results also found transformational leadership to have a positive influence on employee job performance, which is consistent with the previous studies of Jung and Avolio (1999), Kuchinke (1999), Dickson et al. (2003), and Scandura and Dorfman (2004).

Objective 6: To examine the moderating effects of transformational leadership between national culture dimensions and job performance in the container shipping context.

The moderating effects of transformational leadership are subsequently examined. The results reveal the moderating effects of transformational leadership with long-term orientation, uncertainty avoidance, masculinity, power distance, and collectivism all to have significant effects on employee job performance. An important finding of this study is that when the high transformational leadership and long-term orientation are congruent with each other, higher level performance is a result. This implies that in container shipping companies where employees perceive their foreign managing directors to have long-term orientation and transformational leadership, higher job performance can be expected.

Regarding the moderating effects of transformational leadership with uncertainty avoidance, the results indicate that when transformational leadership and uncertainty avoidance are high, employee job performance improves. This implies that in container shipping operations overseas where managing directors have higher transformational leadership and higher uncertainty avoidance it is likely that employee job performance will be improved.

In terms of the moderating effects of transformational leadership on masculinity and job performance, the hypothesis that transformational leadership mitigates the negative relationship between masculinity and job performance is supported. This indicates that high transformational leadership may decrease the negative impact of power distance on job performance. Regarding the moderating effects between power distance and job performance, the results also indicate transformational leadership mitigates the negative impact of power distance on employee job performance in container shipping companies. This implies that higher levels of transformational leadership together with lower power distance leads to better employee job performance.

In addition, results suggested that the moderating effects of transformational leadership between collectivism and job performance are examined. High transformational leadership together with high collectivism improve employee job performance. This implies that employees who perceive foreign managing directors to possess high transformational leadership and high collectivism activities may exhibit improved job performance.

6.2 Contributions of this Study

The container shipping is an international industry. To sustain the individual performance of a culturally diverse workforce, shipping companies are striving to decrease the negative impacts of perceived cultural differences and also to develop effective leader behaviour in such a multinational context. Previous studies have focused national culture-related research on safety behaviour (Håvold, 2007; Tsai, 2009; Lu and Tsai, 2010; Lu et al., 2012). There have been relatively few studies examining whether employee job performance is related to employees' perception of cultural difference in the container shipping business. This study develops a theoretical model to explain the influence of national cultural differences on employee job performance. Several important contributions with regard to cultural difference are extrapolated from the research findings.

First, the study evaluates the mean scores difference between paired sample, which

provides empirical evidence of employee perceptions of cultural difference in the shipping context, and demonstrates the perceived differences between the national culture dimensions between employees (from the UK, Germany, Belgium, Netherland, China (Mainland China), and Taiwan) and their foreign managing directors. This study reveals that perceived cultural differences exist and have practical influence on employee job performance.

Second, this study explores the effects of cultural differences on job performance from the perspective of employee perceptions. Several prior studies on cultural differences have focused on the basis of national culture dimensions (Leung, 1989; Lu et al., 1999; Thomas, 1999; Neelankavil et al., 2000; Thomas and Au, 2002); however, relatively few studies have considered the role of transformational leadership (Kuchinke, 1999; Kirkman et al., 2006) on cultural differences. This study examines the moderating effects of transformational leadership on the relationship between national cultural dimensions and employee job performance, which fills the gap and provides empirical evidence of their importance in container shipping operations.

Third, most previous studies related to cultural difference issues have focused on investigating the relationship with national level and organizational level variables (Hofstede, 2001; House et al., 2004; Kirkman et al., 2006). For example, Thomas (1999) builds a theoretical model to examine the relationship between cultural difference and work group effectiveness using twenty-four multicultural teams, which revealed that group cultural diversity is related to group performance. Neelankavil et al. (2000) found that diverse cultural differences play an important role on managerial performance through investigating employees working in oversea branch offices in four countries (e.g. China, India, Philippines, and the United States). Richards and De Carolis, (2003) indicated national cultural dimensions have a significant influence on firms' joint venture and development activities in an examination comparing a parent company and its overseas subsidiary. This study seeks to examine how employee job performance is affected by national cultural dimensions and transformational leadership. According to the author's knowledge, this study is one of first to examine cultural differences, transformational leadership, and job performance at an individual level in the container shipping context.

