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CORPORATE MULTICULTURALISM IN THE GLOBAL AEROSPACE INDUSTRY

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CORPORATE MULTICULTURALISM IN THE GLOBAL AEROSPACE INDUSTRY

A Directed Project

Submitted to the Faculty

of

Purdue University

by

Danielle A. Kaskel

In Fulfillment of the

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of

Master of Science in Aerospace Management

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ABSTRACT

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International aerospace corporations have recently witnessed a rapid growth in the pace of globalization. Increasing global sales, international acquisitions, and production outsourcing to other countries are activities that highlight the critical necessity of effectively conducting business between culturally diverse stakeholders. An awareness of the ways in which culture defines who we are and how that affects interaction with others is crucial to international business success. Geert Hofstede, Andre Laurent, and others have conducted large scale cultural research, which suggests that ignorance of the impact of cultural differences and ethnic variation on interpersonal conduct will be detrimental to the quality of workplace interaction. This investigation employed Hofstede's "Culture in the Workplace Two" (CWQ2), an attitudinal assessment tool, to evaluate the prevalence of Hofstede's dimensions of corporate multicultural awareness among executives in a population of aerospace executives. Analysis of the aggregated CWQ2 survey responses suggests ways to employ corporate multicultural dimension training (CMDT) to promote improvement in multicultural awareness through seminars in corporate settings.

INTRODUCTION

1.1. Introduction

“Globalization is not a fashion, or a temporary development. It is here to stay, and most companies or managers have yet to make their accommodation to it.”

—Jeannet (2000)

Understanding corporate multiculturalism provides the opportunity to increase productivity, maximize company margins, and create efficiency. Some anthropologists suggest that “there is no universal *right way* of being human. *Right way* is almost always *our way*; (and) that *our way* in one society almost never corresponds to *our way* in any other society” (Li & Karakowsky, 2001, p. 1). Similarly “our way” in one corporation almost never corresponds to “our way” in another corporation. Becoming familiar with the “our way” or culture of a corporation will enhance inner corporate communication, efficiency, and productivity.

As a cultural audit this investigation explores the subjective interactions of aerospace industry executives to determine which corporate multicultural awareness dimensions the executives most commonly embrace. This embrace is noted by Geert Hofstede, “the building of cultural awareness may not be an easy task, but once accomplished, it definitely helps [get] a job done efficiently” (1997 p. 7). There are many opportunities and challenges that a cultural audit may identify—e.g., the capability to increase internal/external corporate communication, and promote variegated thinking. Hofstede’s validated “Culture in the Workplace” (CWQ2) survey accurately identifies differing executive cultural dimensions; therefore, this instrument is of suitable construct for investigating this study’s questions. This instrument enables analysis that has not yet

been done to assess international aerospace executives' perceptions of multiculturalism in corporate culture within the current state of global business.

The CWQ1 was Hofstede's 1980 foray into studying and assessing cultural dimensions as affected by individual executives' and their innate management traits. In 2006, the CWQ1 was updated to eliminate statistically weak questions; the updated version was renamed CWQ2. This investigation used Hofstede's CWQ2 survey to evaluate aerospace industry executive experts' perceptions of corporate multicultural dimensions. Using CWQ2 in this investigation allows for assessment of executive perception data for grounded theory analysis, toward uncovering the advantages and value of future corporate multicultural dimension training (CMDT) for aerospace corporations.

In the 1990s Hofstede selected to license his CWQ2 survey to an internationally recognized consulting firm, Itap International. Itap specializes in various cultural research, corporate cultural training, and multicultural consulting (Itap International, 2010, p. 1). Hofstede's cultural audit enables global organizations to align internal and external business processes with desired outcomes (Itap International, 2010, p. 1). To use Hofstede's CWQ2 in this investigation, the researcher licensed the survey for distribution to the sample population. Surprisingly, little research has been performed to assess how international aerospace executives' view the importance of multicultural awareness and related training programs in enhancing global business. Becoming knowledgeable with what "our way" is with regard to corporate culture can provide insight into how business interaction with diverse international cultures may either flourish or die.

This investigation is designed to solicit the perceptions and opinions of international aerospace industry executives. Hofstede's CWQ2 survey identified which corporate multicultural awareness dimensions are most widely accepted among current aerospace industry executives. The researcher's motivation for this investigation is to suggest the addition of corporate multicultural dimension training (CMDT) where warranted.

1.2. Statement of the Problem

At present no analysis has been conducted to measure international aerospace industry executives' perceptions of corporate multiculturalism. Corporate multiculturalism is important to identify because it outlines "the cultural differences that may exist between one's home country and the country of business operation" (Li & Karakowsky, 2001 p.1). This investigation's objective is to identify how a diverse population of aerospace industry executives' corporate multicultural dimensional workplace traits align with or differ from Hofstede's five dimensions as measured by his, "Culture in the Workplace 2" survey.

1.3. Significance of the Problem

Continuous expansion of numerous "multinational corporations create a tremendous need for new approaches to organization(al) development and career development because global operations require radically different organization(al) cultures and new strategies for developing managerial talent" (Ardichvili & Kuchinke, 2002, p. 147). Building upon Ardichvili and Kuchinke, this investigation hypothesizes how global aerospace industry executive experts' perceive current aerospace industry's corporate multicultural status. The investigation sought the perceptions of 36 global aerospace industry executives with regard to corporate multicultural training as a positive technique to generate productivity and efficiency in aerospace business interactions.

Corporate multicultural training is not a standard practice because "[current] human resource management demonstrates only an underdeveloped spectrum of original diversity management actions" (Stefan & Markus, p. 44). Thus, current global aerospace industry executive experts' perceptions of corporate multicultural training require investigation.

The goal of the investigation is to publish recommendations that support creation and establishment of future corporate multicultural dimensional training programs throughout the modern global aerospace industry.

1.4. Statement of Purpose

The merit of Hofstede's cultural research in the workplace is found in the notion that culture is "the collective programming of the mind which distinguishes the member of one state from another" (Hofstede, 1980, p. 1). Hofstede produced five major cultural dimensions and ten subcategories in order to categorize and parse cultural distinctions throughout diverse regions of the world. The five cultural dimensions and ten subcategories include: *Individualism* (Individualism – Group), *Power Distance* (Hierarchical – Participative), *Certainty* (Need for Certainty – Tolerance for Ambiguity), *Achievement* (Achievement – Quality of Life), and *Time Orientation* (Long-Term Orientation – Short-Term Orientation) (Itap International, p. 1).

Considering Hofstede's research and the world's global economy, the investigation's main research question emerged: In the current global aerospace industry, what corporate multicultural dimensions, as defined by Geert Hofstede, do modern aerospace industry upper-middle-level executive experts' possess? The CWQ2 assessed aerospace industry executives corporate multicultural profile dimensions. Hofstede's CWQ2 also outlines the extent which each corporate multicultural dimensions measure against other nation's multicultural dimensions.

The researcher analyzed all CWQ2 aggregated data to determine what aerospace industry executive experts report as their "perceptions, truths, beliefs, explanations, and worldviews" concerning multiculturalism in the international workplace (Patton, 2002, p. 132). The investigation situated the CWQ2 data analyses in recommendations for improvement of future aerospace industry corporate multicultural training.

The rights to 200 survey trials of Hofstede's, "Culture in the Workplace" (CWQ2) survey were acquired in October 2009 from Hofstede's exclusive licensing corporation, Itap International (Itap). The investigation's analysis gauged all aerospace industry executives' CWQ2 responses. The respondent's corporate multicultural dimensions unveiled how executives perceive corporate multiculturalism as impacting productivity and efficiency in today's global aerospace industry. All CWQ2 participant data was aggregated, by Itap, to determine which dimensions and subcategories the current aerospace industry most commonly embraces. The investigations in-depth examination of

corporate multicultural dimensions revealed how CMDT may or may not benefit future aerospace industry training programs.

1.5. Definition of Terms

CMDT: Corporate Multicultural Dimensional Training seminars, lectures, interactive role-playing exercises, and specialized corporate multicultural program for cross-border business employees.

Culture: Communication, the essential core consists of traditional ideas and especially their attached values as a collective programming of the mind that distinguishes the members of one group or category of people from another (Li & Karakowsky, 2001).

Beliefs, Values, and Norms which are, “shared distinctive behavioral norms that are omnipresent, may appear natural, and are transmitted to new members of the culture” (Matsumoto, 2001, p11).

Cultural Awareness: How individuals identify the cultural differences that may exist between one’s home country and the country of business operation (Li & Karakowsky, 2001, p. 4)

Cultural Proficiency: Requires individuals that have the will, knowledge, skills, cross-cultural experiences, and the ability to transform cultural ineptitude into culturally rich systems (Baron, 2007, September).

Ethnicity: What we have learned within our families about traditions, practices, and customs of their communities of origin (Matsumoto, 2001).

Ethnocentrism: The belief that one’s own culture is superior to that of others culture (Li & Karakowsky, 2001, p. 2)

Geert Hofstede’s Cultural Dimension Definitions (APPENDICES A – E) :

APPENDIX A

Achievement: The degree to which we focus on goal achievement and work or quality of life and caring for others. According to Dr. Hofstede, “this dimension measures the degree to which cultures differentiate between gender roles” (Itap International, 1980, p. 1).

Achievement Orientation (Masculine): An achievement-oriented (masculine) society is one in which social gender roles are clearly distinct (Itap International, 1980, p. 1).

Masculinity: (Achievement versus Relationship) measures the extent to which the dominant values are assertiveness, money, and things (achievement), not caring for others or for the quality of life. The other end of the spectrum would be femininity (Hofstede, 2002, p. 1).

Quality of Life Orientation (Feminine): A quality of life-oriented society is characterized by overlapping gender roles (Itap International, 1980, p. 1).

Femininity: established by an individual's ability to be modest and caring (Hofstede, 2002, p.1)

APPENDIX B

Certainty: The extent to which people prefer to use rules, regulations, and controls or are more comfortable with unstructured, ambiguous, or unpredictable situations (Itap International, 1980, p. 1). Dr Hofstede states, “(certainty) measures the way people of different cultures react to uncertain or unknown situations” (Itap International, 1980, p. 1). Itap International went on to state, “organizations in cultures that tolerate uncertainty encourage individuals to take initiatives and use creative approaches; they provide less on-the-top job structure, support, and tend to hire and fire more freely” (1980, p. 1).

Need for Certainty: The index measures the extent to which a society feels threatened by uncertain or ambiguous situations (Hofstede, 2002, p. 1). Cultures that consist of the need for certainty do not tolerate ambiguity. Cultures that possess a low need for certainty, “have a preference for innovation outside existing organizational rules; in business, they have a higher tolerance for matrix organizations and transformational leadership, a belief in teamwork, a preference for tasks

with scope and for development, take calculated risks, and promote problem solving” (Itap International, 1980, p. 1).

Tolerance for Ambiguity: Dr. Hofstede found, “organizations in societies with a high need for certainty have a preference for strong codes of behaviors and management practices and tolerate less deviation from them; they tend to support their employees on the job” (Itap International, 1980, p. 1).

APPENDIX C

Individualism: The degree to which action is taken for the benefit of the individual or the group. Dr Hofstede said, “(individualism) represents the relationship between the individual and the group in a given society” (Itap International, 1980, p. 1). Individualism refers to a loosely knit social framework within which people are supposed to take care of themselves and their immediate families only (Hofstede, 2002, p. 1).

Individual Orientation: “An individualistic society is a culture of the *self* where individuals are expected to take care of themselves and ties between individuals are loose” (Itap International, 1980, p. 1).

Group Orientation: “A group or collectivists society gives preference to belonging to the *we* where individuals are loyal and contribute to the wealth of their family, clan, or organization in exchange for reciprocal group support” (Itap International, 1980, p. 1).

APPENDIX D

Power Distance: This index measures the degree of inequality that exists in a society (Hofstede, 2002, p. 1). Itap International’s defines “[power distance as] the degree to which inequality or distance between those in charge and the less powerful [subordinates] is accepted” (1980, p. 1).

Hierarchical Orientation: Hofstede states, “a society with an autocratic style leans toward a hierarchical structure where individuals know their place and limit of their roles” (Itap International, 1980, p. 1).

Participative Orientation: Hofstede also went on to say that, “a society

with a participative orientation seeks status, equality, and interdependence between different layers of power” (Itap International, 1980, p. 1).

APPENDIX E

Time Orientation: “The extent to which members of a society are prepared to adapt themselves to reach a desirable future, or the extent to which they take their guidance from the past and focus on fulfilling their present needs and desires” (Itap International, 1980, p. 1).

Long-Term Orientation: Describes the impact of time on the individual’s behaviour. Individuals with a low Long-Term Orientation Index prefer quick results from their work as compared to individuals with a high Long-Term Orientation Index (Hofstede, 2002, p. 1). This dimension focuses on what executives value as they deal with future goals (Itap International, 1980, p. 1).

Short-Term Orientation: Whereas individual’s whose ethics are more focused around “respect for tradition, social obligations, and protecting one’s face,” are commonly connected to short term-orientation (Hofstede, 2002, p. 1). Focuses on the values toward the past and present (Itap International, 1980, p. 1).

Globalization: A current reality for everyone that has huge implications for organizations and society in general. Thomas Friedman’s (2005) book, *The World is Flat*, describes the profound effects that technology and globalization have had on the way we work and the way we live (Henderson & Provo, 2006, p. 275).

Layer of Culture:

The Corporate Level: Associated with the particular culture of an organization; applicable to those who are employed (Li & Karakowsky, 2001).

Multiculturalism: The sub maximization of integrated cultures (Parhizgar, 2007, p.1).

Multicultural Education: The way in which all participants, regardless of diversity characteristics, feel equally valued and challenged with an equal chance for academic success (Ponterotto, 1998, p.1.).

1.6. Assumptions

1. This investigation assumes aerospace industry executives' particular company's human resource departments provide only minimal multicultural awareness training.
2. Surveyed participants are assumed to be employed in similar upper-middle-level management positions across the different aerospace companies.
3. The number of aerospace industry executive participants is presumed to be an adequate representation of the current aerospace industry.
4. Surveyed executives are assumed to have met the minimum five years of aerospace industry experience to participate in the CWQ2 survey.
5. The number of participant responses is presumed to be satisfactory for a Likert-scale quantitative analysis.
6. Aerospace industry executives are knowledgeable, honest, and truthful when responding to the CWQ2 survey questions.

1.7. Delimitations

1. The CWQ2 survey is to be disseminated only to the researcher's selection of 62 aerospace industry executives.
2. This investigation does not focus on a specific aerospace company, but rather measure a broad spectrum of perceptions from different aerospace entities.
3. The CWQ2 survey instrument is not the only acceptable or all-inclusive way to measure corporate multiculturalism.
4. The researcher suggests areas for improvement, corporate multicultural dimensional training (CMDT), to current human resource cultural training.
5. The conceptual framework of the CWQ2 survey only measures Hofstede's corporate multicultural dimensions in working environments.

1.8. Limitations

1. Limited participation to aerospace industry executives who possess five or more years of aerospace industry experience.
2. The aerospace industry executives may only answer the CWQ2 survey questions which they feel comfortable answering.
3. Aerospace industry executives may wish to not disclose certain personal information while answering the CWQ2 survey.
4. The investigation is limited to aerospace industry executives who are capable of responding to the CWQ2 survey questions.
5. The quantitative CWQ2 survey methods may be inherently limited by certain executives being more familiar with corporate multiculturalism based on their background, education, or personal experiences.
6. The researcher assumes aerospace industry executives who opted out of the survey would have responded in the same manner or similarly to those who participated in the investigation and took the CWQ2 survey.
7. Due to the small sample size of 70 aerospace industry executives, the results may not accurately represent the general aerospace industry population.

Next the investigation turns to the review of the literature.

REVIEW OF THE LITERATURE

1.9. Introduction

This investigation evaluated aerospace industry experts' perceived value of corporate multicultural dimension training (CMDT) as a method to generate productivity and efficiency within the aerospace industry. The motivation to research corporate multiculturalism is to suggest implementation of corporate multicultural awareness training in aerospace industry human resource training programs.

Corporate multicultural dimension training is a prominent aspect of work done by anthropologists who use ethnographic research methods to study cultural impact in workplace interactions. Yet, in the field of corporate multicultural training research, there is a dearth of literature exists. Very few cultural studies consider CMDT's effect on individuals' productivity and efficiency in global aerospace business ventures. Empirical studies linking ethnicity and international business performance indicators show a disconnect noted by Shoobridge (2006, p. 119).

This investigation and Hofstede's, "Culture in the Workplace 2" survey, posed questions such as, how do diverse aerospace industry executives' corporate multicultural dimensional workplace traits align with or differ from the negotiated local workplace traits of an aerospace corporation's executives? In what ways may Hofstede's corporate multicultural dimensions be implemented into future human resource training programs at aerospace corporations?

These questions indicate the importance of defining the words *culture* and *multiculturalism* referenced in this study. Hofstede defines *culture* as a "collective programming of the mind distinguishing the members of one group or category of people from another" (2008, p. 2). *Multiculturalism* is defined by the American Psychological Association (APA) as "an absolute sense, [that] recognizes the broad scope of dimensions

of race, ethnicity, language, sexual orientation, gender, age, disability, class status, education, religious/spiritual orientation, and other cultural dimensions” (APA, 2002, p. 9). Both multiculturalism and diversity are recognized as, “critical aspects of an individual’s ethnic/racial and personal identity” (APA, 2002, p. 9).

The rapid evolution of globalization in the past century commands executives to reconcile multicultural issues that heretofore were not of this immediate concern. International aerospace corporations have witnessed a rapid evolution of globalization. Shorish classifies globalization as “the process of corporate structuring that focuses a company’s core competency on a single, worldwide market, creating growth and profit opportunities through synergies and efficiencies in engineering, sales, purchasing, production, and distribution” (1998, p. 4). Globalization’s power to change the business world is consistently emphasized in the literature—that in less than half a decade the global economy will see contributions from a whole new sector of now-third-world countries (Henderson & Provo, 2006, p. 275). The research also insinuates international organizations will encounter future cultural ramifications from such circumstances (See Friedman and Yu).

The motivation to research CMDT is to suggest its place in future training programs throughout global aerospace corporations. In order to determine CMDT’s impact, this investigation evaluated how aerospace industry executives perceive the “our way” of corporate culture as mentioned in the introduction. The investigative process utilized Itap International to disseminate Hofstede’s “Culture in the Workplace” (CWQ2) survey.

Hofstede has recognized through studies that many different cultures and ethnic diversities exist in the workplace. This investigation gathered qualitative information from aerospace industry executives within a specific corporation and a cross-selection of executive drawn from the aerospace industry at-large. Implementing Hofstede’s CWQ2 survey, this investigation identifies the five cultural “our ways” present in today’s aerospace corporations.

Additionally, the research expanded upon Li and Karakowsky's definition of the corporate level of culture by associating executives "with the particular culture of an organization, applicable to those who are employed" (2001, p. 3).