Forth, from a methodological perspective, this study verifies the validity and reliability of each evaluating dimension in this study. A hierarchical regression statistical technique is adopted to examine the influence of national culture and transformational leadership on employee job performance. The role of the moderating effect of transformational leadership is subsequently considered as it relates to national cultural dimensions and job performance simultaneously; this is another contribution of this study in regard to the individual performance of employees.

In addition, from a practical standpoint, this study identifies useful transformational leadership items for the purpose of evaluating the moderating effects of certain factors in the context of container shipping. These measures may assist container shipping operators to assess the effects of transformational leader behavior on the part of dispatched managers as well as potentially providing effective guidance for promoting improved employee performance overseas.

6.3 Implications of the Study

Several implications can be drawn from the findings of this study. First, cultural difference is one of the crucial factors affecting employee job performance in container shipping companies that must be taken into consideration by shipping operators. Each dimension of perceived cultural difference seems to be related to a different degree of

agreement by employees in overseas branch office operations. It is necessary for shipping companies to assess the influence of cultural differences. By understanding the cultural differences between employees and their foreign managing directors or shipping managers, who are dispatched overseas, a variety of strategies can be delivered to employees by means of transformational leadership that may in turn facilitate improvements in employee's job performance.

The operational environment of container shipping companies is extremely competitive. Thus, managers need to determine any existing cultural difference between employees and foreign managing directors to reduce any negative influence on employee job performance. The findings of this study also indicate that power distance and masculinity are negatively associated with employee job performance while long-term orientation, uncertainty avoidance, and collectivism are positively associated with employee job performance. These results suggest that a lower perceived difference in power distance and masculinity and a higher perceived difference related to long-term orientation, uncertainty avoidance, and collectivism on the part of employees and foreign managing directors are helpful with regard to improving job performance (task and contextual).

This study also found the employees from the UK, Germany, the Netherlands and Taiwan to perceive the highest differences in the collectivism dimension. Managers dispatched to these countries may wish to create a more collectivist-oriented environment or may wish to become more aware of the importance of group interests (e.g. team work, conflict avoidance with other colleagues) when working with these three countries' employees. Belgium's respondents had the highest perceived difference in regard to the long-term orientation dimension, which means that managers should develop long-term characteristics in Belgium's employees, such as the willingness to sacrifice present pleasure for future success and the establishment of perseverance, in order to improve individual job performance. This finding is consistent with the results of Hofstede (1998, 2001). China's employees demonstrated the highest perceived difference in the dimension of uncertainty avoidance, which indicated that managers may wish to create detailed job specifications and provide specific instructions to China's employees. Further, managers are suggested to hold meetings before employee proceed to work to avoiding their making mistakes.

The research findings of this study also provide support for the effect of religious affiliation on employees, with Buddhists and Taoists placing greater emphasis on organizational hierarchy, which indicates managers should mitigate the negative influence of power distance when leading employees with these two types of religious beliefs. Employees with Catholic and Christian religious affiliation have higher perceived difference with regard to the uncertainty avoidance dimension, which indicates that managers may wish to establish detailed job regulations and collect more work-related information in order for these employees to avoid making mistakes.

More importantly, manager possessing transformational leadership do have positive effects on employee job performance, and this plays a crucial role as a moderator on perceived cultural difference and job performance. This study indicates that transformational leadership interacts with long-term orientation, uncertainty avoidance, masculinity, power distance, and collectivism in regard to their effects on employee job performance. An important finding indicates that transformational leadership can decrease the negative effects of power distance and masculinity, and reinforce the positive effects of long-term orientation, uncertainty avoidance, and collectivism on job performance. This implies high transformational leadership with lower power distance, masculinity or higher long-term orientation, uncertainty avoidance, and, collectivism can improve employees' performance. In such a multinational context as is characteristic of container shipping operations, managers are suggested to use transformational leadership to transcend all the difference in cultural perception and reinforce this influence on employee's job performance.

6.4 Limitations and Directions for Future Research

6.4.1 Limitations

This study develops a conceptual model to examine the effects of national culture on employee job performance and the moderating effect of transformational leadership on the relationship between perceived cultural difference and job performance. However, this study has various limitations, which provide meaningful directions for further research on this field.

First, it was difficult for these researchers to approach employees scattered around the globe. The questionnaires were to be distributed to employees in some distinct countries. The researchers were incapable of explaining the purpose and measuring items to employees in these countries. Employees in these countries may not consider their responses as carefully and objectively as they might have done as a result of bias may have been presented in their responses.