1.10. Background of the Investigation

Harvard Business School suggests that through understanding multiple cultures, entire market segments may be discovered and stagnant markets may have improved development (Yoffie, 2004, p. 15). David Yoffie provides Coca-Cola as an appropriate example: this international corporation realizes local market preferences may include non-cola products. "In 2000 Coke carried more than 200 brands in Japan alone, most of which were teas, coffees, juices, and flavored water. In Brazil, Coke offered two brands of guarana, a popular caffeinated carbonated berry drink accounting for one quarter of that country's CSD (carbonated soft drinks) sales" (2004, p. 15). Consequently, Coca-Cola's beverage differentiation is based upon the tastes of the culture that they are addressing. Coca-Cola's corporate multicultural ability to adapt to their surrounding is what enables the corporation to be the world's largest international beverage corporation (Yoffie, 2004).

Alexander Ardichvili and K. Peter Kuchinke claim that "continuous expansion of numerous multinational corporations creates a tremendous need for new approaches to organization (al) development and career development because global operations require radically different organization (al) cultures and new strategies for developing managerial talent" (2002, p. 147). The researcher assembled a corporation-based and at-large sample of aerospace industry respondents' perceptions, aggregated the two sets of responses, and demonstrated that CMDT possesses positive value for the global aerospace industry's future training programs.

Our individual cultural backgrounds contribute to our multiple cultural memberships because, as Lott argues, "when we study attributes, beliefs, skills, values, social perceptions, and expectations, we inevitably [become] compelled to respect and understand diversity and the multicultural uniqueness of individual(s)" (2010, p. 7). This

theoretical framework connects with the “our way” referred to in chapter one. Multicultural group interactions are fertile grounds for Hofstede’s cultural dimensions. As project manager of a multicultural team in Dubai and the United States the researcher was provided the opportunity to apply the cultural dimensions framework in praxis; from that experience, Hofstede’s dimensions provided a means to analyze the researcher’s own personal dimensions in a dynamic cultural workplace exchange. Lott affirms “the study and understanding of behavior, when guided by the premise of individual multiculturalism, will increase the authenticity of our knowledge and the reliability of our predictions.” In practical application of the cultural dimensions in the dynamics of an international workplace the researcher saw the “relevance and efficacy” of Hofstede’s cultural dimensions, in predicting and evaluating personal and group behaviors (2010, p.7).

In 2006, Shoobridge and Liff undertook a meta-analysis of the empirical studies that dealt with business productivity as impacted by determinants from ethnicity in minority populations (2006, p. 111). One outcome of their study, was the suggestion for future research to examine a more “holistic approach” to evaluate performance of a multicultural workplace. The definition of culture examines many different dimensions some conscious and others unconscious. Building on Shoobridge and Liff’s recommendations for future study this investigation will apply a new “holistic approach” that focuses on Hofstede’s corporate multicultural dimensions (refer to definitions).

1.11. Cultural Dimensions

This section details Hofstede’s CWQ2 instrument and gives context for the dimensions of corporate multiculturalism that, aggregated, form the instrument for data collection in the sample populations. The five dimensions include: Achievement, Certainty, Individualism, Power Distance, and Time Orientation.

Achievement is how executives focus, are they focused on goal achievement or, quality of life achievement (Hofstede, 2002, p. 1). The *Achievement Orientation* or *Masculinity* is determined by an individual’s level of assertive and competitiveness.

Femininity is established by an individual's ability to be modest and caring. Cultures with a high *Masculinity Index* focus on material success whereas a culture with low *Masculinity Index* values rather feminine traits orient themselves around the quality of life, harmony and social behaviour. Through review of the literature, it was found that a female's values differ less between cultures across different countries than that of male's values; "the assertive pole has been called 'masculine' and the modest, caring pole 'feminine'" (Hofstede, 2002, p. 1). Hofstede found that "women in feminine countries have the same modest, caring values as the men; in the masculine countries they are somewhat assertive and competitive, but not as much as the men, so that these countries show a gap between men's values and women's values" (Hofstede, 2002, p. 1).

Certainty is the extent to which executive humanity copes with rules, regulations, uncertainty and ambiguity; "it ultimately refers to man's search for Truth" (Hofstede, 2002, p. 1). *Uncertainty avoidance* measures the level to which individuals are comfortable or uncomfortable in an unforeseen, unstructured, or unknown situation. People with a need for certainty dislike facing new working situations and without any guidelines, normatively never break the rules, and possess a strong loyalty to their employer. Whereas a person with a tolerance for ambiguity is likely to deal with unacquainted situations easily. Executives with a tolerance for ambiguity are very pragmatic, and flexible. Cultures with the need for certainty try to minimize the possibility of such situations by strict laws and rules, safety and security measures, and on the philosophical and religious level by a belief in absolute Truth; 'there can only be one Truth and we have it' (Hofstede, 2002, p. 1). People in uncertainty avoiding countries are also more emotional, and motivated by inner nervous energy. The opposite type, uncertainty accepting cultures, are more tolerant of opinions different from what they are used to; they try to have as few rules as possible, and on the philosophical and religious level they are relativist and allow many currents to flow side by side. People within these cultures are more phlegmatic and contemplative, and not expected by their environment to express emotions" (Hofstede, 2002, p. 1).

Individualism is the extent to which an individual is not a collectivist. Individualism is defined according to Hofstede, "[High individualism is where] everyone

is expected to look after him/herself and his/her immediate family” (Hofstede, 2002, p. 1). *Collectivism* individuals are determined from birth and beyond as they are incorporated into strong, “cohesive in-groups, often extended families [with uncles, aunts and grandparents] which continue protecting them in exchange for unquestioning loyalty” (Hofstede, 2002, p. 1). A low Individualism Index reflects rather collectivistic behaviour; where as a high Individualism Index explains why these Individuals tend to undertake autonomous actions. Hofstede goes on to state, “the issue addressed by this dimension is an extremely fundamental one, regarding all societies in the world” (Hofstede, 2002, p. 1).

Power distance is determined by individual interactions and communication differentials between executive and employee. Human beings possess the ability or inability to accept hierarchal structure in given situations; individual executive interaction or lack thereof is dependent upon their cultural upbringing (Hofstede, 1980, p. 1). In relation to this, one who has a low *power distance* will be more likely to address their superior whereas; one who possesses a high power distance will most likely not address their superior (Helmreich & Merritt, 1998, p. 57). Hofstede validates this by stating, “Power and inequality, of course, are extremely fundamental facts of any society and anybody with some international experience will be aware that 'all societies are unequal, but some are more unequal than others’” (Hofstede, 2002, p. 1).

Time Orientation includes two subcategories of time orientation are *long-term* versus *short-term orientation*. The fifth dimension was the result of a questionnaire created by the Chinese. This dimension is said to “deal with Virtue regardless of Truth” (2002, p. 1). Individual’s values related to *long-term orientation* include thrift, perseverance, and work success over a long period of time is valued. The *Long-term Orientation Index* describes the executives preference for results in relation to the time and effort output. Executives with a low Long-Term Orientation Index prefer quick results from their work as compared to individuals with a high Long-Term Orientation Index. Individuals whose ethics are more focused around “respect for tradition, social obligations, and protecting one’s face,” furthermore, are commonly connected to *short-term orientation* (Hofstede, 2002, p. 1). Hofstede accredited, “both the positively and the

negatively rated values of this dimension are found in the teachings of Confucius” (Hofstede, 2002, p. 1). Confucius, who existed around 500 BC, was one of the most influential Chinese philosophers of that era.

1.12. Evolution of Corporate Culture

“All words have the taste of a profession, a genre, a tendency, a party, a particular work, a particular person, a generation, an age group, the day and hour. Each word tastes of the context and a context in which it has lived its socially charged life.”

– Bakhtin, 1981, p. 293

To unpack the cultural dimensions in a corporate setting it is important to understand—through the early writings of anthropologist Margaret Mead and linguists Mikhail Bakhtin and John Clark—the importance of comprehending the “stakeholders’ point of view and experiences” (Ardichvili & Kuchinke, 2002, p. 159). Mikhail Bakhtin researched intercultural communications, which lead to the Bakhtinian metaphor that “cross-cultural research is not centered on attempts to understand others’ perspectives, as if these perspectives were...a constant creation for new realities in a multivoiced dialog involving the researcher and the participants” (Ardichvili & Kuchinke, p. 160).

Bakhtin’s research guides the researcher’s view that cross-cultural communication has the ability to be affected by the researcher as well as, the informant. This investigation selected to use Itap for Hofstede’s CWQ2 survey to address the potential for researcher cultural bias when analyzing informant’s cross-cultural data. Certain cultural traits—prejudices, lack of understanding, multicultural ignorance—have the potential to be destructive to inter-group and inner-group communications international corporations (Ardichvili & Kuchinke, p. 160-61). Clear communication is the essential fuel that propels corporate culture to success; similarly, the lack of this vital fuel can stall corporate success, “so the issue of prejudice should be addressed through multicultural training” (Pope-Davis, Coleman, Liu, & Toporek, 2003, p. 23). This investigation addressed executive’s cultural traits and communicative abilities by employing

Hofstede's CWQ2 survey to identify their personal corporate multicultural dimensions. The informants' data may be analyzed to prepare research-informed CMDT directions.

1.13. Summary of the Literature Review & Future Directions

The aerospace industry operates on an increasingly global scale. The recent example of Eyjafjallajökull Volcano's disruption of international flight exemplifies the interconnectedness of the aviation/aerospace industry's decision-forcing issues that cross multiple cultures and implicate the need for CMDT. Aerospace industry organizations are confronting multicultural diversity in economic, and safety situations without the necessary training/tools. The multicultural dimension issues of "leadership, technology, and globalization," will continue to build and impact the aerospace industry into any foreseeable future. (Ng, 2008, p. 59) (Henderson and Provo, 2006, p. 1).

The motivation to research corporate multicultural dimension training developed because, review of the literature acknowledged there is scant data pertaining to aerospace industry executive multicultural training. The literature review introduction outlines the investigations objective is to measure aerospace industry expert's corporate multicultural dimensions, by using the CWQ2 survey and Hofstede's dimension definitions. Human beings possess the ability or inability to accept hierarchal structure in given situations; individual executive interaction or lack thereof is dependent upon their cultural upbringing (Hofstede, 1980, p. 1).

This investigation gathered Likert style qualitative data from aerospace respondents, using Hofstede's CWQ2 survey. The data collection instrument measured respondents' corporate multicultural placement in *achievement*, *certainty*, *individualism*, *power distance* and, *time orientation* dimensions. The aggregated data provides a predictive baseline capability to determine CMDT's ability to affect the global aerospace industry's productivity and efficiency through increased multicultural education where warranted. In conclusion, the impact of understanding CMDT may be recommended to have a place in future human resource training programs at aerospace corporations?

METHODOLOGY

1.14. Introduction

“Culture and place demand our attention not because our concepts of them are definitive or authoritative, but because they are fragile and fraught with dispute.”

– Jody Berland (1997) (Patton, 2002, p.391)

While questioning the “how” for the creation of corporate multiculturalism for the world’s contemporary global workforce, it is increasingly important to remember “diversity management stands for a change in perspective, since it encompasses more than equal opportunities between the sexes” Corporate multiculturalism is not a widespread practice among present aerospace executives (Stefan & Markus, p. 44). Corporate multicultural management is not a standard practice because “(current) human resource management demonstrates only an underdeveloped spectrum of original diversity management actions” (Stefan & Markus, p. 44).

1.15. Survey Development

This investigation employed Hofstede’s “Culture in the Workplace 2” (CWQ2) survey. It is an ethnographical survey designed to establish, “what the culture of this group of people is” (Patton, 2002, p. 132). According to Patton an ethnographic a study’s focus surrounds, “a social scientific description of a people and the cultural basis of their people hood” (Patton, 2002, p. 81). Ethnographic inquisition presumes a, “human group of people interacting together for a period of time will evolve a culture” (Patton, 2002, p. 81). The perspective of surveying aerospace industry executives’ with the CWQ2 is a

form of grounded theory testing based on the disciplinary roots of social sciences and evaluation (Patton, 2002, p. 132). The CWQ2 specifically evaluated respondent's corporate multicultural dimensions by measuring their perceptions with a 60 Likert style questions (Itap International, 1980, p. 1).

Hofstede's CWQ2 survey was designed to be a powerful tool that identifies, "the knowledge of specific cultures in the context of the workplace" (Itap International, 1980, p. 1). Corporate cultural knowledge when understood, as stated by Hofstede, may guide executives as a, "navigation[al] aid, users [may] effectively apply their native intelligence with confidence and develop their ability to resolve cross-border business challenges" (Itap International, 1980, p. 2). Hofstede's research affirms the same may be true for today's global aerospace industry executives.

Marcee Turner outlines the importance of investigating the different dimensions of cultural sensitivity and multicultural attitudes. Turner argues that corporate multicultural inadequacies such as, a "lack of exposure to others differing culture[s], linguistic, and socioeconomic backgrounds creates a concern" as it creates inefficiency (2007, p.4). Ms. Turner affirms that "cultural awareness, knowledge, and skills or lack thereof may be very insightful" knowledge for executive's to understand so they might maximize the margins of their productivity and efficiency (2007, p.5).

This investigation determined the need for CMDT in the existing aerospace industry. In October 2009 the researcher acquired the licensing rights to 200 trials of Hofstede's CWQ2 survey from, a third party consulting firm, Itap International. The CWQ2 survey was exclusively selected because of its multicultural breadth and accreditation. The CWQ2 survey served as a standard for all aerospace industry executives participating in this investigation. While participation by all respondents is entirely voluntary, participant permission was sought via telephone call and e-mail request to anonymously participate in the CWQ2 survey via the internet (APPENDIX G).

This investigation focused on the applications of Hofstede's multicultural dimension awareness CWQ2 survey. The CWQ2 survey is distributed by ITAP International under Hofstede's license, and may be located at www.itapintl.com. Hofstede's "Culture in the Workplace 2" survey will quantify aerospace executive's

corporate multicultural characteristics such as, Power Distance, Individualism, Masculinity, Uncertainty Avoidance, and Long Term Orientation throughout the entire aviation/aerospace industry (Helmreich & Merritt, 1998, p. 57).

Aerospace industry executives were asked sixty Likert style questions seeking personal reflection on their experiences. All 60 closed fixed-response questions required aerospace industry experts to utilize a five point Likert scale to measure the degree of their level of agreement or disagreement to each question. These 60 questions measure perceived effectiveness of corporate multicultural training and composition of cultures within the aerospace industry executives' company. Every one of the 60 questions requested the respondent to relate how they, as aerospace industry executives, perceive corporate multicultural issues within the workplace. Corporate multicultural issues may involve customer interactions, personal beliefs, understanding of cultural nuances, preferences, and personal values (Itap International, 1980, p. 2).

Final conclusions, from the researcher, drew upon the key concepts of Power Distance, Individualism, Masculinity, Uncertainty Avoidance, and Long Term Orientation that Geert Hofstede's "Culture in the Workplace" (CWQ2) research defined (Helmreich & Merritt, 1998, p. 57).

1.16. Sample Selection

First, a beta test group containing five Purdue University Faculty and Graduate Students were asked to review the CWQ2 questionnaire. These individuals must have international experience in order to be properly qualified to evaluate the assessment tool, data collection, and data analysis process. The researcher disseminated the questionnaire to the test pilot group to verify readability and understandability in April 2010. Suggested changes and improvements were implemented.

This investigation was conducted among global aerospace industry experts from major aerospace organizations. Respondents must be categorized as upper-middle-level aerospace industry experts who are defined as currently employed individuals who possessing more than five years of experience in the aerospace industry. Subsequently 70

upper-middle-level aerospace industry experts were solicited to participate in the anonymous qualitative CWQ2 survey online. Additionally, all 70 upper-middle-level aerospace industry experts must have a minimum of one corporate multicultural experience inside the aerospace workplace environment, but not limited to occurrence in the home country of origin. Corporate multicultural experiences are defined as customer interaction, employee interaction inside or outside of a group setting, interaction with a culturally diverse individual from oneself, cultural nuance interaction of any sort, and lastly interaction with a superior or subordinate (Itap International, 1980, p. 1).

1.17. Procedures

This investigation specifically analyzed Hofstede's corporate multicultural research constructs. Hofstede's corporate cultural research identified and developed the "Culture in the Workplace Two" (CWQ2) survey. The CWQ2 measures corporate cultural dimensions related to cultural dimensions in the context of the workplace. The CWQ2 does not serve as a personality test, or as an employee assessment device (Itap International, 1980, p. 3). The CWQ2 is hosted by Hofstede's exclusive licensing company, Itap International. Once the CWQ2 was selected as the data collection tool, the researcher held a teleconference with Catherine Bing, the CEO of Itap International, to verify the CWQ2's construct validity and suitability to this investigation's specific requirements.

Once the CWQ2 was confirmed as an appropriate data collection tool for this investigation, the researcher acquired the licensing rights to 200 surveys. In the beginning, the researcher personally contacted 70 aerospace industry executives, via telephone, to request their participation in the CWQ2 survey. In this investigation an aerospace industry executive may be defined as, a person who has met the five year aviation/aerospace experience minimum, and is currently employed in the aerospace industry. A population of 70 aerospace executives were selected for this investigation however, it should be noted that 70 aerospace executives will not accurately represent the current aerospace industry. This is an area for future research.

The distribution method for this investigation was entirely electronic. First the researcher constructed an informational sheet detailing the investigations purpose, CWQ2 definition, time to take the survey, email address from which to expect the survey to come from, dates to receive the survey, and dates to complete the survey by. The informational sheet was emailed out to all 70 aerospace executives seven business days before Itap International disseminated the email containing the link to Hofstede's CWQ2 online survey. The actual data collection procedure began when Itap International delivered the email containing the link to Hofstede's CWQ2 survey. Two business days post the survey link's release the researcher emailed all 70 executives a follow-up email reminder.

All executives CWQ2 survey participation was requested no later than May 10th, because on May 10th the survey link was closed for data analysis. Itap International aggregated and de-identified all CWQ2 participant responses. Itap released the investigation's aggregate data to the researcher for analysis on May 11th. After the aerospace industry executives completed the CWQ2 survey, a last email was sent out to convey the gratitude of the researcher for supporting this investigation.

This investigation required a niche participant base to include only global aerospace industry upper-middle-level executive experts. The global aerospace industry executive experts must obtain a position from the director level and upward within the aerospace industry, and possess a minimum of five years aerospace working experience to be considered for selection.

The researcher and Itap were the only entities to see the participants' name and email address. The investigation disseminated via email 70 CWQ2 surveys to a prearranged simple selection of global aerospace industry executives whose expertise meets the investigations standards. One week in advance, via email, the researcher distributed a formal email reminder requesting all 70 global aerospace industry executives to participate in the CWQ2 online survey. Upon the Researcher's request, Itap emailed Hofstede's "Culture in the Workplace" survey to all 70 preselected global aerospace industry executive experts. (APPENDIX H) The aerospace industry executives received a second email from Itap containing a web based link to a secure website where

all participants may respond to Hofstede's CWQ2 survey in a uniform manner (APPENDIX G). After Itap delivers the formal email participation request, the participants' name and email address were destroyed and never solicited again. Ultimately all participant data was aggregated and deidentified before the researcher analyzes any results.

All investigative results were aggregated to indicate which multicultural dimensions and subcategories today's aerospace industry executive's corporate multicultural profile is comprised of. Their corporate multicultural profile outlined participants' dimensions and unveiled important multicultural facts to be considered in future aerospace corporate multicultural training programs. The recommendations of this investigation should be seriously considered in the future establishment of multicultural training programs throughout the entire global aerospace industry.