Second, the questionnaire is dispatched and collected by a person in charge (usually with a management title) in each country, which may have an influence on the employees' actual attitude for answering the questionnaire and bias may occur. A random delivery method is recommended for the further research.

Further, 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). A majority of studies have suggested that national cultural differences may be explained in a more comprehensive overview when evaluating the effects of cultural differences (Schwartz, 1994; Inglehart and Barker, 2000; House et al., 2004).

Finally, a self-report method is used when employees answer questions related their job performance, which may led to a bias of over-evaluated their performance. A Common-method variance (CMV) method is suggested for decreasing the bias occurred from a self-report questionnaire.

6.4.2 Directions for Future Research

This study provides suggestions for future research. Researchers can explain how national cultural dimensions influence individual behaviour or attitudes, particularly behaviour or attitudes that may lead to improved employee performance (Hofstede, 2001) in container shipping context. For example, the relationship between culture and entrepreneurship is investigated only at the group/organization and country levels. It is worth conducting empirical studies in future research (Kirkman et al., 2006).

In addition, it would be valuable to study differences in national culture at the group/organization level versus using culture as a national, sociological, group-based construct (Hofstede, 2001; Kirkman et al., 2006). The role of moderators can be further examined between a numbers of inputs. Future research could examine the linkages between national culture, work group resources, human resource practice, and organizational citizen behavior.

This research focuses specifically on employees from the UK, Germany, Belgium, the

Netherlands, China, and Taiwan. It would be valuable to collect data from employees' perception from other countries/societies to obtain a balanced view of the relationship between national culture and job performance in container shipping operations around the globe. It should be noted that Hofstede's (1980) framework has been criticized from both empirical and theoretical perspectives. Researchers may argue that national culture cannot be evaluated only by a statistical model that in all its complexity cannot be captured quantitatively and that a single multinational corporation was used as the basis for Hofstede's conclusions (House et al., 2004). A dynamic view evaluating the effects of culture can be considered in future research (Leung et al., 2005). Other criticism includes the compatibility of national cultural dimensions and heterogeneity within any given country. Further studies may also be conducted using the longitudinal approach to compare the short and long-term effects of national culture on organizational performance (Lu et al., 2007; Tsai, 2009).



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APPENDIX

Dear Madam/Sir,

You are invited to provide your perceptions of national culture and leadership. This questionnaire survey is an attempt to evaluate the perceived national cultural differences between foreign managers and employees. Your opinions are extremely crucial to this research. It would be most appreciated if you would kindly help us by completing the attached questionnaire.

Your participation in this questionnaire survey is entirely voluntary. The information gathered in this survey will be treated in the **strictest confidence** and will be used for research purposes only.

No individual person can be identified from the survey form. This survey will take you about 8 minutes to complete. If you wish to receive a summary of the survey findings, please e-mail us, and we will be happy to send a summary to you when the research is completed. Thank you for your participation in this important research.



Yours sincerely,

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1:	1: Evaluate your level of agreement with the following components of your national cultural perception of yourself. Please put check mark in □ for each item.					
		Strongly disagree				Strongly agree
		1	2	3	4	5
1.	I think employees should not hold too many personal opinions.					
2.	I think any work needs to be instructed by a supervisor.					
3.	I fear having a dispute with my supervisor.					
4.	I believe my supervisor would not consult with other colleagues before making a decision.					
5.	I prefer to do routine work in order to avoid making mistakes.					
6.	I like to discuss my work with someone before doing it.					
7.	I prefer to work with detailed job specifications.					
8.	I would collect more information for decision-making.					
9.	Group interests are more important than personal benefits.					
10.	I prefer team work better than doing work alone.					
11.	I keep harmony and avoid conflict with my colleagues.					
12.	It is important to cooperate with other colleagues.					
13.	Individual career achievement is more important than life quality.					
14.	I strive for any promotional opportunity.					
15.	Individual career achievement is more important than good relationships with co-workers.					
16.	Other than at work, I do not interact with my colleagues.					
17.	I emphasize a long-term outlook rather than immediate benefits.					
18.	I am willing to sacrifice present pleasure for future success.					
19.	I finish my job with perseverance.					
20.	I feel ashamed when I have done something wrong.					