DATA ANALYSIS

The data was collected by means of Hofstede's CWQ2 online survey. Itap International hosted the CWQ2 survey, gathered and aggregated all executive responses, and subsequently released the responses to the researcher for analysis and recommendations. While considering the results of this investigation it is important to remember that each executive may have a different corporate multicultural perspective of the aerospace industry.

1.18. Executives Profile

The investigation's population included a diverse set of aerospace industry executives which was selected because of the aerospace industry's multicultural diversities included executives from a wide spectrum of aerospace industries. All executives had a minimum of five years of industry experience, and are currently employed at an aerospace organization. This respondent sample included 36 of the 40 upper-middle-level aerospace industry executives surveyed. The 36 surveyed participants' responses to the CWQ2 survey measured their alignment with or difference from Hofstede's dimensions of achievement, certainty, individualism, power distance, and time orientation.

1.19. Survey Information

The CWQ2 collection instrument was an online survey with 60 Likert-style questions (see FIGURE 3.1). The Likert-values beneath measure the level of disagreement/agreement for questions 1-60: 1 = Strongly Disagree; 2 = Tend to Disagree; 3 = Undecided; 4 = Tend to Agree; and 5 = Strongly Agree.

There was an optional demographics section at the conclusion of the CWQ2 survey. The demographics in this section merely added to Itap International/Hofstede's body of multicultural knowledge, and demographics were not included in data analysis for this investigation.

1.20. Data

The investigation analyzed the similarities and differences between the 62 aerospace executive participants and compared them with Hofstede's business populations. The analysis compared aerospace industry executives with the United States business population and another country selected to illustrate a major corporate multicultural difference that must be addressed by corporate multicultural dimensional training.

Following this comparison of participant responses to the CWQ2, this investigation looked into how its sample population compares and contrasts with a population of business respondents measured by Hofstede over a period of two decades. Hofstede's work argues that national culture is part of peoples "mental programs that began in early childhood in the family structure and were reinforced by social norms" (Hofstede, 2003, p. 1). This investigation compared its sample population's corporate multicultural dimensions to data collected by Hofstede from business populations in the G8+5. The G8 countries include Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States. The G8 countries have a Gross Domestic Product (GDP) position to support major aerospace initiatives, and multicultural dimensions from these populations provided a starting point for comparing similarities

and differences of national corporate multicultural dimensions. The G8+5 include the G8 nations plus the five leading emerging economies (Brazil, China, India, Mexico and South Africa). The goal of the investigation is to suggest recommendations required to enhance future corporate multicultural training programs throughout the modern global aerospace industry.

Hofstede's Achievement dimension includes two variables. First, the Achievement Orientation is the masculine dimension that includes executives who are more likely to live in order to work, work long hours, and generally believe a good manager is an assertive manager; for other achievement orientation characteristic traits see (TABLE A.1). The second is the quality of life orientation, the more feminine dimension; executives in this dimension commonly work in order to live, work more regular hours, and believe a good manager will seek consensus (see TABLE A.1). Analysis revealed that aerospace industry executives tend slightly more toward the Achievement Orientation dimension. Aerospace organizations that understand this dimensions in a population of aerospace executives may identify the dimensional difference between aerospace executives and a quality of life oriented country such as Russia. Compared with the aerospace industry executives surveyed, the United States has a greater orientation towards achievement. This indicates our "society is one in which social gender roles are clearly distinct ; challenge, earnings, recognition and advancement are important" (Itap International, 1980, p. 1).

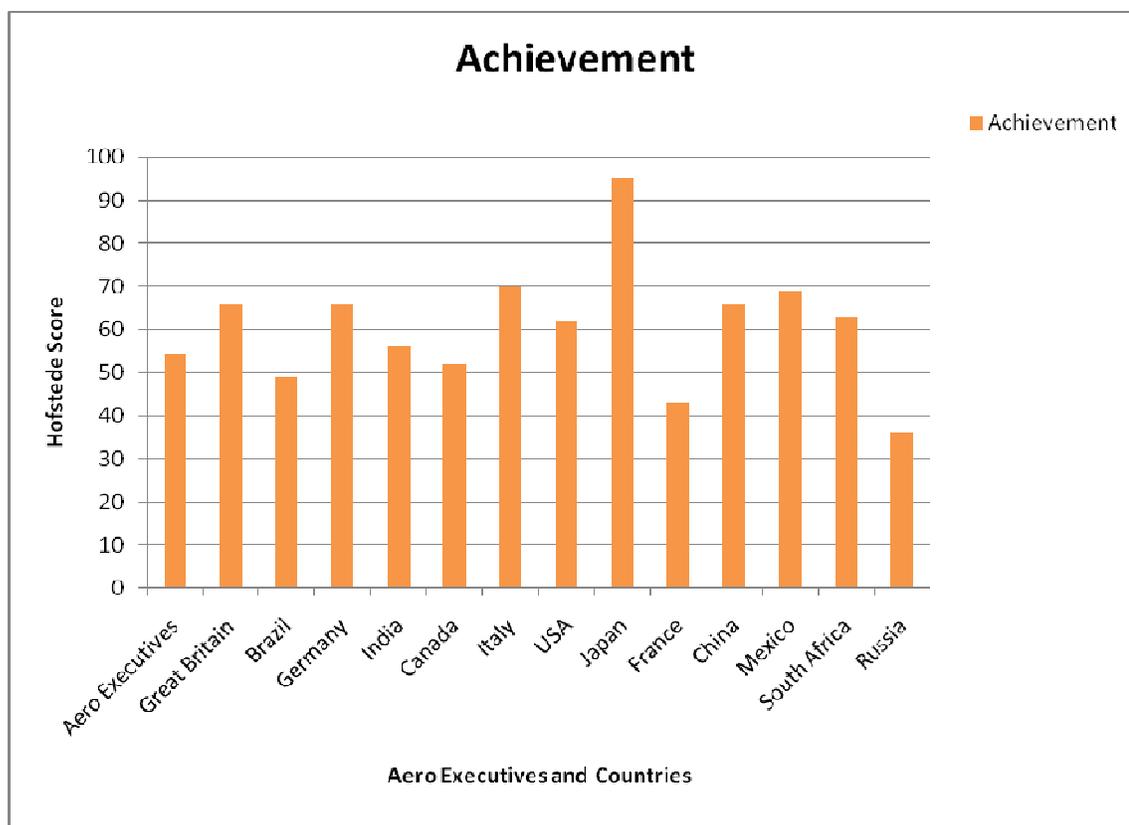


Figure 1.1 Achievement Graph

The Certainty dimension includes the need for certainty category and tolerance for ambiguity category. Certainty is defined by the measure of how “rules, regulations and controls or are more comfortable with unstructured, ambiguous, and unpredictable situations” (Itap International, 1980, p. 1). Executives who embrace the need for certainty prefer familiar situations, are strongly loyal to their organization, and believe rules and procedures should not be broken (Itap International, see TABLE B.1). The tolerance for ambiguity accepts that managers may not have solutions or be comfortable in ambiguous situations; furthermore, these executives believe that it is okay to break the rules to fit certain situations (Itap International, p. 1). The analysis of Certainty indicated a considerable difference between aerospace industry executives and Hofstede’s business populations surveyed in Japan and Russia. The aerospace executives moderately prefer a need for certainty. However, Japan and Russia populations have a much greater need for

certainty, approximately 43% above that of the aerospace executives. That leads the researcher to speculate cultural traits within the aerospace population contrast highly with Japanese and Russian cultural traits. For example, an executive traveling to a country that has a culturally high need for certainty should be aware of some of the subcategories of this dimension (see TABLE B.1): identity is associated with professional training and position in an organization, executives should be aware of more formal ways of behaving and accomplishing work tasks, and managers are expected to know all the answers (Itap International, p. 1). If executives are made aware of these cultural considerations by CMDT, business travel productivity has the potential to be greatly increased.

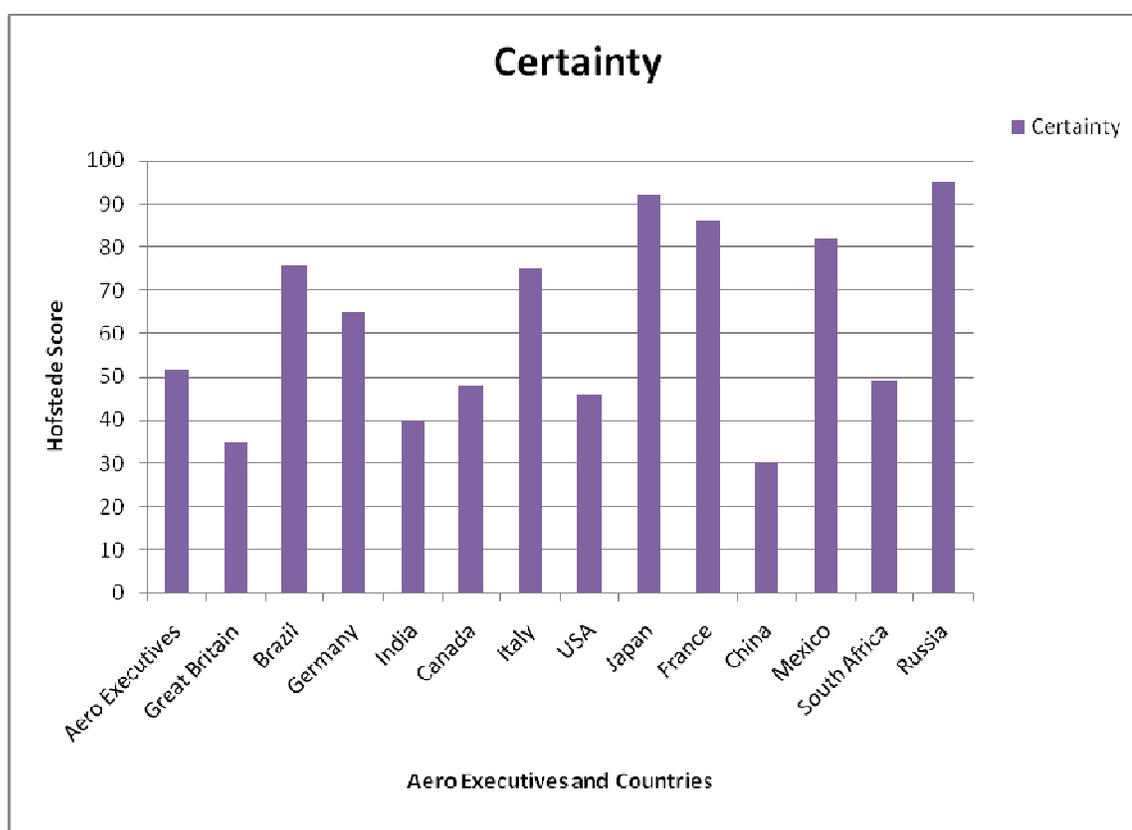


Figure 1.2 Certainty Graph

Hofstede's Individualism dimension measures the cultural orientation toward the "I versus WE consciousness," or individual versus group orientation (Itap International,