Evaluate your level of agreement with the following components of your national cultural perception of your foreign supervisor. Please put check mark in \Box for each item. Strongly disagree Strongly agree 3 5 1 4 2 1. My supervisor thinks employees should not hold too many personal opinions. 2. My supervisor thinks that employees should work under his/her instruction. 3. My supervisor fears having a dispute with headquarters. 4. Before making decisions, my supervisor never acquires opinions from employees. 5. My supervisor prefers to have routine work in order to avoid making П mistakes. 6. My supervisor likes to get employees' opinions before conducting his/ her work. 7. My supervisor prefers to work with detailed job specifications. П 8. My supervisor collects sufficient information before making decisions. П П 9 My supervisor emphasizes group interests rather than personal benefits. 10. My supervisor prefers to encourage team work. П П П П 11. My supervisor keeps harmony and avoids conflicts with employees. 12. My supervisor thinks it is important to cooperate with employees. П П 13. My supervisor thinks personal career achievement is more important than life quality. 14. My supervisor strives for any promotional opportunity. 15. My supervisor thinks individual career achievement is more important than good relationships with co-workers. 16. Other than at work, my supervisor does not interact with employees. П 17. My supervisor emphasizes a long-term outlook rather than immediate П П benefits. 18. My supervisor is willing to sacrifice present pleasure for future success 19. My supervisor finished his job with perseverance. 20. My supervisor feels ashamed when he/she has done something wrong.

2: Evaluate your level of agreement with the following components of your leadership						
perception of your first line supervisor. Please put check mark	in □ f	for ea	ch ite	m.		
	Strongly disagree				Strongly agree	
	1	2	3	4	5	
 My supervisor makes me proud to work with him/her. I admire my supervisor's leadership behavior. My supervisor clearly transmits his/her mission/vision to me. 						
4. My supervisor sets high standards for my work.						
 My supervisor's encourages employees with a variety of methods. I deeply feel encouragement from my supervisor. My supervisor encourages employees to think about problems in innovative ways 						
 My supervisor emphasizes the use of intelligent methods to solve problems on the job 						
 My supervisor supports reasonable opinions from employees. 						
10. My supervisor shows personal concern for me.						
11. My supervisor sets my goals and helps me to achieve them.						
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 						
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. 	onen	ts of	u your	own	□ □ i job	
 11. My supervisor sets my goals and helps me to achieve them. 12. My supervisor expresses his/her appreciation when I do well. 3: Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. 	onen Strongly disagree	ts of	u your	own	job Strongly agree	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3 : Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. 	onen Strongly disagree	ts of	 your		□ job Strongly agree 5	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3 : Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. 1. My foreign supervisor thinks my work quality is excellent. 	onen Strongly disagree	2	□ your 3		□ job Strongly agree 5	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3 : Evaluate your level of agreement with the following comp performance. Please put check mark in □ for each item. My foreign supervisor thinks my work quality is excellent. I can finish any work assigned by my foreign supervisor on schedule. 	onen Strongly disagree	2	□ your 3		□ job Strongly agree 5	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3 : Evaluate your level of agreement with the following comp performance. Please put check mark in □ for each item. I. My foreign supervisor thinks my work quality is excellent. I can finish any work assigned by my foreign supervisor on schedule. My foreign supervisor thinks I am one of the most efficient colleagues. 	onen Strongly disagree 1	2	□ your 3 □		□ job Strongly agree 5 □ □	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. My foreign supervisor thinks my work quality is excellent. I can finish any work assigned by my foreign supervisor on schedule. My foreign supervisor thinks I am one of the most efficient colleagues. My foreign supervisor acknowledges my performance. I actively learn specific job skills and knowledge suggested by my foreign supervisor. 	Onen Strongly disagree 1	2	 your 3 		job Strongly agree 5	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3 : Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. I. My foreign supervisor thinks my work quality is excellent. I can finish any work assigned by my foreign supervisor on schedule. My foreign supervisor thinks I am one of the most efficient colleagues. My foreign supervisor acknowledges my performance. I actively learn specific job skills and knowledge suggested by my foreign supervisor. I help colleagues after I finish the work assigned by my foreign supervisor. 	Onen Strongly disagree	2 2	 your 3 		Job Strongly agree 5	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3: Evaluate your level of agreement with the following comp performance. Please put check mark in □ for each item. I. My foreign supervisor thinks my work quality is excellent. I can finish any work assigned by my foreign supervisor on schedule. My foreign supervisor thinks I am one of the most efficient colleagues. My foreign supervisor acknowledges my performance. I actively learn specific job skills and knowledge suggested by my foreign supervisor. I can work independently to finish tasks assigned by my foreign supervisor. 	Onen Strongly disagree	2 2	□ your 3 □ □ □ □ □		job Strongly agree 5	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3 : Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. I can finish any work assigned by my foreign supervisor on schedule. My foreign supervisor thinks I am one of the most efficient colleagues. My foreign supervisor acknowledges my performance. I actively learn specific job skills and knowledge suggested by my foreign supervisor. I help colleagues after I finish the work assigned by my foreign supervisor. I can work independently to finish tasks assigned by my foreign supervisor. My foreign supervisor acknowledges my work efficiency. 	Onen Strongly disagree	2 2 0 0 0 0	3 		job Strongly agree 5 1 1	
 My supervisor sets my goals and helps me to achieve them. My supervisor expresses his/her appreciation when I do well. 3 : Evaluate your level of agreement with the following comp performance. Please put check mark in for each item. I can finish any work assigned by my foreign supervisor on schedule. My foreign supervisor thinks I am one of the most efficient colleagues. My foreign supervisor acknowledges my performance. I actively learn specific job skills and knowledge suggested by my foreign supervisor. I help colleagues after I finish the work assigned by my foreign supervisor. I can work independently to finish tasks assigned by my foreign supervisor. My foreign supervisor acknowledges my work efficiency. I like to cooperate with my foreign supervisor. 	onen Strongly disagree 1	2 2	□ your 3 □ □ □ □ □ □		Job Strongly agree 5	