1980, p. 1). Individual orientation organizations reward individual effort, employ persons who are responsible for themselves, and promote efficiency above loyalty (Itap International, 1980, p. 1). The data shows a 34% difference between the aerospace executive's Individual orientation and China's Group orientation, China being the most group-orientated country of the G8+5. Potential for CMDT training is indicated here; if executives are oriented toward individual work and must interface with a group-oriented culture, then this corporate cultural clash could reduce efficiency and productivity. The cultural tension between individual versus group-orientation may hinder project completion through miscommunications, scheduling extensions, and cost overruns (see TABLE C.1).

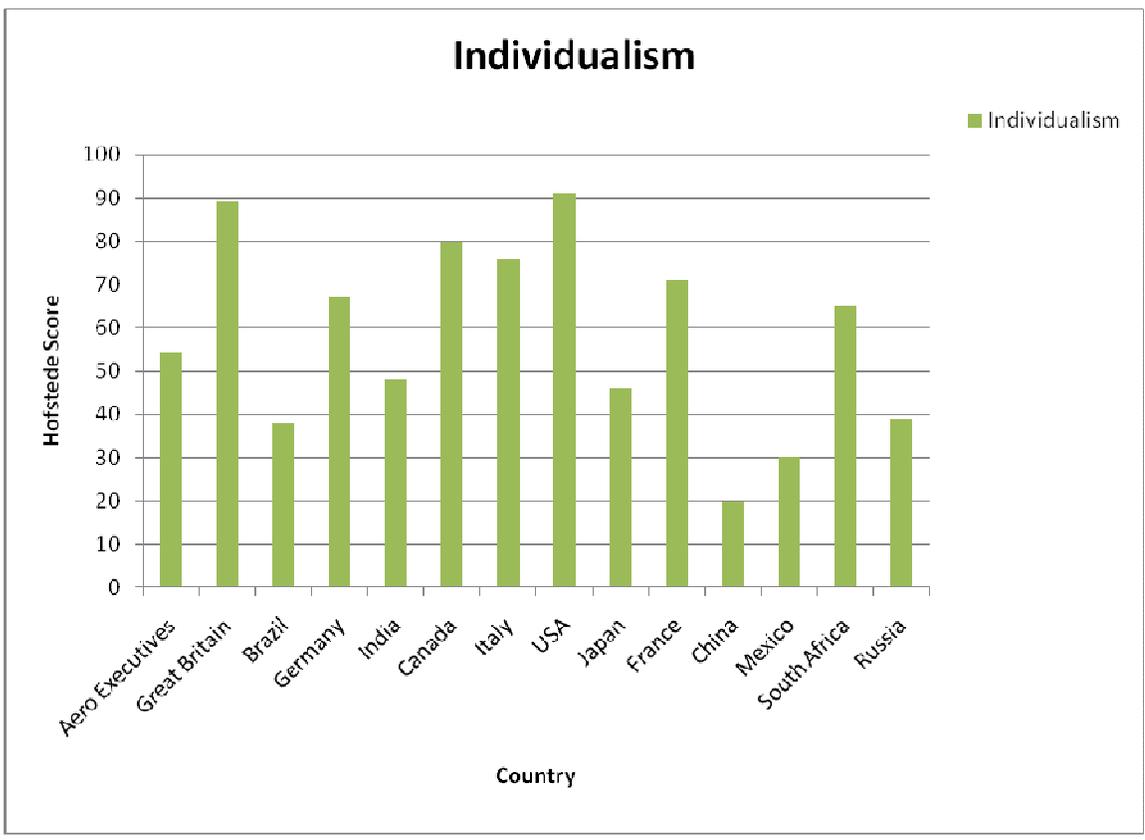


Figure 1.3 Individualism Graph

The Power Distance dimension measures the difference between participative and hierarchical oriented societies. Participative population organizations are pragmatic, have fewer levels of management, and believe “good ideas and suggestions can come from [executives] from any level” (Itap International, 1980, p.; 1 see TABLE D.1). Hierarchical oriented populations are latent and utilize more layers of management, organizations employ top-down approaches, and “managers [are] expected to know the answers/best way” (Itap International, 1980, p.; 1 see TABLE D.1). The aerospace industry executives measure as a participative population within the Power Distance dimension. This signifies the executive’s corporate culture prefers all employees to have equal rights, managers who utilize consultative approaches, and management that expects employees to suggest problem solving techniques (Itap International, 1980, p.; 1 see TABLE D.1).

When comparing Hofstede’s business populations in the G8+5 with surveyed aerospace executives, there is a prominent difference between the aerospace executives’ participative-orientation and the Russian business populations’ hierarchical-orientation. The Russian population has a 48% higher hierarchical orientation than the aerospace executives. Subsequently, should an aerospace executive need to conduct business with Russia they should understand that there are certain cultural hierarchical nuances to be addressed: obedience is expected, managers always know the best ways, and work tasks are clearly presented (Itap International, 1980, p.; 1 see TABLE D.1).

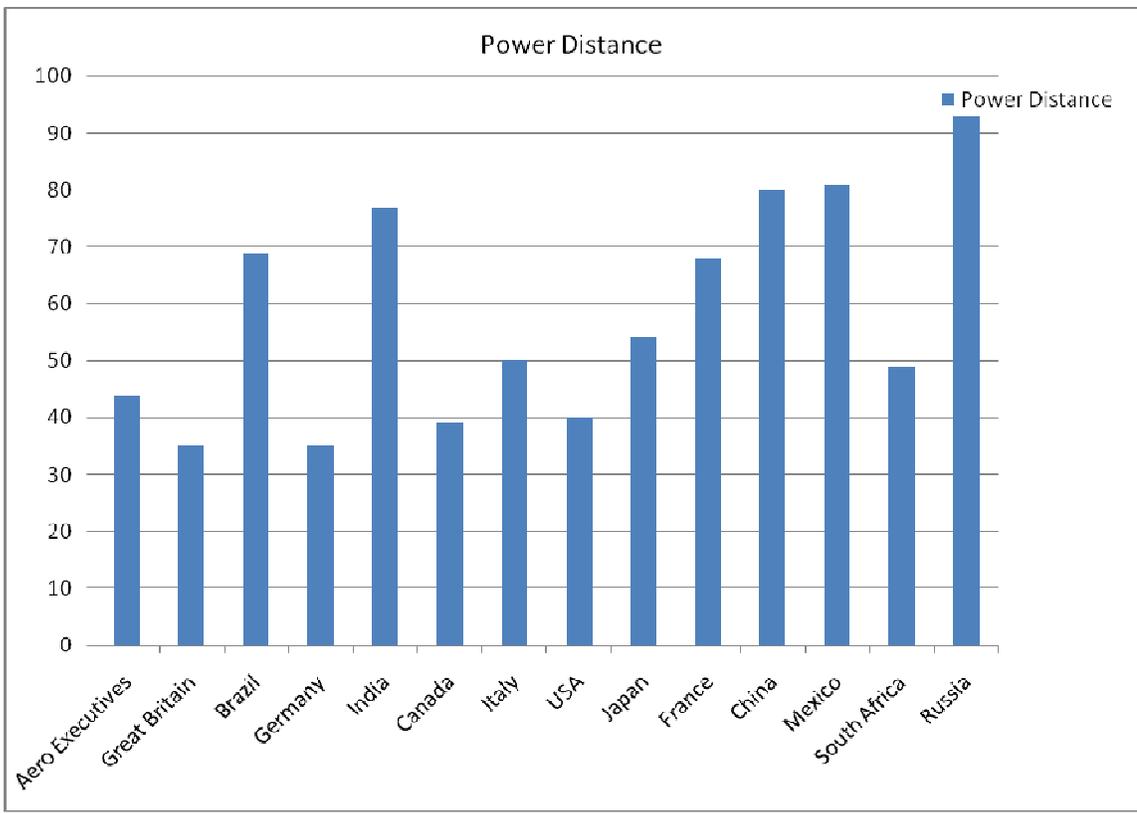


Figure 1.4 Power Distance Graph

Hofstede defines time orientation based on whether corporate success occurs over a long-term amount of time or the immediate gratification of success over a short-term period of time. Long-term orientation emphasizes values oriented toward the future: perseverance, thrift, and in business, building strong market positions first rather than striving for immediate market returns (Itap International, 1980, p. 1; see TABLE E.1). Short-term orientation focuses predominately on ideals which are related to the past and the present: respect for tradition, fulfilling social obligations in business, and focuses on the bottom line and quarterly reports (Itap International, 1980, p. 1; see TABLE E.1). In Hofstede’s business G8+5 populations the countries, including Mexico, South Africa, and Russia, do not report time orientation. Consequently, there is no data to compare with aerospace executives in this investigation. The analysis suggests the aerospace executives surveyed measure into the Long-term orientation dimension. They value

lasting success over quarterly profits, investing in personal networks, and common sense (Itap International, 1980, p. 1; see TABLE E.1). The aerospace executives contrast the strongest with Canada where the business population measured focuses on short-term orientation. Short-term orientation countries value quick results and place more importance on quarterly results rather than long term success (Itap International, 1980, p. 1; see TABLE E.1).

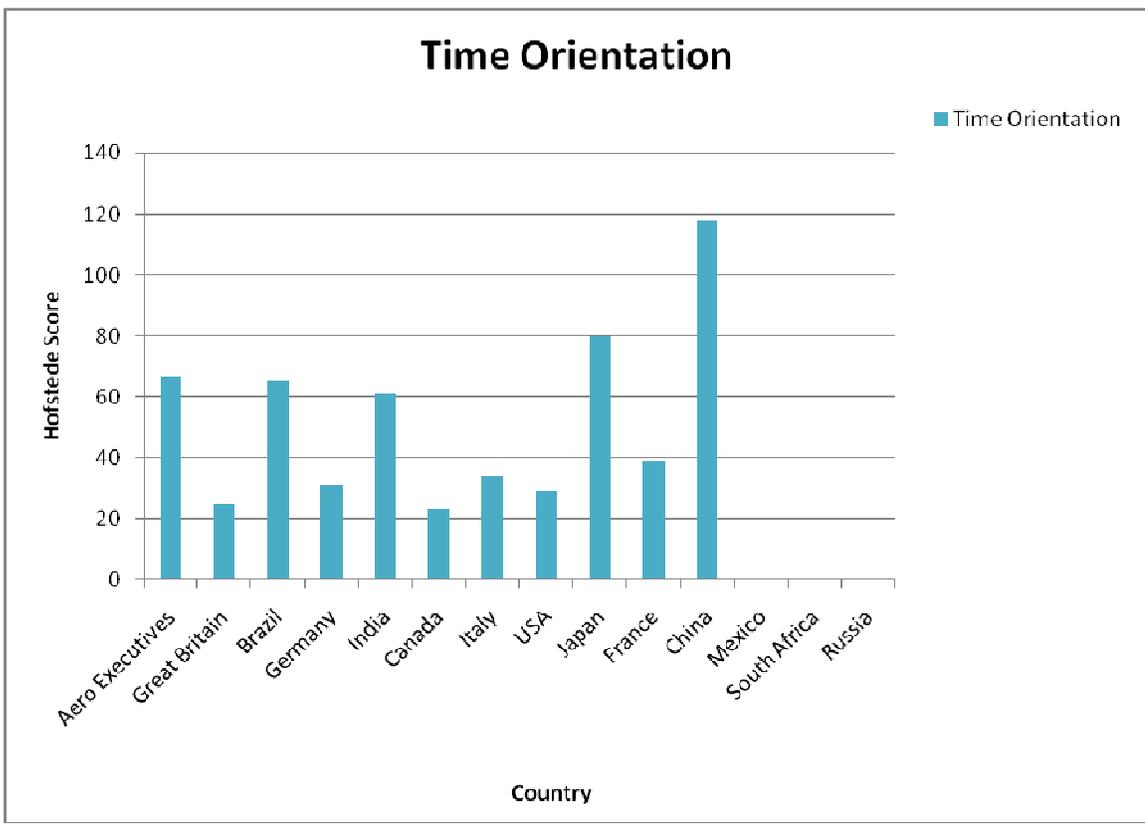


Figure 1.5 Time Orientation Graph

CONCLUSIONS DISCUSSIONS & RECOMMENDATIONS

1.21. Conclusion

This investigation invited 70 aerospace industry executives to participate in Hofstede's CWQ2 survey online; 62 of the 70 executives participated in this investigation. Subsequently, the CWQ2 results were aggregated and analyzed utilizing grounded theory principles. This investigation analysis also employed Likert-scale frequency of response measuring of averages and graphed, using Excel, the averages in tandem with Hofstede's data on G8+5 business populations. Inferences were drawn from the aggregated data which suggests that there are corporate multicultural dimensional differences among both aerospace industry executives and the business populations in Hofstede's G8+5 country data.

Aerospace industry executives and G8+5 countries across all categories of Hofstede's five dimensions reflected considerable variance among all populations. The variance reinforces the notion that cultural groups retain their early childhood and familial enculturation; these cultural identities are reified by societal structures (Hofstede, 2003, p. 1). Hofstede's five corporate multicultural dimensions measure aerospace industry's corporate cultural preferences using five dimensions: Achievement, Certainty, Individualism, Power Distance, and Time Orientation.

1.22. Discussion

Analysis of the data demonstrates that aerospace industry's corporate multicultural dimensions are as varied as those that Hofstede measured in his business populations. The aerospace industry executives slightly favored (54%) an achievement-orientation over a quality of life orientation in the Achievement dimension. In the Certainty dimension, executives slightly preferred (52%) the need for certainty-

orientation rather than a tolerance for ambiguity-orientation. The participants show a slight predisposition toward individual over group orientation in the Individualism dimension. Participants moderately preferred (44%) a participative rather than a hierarchical orientation in the Power Distance dimension. The Time Orientation dimension showed a surprisingly strong orientation among participants toward long-term outcomes rather than shorter-term goals.

The most observable outcome from the data analysis was that aerospace executives were sizably different in all five cultural dimensions from the G8+5 countries, most surprisingly when comparing the executives to the United States. In the Achievement dimension, executives (54%) measured lower than the United States (62%). This signifies both the United States and the executives are both achievement-oriented however, executives measure more closely to the quality of life-orientation. This means executives may more closely relate to those countries with quality of life-orientations. The Certainty analysis showed that aerospace executives (52%) favored a need for certainty-orientation, whereas the United States population (46%) preferred a tolerance for ambiguity. This was a surprising outcome to observe since the majority of aerospace industry executives who participated in this investigation were from the United States. The executive's need for certainty dimension characteristically represents the aerospace industry in the fact that people in this category prefer things such as not breaking the rules, information is power, and innovation is widespread (Itap International, 1980, p. 1; see TABLE B.1).

In the Individualism dimension the United States population (91%) strongly prefers an individual-orientation. Similarly, the aerospace executives (54%) also prefer an individual-orientation but not to the same degree as the United States. The executives (44%) and the United States (40%) were both slightly participatively-oriented in the Power Distance dimension. This signifies an informal workplace may be expected where subordinates and managers make decisions together (Itap International, 1980, p. 1). The executives (67%) leaned towards the long-term orientation where the United States (25%) measured more toward the short-term orientation within the Time-Orientation dimension. This was a very interesting observation to see the United States most

commonly prefers quarterly results rather than the executives who prefer long-term results.

The interesting outliers that largely differ from the aerospace executive and the United States may be observed from the data. In the Achievement dimension Japan had a very high dimension for achievement orientation. The structure in Japanese culture may explain the very high achievement orientation because “performance and results are stressed” (Itap International, 1980, p. 1). Russia was the outlier for the Certainty dimension when compared with the United States and executives. Russia’s lack of tolerance for ambiguity may be attributed to their cultures strict government structure and rules.

China is the outlier for the Individualism dimension in that they measure in at a very low group-orientation. China is a very family oriented society in which group-orientation is favored from childhood on; this cultural attribute is so common that it is also reflected in the workplace where the “company is responsible for the employees” (Itap International, 1980, p. 1). In the Power Distance dimension, Russia is again observed as an outlier as they strongly prefer a hierarchical-orientation to that of a participative-orientation. Russia, as previously mentioned, has a strict government with many rules to which society must abide. This “top-down” approach is a contributor to their hierarchical-orientation dimension (Itap International, 1980, p. 1). The China population strongly prefers long-term orientation over short-term orientation. This is an interesting observation because China measures the highest dimension from Hofstede’s G8+5 country populations measured.

1.23. Recommendations

As the world changes and more borderless business is conducted every day, there is an emerging market for corporate multicultural training. This analysis emphasized that the aerospace industries corporate multicultural dimensions do differ from Hofstede’s other business populations in other countries. This investigation suggests corporate multiculturalism is a crucial element in aerospace businesses.

The design of this investigation was exploratory in nature. The researcher sought to measure international aerospace industry executive's perceptions of corporate multiculturalism in the workplace. The purpose of this investigation was to utilize Hofstede's CWQ2 survey to measure 70 aerospace industry executives' corporate multicultural dimensions; 62 executives responded to the CWQ2 survey. This was a large response rate considering the online survey was only available to the executives for seven business days. In conclusion of this investigations analysis these recommendations were generated.

The researcher is recommending that it may be beneficial to further investigate corporate multicultural dimension training (CMDT) as an implementation in aerospace organizations. The data finding show there is in fact a difference between aerospace executives and the industry. Training such as, CMDT will facilitate productivity and efficiency in cross boarder business. Understanding one's own culture is important, but understanding those cultures with whom you work is essential.

The opportunities for future research include CMDT programs, because the training programs have not presently been developed. It is the goal of the researcher to utilize this investigation's data and research as building blocks towards the development of CMDT. There is a large market for CMDT in that, corporate multiculturalism has been prevalent since two decades ago when Hofstede began his research among IBM employees, and it is not going away (Hofstede, 2003, p. 1). There is great market potential for CMDT; with future research CMDT will develop the ability to be a training program that will better executives' rapport across the business world. Throughout this investigation it truly was thrilling to observe and experience all of the affluence multiculturalism provides to the workplace.