4: Please select each group the option that best describes your current work.

1. What is your age?

□Less than 30 □31~40 □41~50 □51~60 □More than 60

2. What is your position in your company?

□Above manager □Manager/Assistant manager □Director/Vice director □Supervisor/Foreman □Clerk □Other (please specify):_____

3. What is your monthly income (NTD)?

□Less than 30,000 □30,000-50,000 □50,001-100,000 □more than 100,000

4. What is your educational level?

□High school or below □College/University □Post graduate

5. What is your religious affiliation?

□Catholic □Christian □Islam □Buddhism □Taoism □Other (please specify)

- 6. What is the nationality of your foreign supervisor? Please specify
- 7. How long have you been in your current company?
 □Less than 5 years □5-10 years □11~15 years □16~20 years □More than 20 year

各位海運業的先進 您好:



		非常不同意1	不同意2	無意見3	同意4	非常同意 5
1.	我認為員工不應有太多個人意見					
2.	我覺得任何工作都需依據主管的指示進行					
3.	我害怕與主管發生爭執					
4.	我覺得主管進行決策時,不需徵詢其它成員的意見					
5.	我喜歡從事例行性的工作,以避免犯錯					
6.	做事前,我會與人討論後再做決定					
7.	我喜歡作業流程有明確且詳細規定的工作					
8.	我會尋求更多資訊以作為決策參考					
9.	我會為團體而犧牲個人的利益					
10.	我覺得團隊合作比單獨行事來得好					
11.	我會維持團體的和諧,避免與它人衝突					
12.	我認為與同事之間的合作是很重要的					
13.	我認為事業成就比生活品質更重要					
14.	我會儘量爭取升遷的機會					
15.	我覺得個人成就比同僚關係更重要					
16.	我認為沒有必要為同仁工作以外的事情著想					
17.	我較重視長期成就而非短期利益					
18.	我願意犧牲現在的享樂以換取未來的成功					
19.	我會秉持刻苦耐勞的精神完成工作					
20.	做錯事時,我會感到羞愧並勇於認錯					

第一部分:下列是有關於「**文化認知**」的問項,依照您個人看法,依<u>同意性程度</u>在適當的 □中打「✓」。

下 <u>在</u>	列是有關於「 員工對外籍主管文化認知」 的問項,依照您 適當的□中打「✓」。	個人	看法	,依 <u></u>	同意性	程度
		非常不同意 1	不同意2	無意見3	同意4	非常同意 5
1.	我的外籍主管認為員工不應有太多意見					
2.	我的外籍主管覺得任何工作都需依據他的指示進行					
3.	工作上,我的外籍主管害怕與總公司發生爭執					
4.	我的外籍主管進行決策時,不會徵詢其它成員的意見					
5.	我的外籍主管喜歡從事例行性的工作,以避免犯錯					
6.	做事前,我的外籍主管會與人討論後再做決定					
7.	我的外籍主管喜歡作業流程有明確且詳細規定的工作					
8.	進行決策時,我的外籍主管會尋求更多資訊以作為參考					
9.	我的外籍主管會為團體而犧牲個人的利益					
10.	我的外籍主管認為團隊合作比單獨行事來得好					
11.	我的外籍主管會維持團體的和諧,避免與它人衝突					
12.	我的外籍主管認為與同事之間的合作是很重要的					
13.	我的外籍主管認為事業成就比生活品質更重要					
14.	我的外籍主管會儘量爭取升遷的機會					
15.	我的外籍主管認為個人成就比同僚關係更重要					
16.	我的外籍主管較不會為同仁在工作外的事情著想					
17.	我的外籍主管較重視長期成就而非短期利益					
18.	我的外籍主管願意犧牲現在的享樂以換取未來的成功					
19.	我的外籍主管會秉持刻苦耐勞的精神完成工作					
20.	我的外籍主管做錯事時會感到羞愧並勇於認錯					

第二部分: 下列是有關外籍主管「 領導風格 」的問項,依照您	個人	看法	,依后]意性	程度
[土坦由り□丁1] 「」、	非				
	<u>ナ</u> 常				非
	不	不	無		常
	同	同	意	同	同
	意	意	見つ	意	意
1 我會以外籍主管土事為举			<u> </u>	4	<u> </u>
2 我敬佩我的外籍主管的行為					
3. 我的外籍主管會清楚表達他的願景					
4. 我的外籍主管鼓勵員工設立工作標準					
5. 我的外籍主管會用各種方法鼓勵員工					
6. 我會感受到外籍主管的激勵					
7. 我的外籍主管會引導員工使用創新的思考方式					
8. 我的外籍主管強調員工使用智慧的方法克服工作障礙					
9. 我的外籍主管支持員工所提的合理意見					
10. 我的外籍主管會主動關懷員工					
11. 我的外籍主管會協助我達成目標					
12. 我的外籍主管會讚賞工作上表現良好的員工					
第三部分: 下列是有關「工作方面」的問項,依照您個人看法	去,住	5同意	;性程	度在	適當
的□中打「✓」。					
	非				
	常				非
	不一	不	無	-	常
	同立	同	怠日	同立	同
	息 1	息 2	元 3	息 4	息 5
1.外籍主管覺得我的工作品質很好					
2.我能盡速及準時的完成外籍主管交辦的工作					
3.外籍主管認為我是最有生產力的員工之一					
4.我的外籍主管對我的表現極為肯定					
 J. 找 冒 積 極 学 省 外 精 土 官 廷 讓 所 常 的 导 美 知 識 和 技 能 6 尚 北 亡 よ か 箱 + 答 所 六 止 め エ ケ 後 · △ + 私 封 山 甘 山 」 					
U. 面找兀成가稻土省川文代的上作夜,曾土期帛助共他人 7. 此一一一日本书中主人前十年长六人以上在					
1 技能御业芯考业元成外帮+官所公付时4+检		_		_	_
7. 我能掏立芯考业元成外籍主官所交付的任務 8. 我的外籍主管很肯定我的工作效率					
 7. 我能掏立芯亏业元成外籍主管所交付的任務 8. 我的外籍主管很肯定我的工作效率 9. 我與外籍主管能和睦相處 					

第四部分:基本資料

1.	請問 您目前的年齡為何?
	□30歲以下 □31~40歲 □41~50歲□51~60歲 □60歲以上
2.	請問 您目前的職稱為何?
	□經理以上 □經理/協理□處長/課長/股長 □主任/領班
	□專員/辦事員 □其他(請說明)
3.	請問 您的月收入(新台幣)為
	□3萬元以下 □3萬~5萬(含)元 □5萬~10萬(含)元 □10萬元以上
4.	請問 您的教育程度
	□高中職以下 □大學(含專科) □研究所以上
5.	請問 您的宗教信仰偏向於?
	□天主教 □基督教 □伊斯蘭教□佛教□道教□其他(請說明)
6.	請問 您的外籍主管那自那裡? (請說明)
7.	請問您進入公司服務已有幾年?
	□5年以內 □6~10(含)年 □11~15(含)年 □16~20(含)年 □20年以上
	and the second se

「四間」」