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Appendix A. Achievement

Table A.1 Achievement Table

ACHIEVEMENT ORIENTATION (masculine)	QUALITY OF LIFE ORIENTATION (feminine)
Goal achievement has priority over quality of life	Quality of life has priority over goal achievement
Assertiveness, competitiveness and ambition are virtues	Modesty, solidarity, and helping others are virtues
Big and fast are beautiful	Small and slow are beautiful
Admiration for the strong	Sympathy for the underdog
At home, biological differences mean different roles for the sexes: Men are expected to achieve, women to care. Women are more accepted at work if they adopt masculine roles.	Sex roles overlap, with men also taking caring roles. Strong ambitions are unusual among men as well as women. Women are accepted at work without having to dress and behave like men.
Advancement and earnings important	Employment security important
Higher job stress; long hours expected	Lower job stress; family time valued
Not my brother's keeper	Empathy for others
Live in order to work	Work in order to live
Expectation that work takes precedence over family life	Family life is taken into account
Long hours are expected; lots of travel and weekend work	More regular hours are the norm
Big hits are expected; large programs are more likely to get attention	Subtleties are appreciated. Little changes can make huge differences
A job applicant with an achievement orientation might be perceived by a quality of life oriented interviewer as focusing too much on what they have accomplished	A job applicant with a quality of life orientation might be perceived by an achievement oriented interviewer as underselling himself/herself

A good manager should be decisive and assertive	A good manager should be intuitive and strive for consensus
Performance and results are stressed	Solidarity and service are stressed
Incentives that improve earnings, recognition, advancement and challenge are preferred	Incentives that bring improvements in benefits and other quality of life areas (as opposed to monetary rewards alone) are preferred

Appendix B. Certainty

Table B.1 Certainty Table

NEED FOR CERTAINTY	TOLERANCE FOR AMBIGUITY
Rules and procedures specified and should not be broken	Flexibility. Rules should fit situations and may be broken
Philosophical, normative rules	Pragmatism, working principles
Trust is lower	Trust is higher
Relatively intolerant vis-à-vis original or marginal people	Relatively tolerant vis-à-vis different or marginal people
Information held is power	Information shared is power
Innovative ideas are rapidly applied	Innovative ideas are rapidly developed
Identity is associated with professional training and position in an organization	Identity is associated with personality and associates
Belief in specialists and expertise	Belief in generalists and common sense
Strong loyalty to employer, longer average duration of employment	Weak employer-employee bond, shorter average duration of employment
Prefer familiar situations	Comfortable in ambiguous situations
Comfort with well-defined rules, practices	There should be no more rules than is strictly necessary
Rules are sacrosanct; everyone knows the way to do things	If breaking a rule makes the client satisfied, rewards may be given for “thinking outside the box”
Stability is sought, valued and rewarded	Trying new approaches is encouraged and rewarded even at failure (because learning took place)
More formal and widely understood ways of behaving and getting the work done	Tolerance of differences, innovative ideas and a wide range of behaviors
Managers expected to know all the answers	Managers may not have solutions

In a learning environment, comfortable in structured learning situations and concerned with the right answers	In a learning environment, comfortable with open-ended learning situations and concerned with good discussions
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Appendix C. Individualism

Table C.1 Individualism Table

INDIVIDUAL ORIENTATION	GROUP ORIENTATION
"I" consciousness	"We" consciousness
Individual takes care of self and, sometimes, immediate family	Relatives, in-group take care of the individual in exchange for loyalty
Self-interest comes before those of the group	Interests of the group prevail over individual ones
Personal life and professional life are separated	Emotional dependence of the individual on organization
Competition between individuals	Cooperation and harmony among individuals
Efficiency prevails over loyalty	Loyalty prevails over efficiency
Freedom and challenge in jobs important	Training and use of skills in jobs important
Employees responsible for themselves	Company responsible for employees
Management is management of individuals even in teams	Management is management of groups
Individuals get bonuses and recognition	Teams get rewarded together and recognition goes to the group as a whole
Feedback is given directly to the individual	Feedback to an individual is often given indirectly or through a member of his/her in-group (individual may be uncomfortable being singled out)
Hiring and promotion decisions should be based on skills and rules only	Hiring and promotion decisions take employee's in-group into account
Manager may not inform or include the group before making decisions	Manager and group participate in making decisions; resistance is likely if decisions not reached by consensus

Appendix D. Power Distance

Table D.1 Power Distance Table

HIERARCHICAL ORIENTATION	PARTICIPATIVE ORIENTATION
Hierarchical, or "top-down" approach	Participative, consultative approach
Formality (reserve)	Informality
Manager, teacher, power figure expected to know the answers/best way	Good ideas and suggestions can come from people at any organizational level
Pyramidal structure	Pragmatic organization centered on tasks
Dependency, obedience	Independence, initiative
Latent conflict between the powerful and powerless accepted	Latent harmony between the powerful and the powerless accepted
Power holders are entitled to privileges	All should have equal rights.
The way to change an organization is by getting rid of those in power	The way to change an organization is by redistributing power
Subordinates expect to be told. Manager makes decisions appropriate to his/her level; employees rely more on their managers for direction	Subordinates expect to be consulted. Manager consults with those involved and expects them to participate in the decision making
Top-down organization; focus on functional specialties	Matrix structures where work to get done depends on cross-professional collaboration
More layers of management	Fewer levels of management
Work gets done most efficiently when appropriate channels are used	More important to get the work done than to go through channels
Employees are expected to follow through as delegated; they are less likely to suggest solutions for problems unless specifically asked/told	Employees are expected to go to managers to report on progress and suggest approaches to problem solving
Work tasks usually are clearly presented	Work tasks sometimes are ambiguous, less defined

Appendix E. Time Orientation

Table E.1 Time Orientation Table

LONG-TERM ORIENTATION	SHORT-TERM ORIENTATION
Success over a long time horizon is valued	Quick results expected
Importance of profits 10 years from now	Importance of this year's profits
Concern with Virtue	Concern with Truth
Investment in lifelong personal networks	Personal loyalties vary with business needs
Thrift, sparing with resources	Spending for status purposes (social consumption)
Leisure time is not so important	Leisure time is valued
Marginal savings rates are high	Savings rates are lower
Government by men/women	Government by law
What is good and evil depends upon the circumstances	There are universal guidelines about what is good and evil
Synthetic thinking	Analytic thinking
Priority given to common sense	Priority given to abstract rationality
Deferred gratification of needs accepted	Immediate gratification of needs expected
Managers are allowed time and resources to make their own contributions	Control systems are established to improve short-term financial performance and managers are judged by achieving these results
Measures such as market position, sales growth, and customer satisfaction are key in evaluating business performance	Measures such as profit growth, ROI, and residual income are key in evaluating business performance
Adaptivity	Known Truths

Appendix F. Participant Survey Summary

Good Afternoon Everyone,

You have all been pre-selected because your aviation and aerospace expertise sets you apart. Now I would like to put your skills and abilities to the test. I understand your time is valuable, so the survey is online and only takes approximately 10-12 minutes.

The survey is completely confidential and hosted by Itap International, a consulting company. The Likert style questions will measure your level of agreement or disagreement to certain situations.

Later this week you may expect a second e-mail from Itap International, from the email address: cwqadmin@itapcwq.com

This e-mail will contain a link to the online survey. Early participation is always greatly appreciated. I am recommending your participation no later than May 10th as it will be very helpful and always greatly appreciated.

Thank you all in advance for donating a few minutes of your time to fulfill my request. If you have any questions please feel free to contact Danielle Kaskel at dkaskel@purdue.edu / cell: 812-204-8342.

Sincerely,

Danielle A. Kaskel

Master of Aviation Technology

Class of 2010

Aviation Technology, Purdue University

812.204.8342 ~ dkaskel@purdue.edu

Appendix G. Consent Form

INFORMATIONAL FORM FOR: TIMCO Executives

Executive's:

I am formally inviting you to participate in a voluntary study of corporate multiculturalism. You were selected as a participant in this study because you are currently working in the aviation / aerospace industry and are considered an industry expert.

If you chose to participate, you will be sent an email link to Geert Hofstede's the "Culture in the Workplace 2" (CWQ2) survey. The CWQ2 survey will take approximately 10-15 minutes to complete online. While answering the questions, you will be requested to reflect upon personal attitudes, beliefs, experiences, and values. The survey may provide you the opportunity to reflect on corporate multicultural issues which you may not have considered in the past. At the conclusion of the CWQ2 survey there is a strictly voluntary demographic section that you may answer only if you are comfortable and willing to do so.

There is minimal risk of discomfort. You may skip any questions that may make you feel uncomfortable. All of your answers will be anonymously recorded for analysis. There is a brief demographic section at the conclusion of the survey that is strictly voluntary and not required. There are no financial benefits to your participation. Your participation or nonparticipation will not affect your employment status. All data gathered will be de-identified and aggregated by Itap International, a third party consulting and licensing firm. All data gathered will be destroyed upon conclusion of the investigation. Furthermore, Itap International, Purdue University and, Danielle A. Kaskel will never solicit your email in the future. No email addresses, or data gathered will ever be sold or distributed.

Your decision to partake in the interview or not will not affect your company, job status, or any relationship(s) with the department of Aviation Technology at Purdue University.

- If you have any questions or concerns, please contact me at: Danielle A. Kaskel (dkaskel@purdue.edu) or Professor Donald. A. Petrin (dapetrin@purdue.edu).

YOU DETERMINE WHETHER OR NOT TO INVOLVE YOURSELF. YOUR PARTICIPATION IN THE ONLINE SURVEY WILL BE YOUR CONFIRMATION OF "I ACCEPT" INDICATING YOU ARE AT LEAST 18 YEARS OF AGE, OF SOUND MIND AND, HAVE AGREED TO PARTAKE IN THE CWQ SURVEY INVESTIGATION AND HAVE READ THE AFOREMENTIONED INFORMATION PRESENTED.

Appendix H. Culture in the Workplace Two Survey Example



Culture in the Workplace Questionnaire™

As members of the global workplace, our effectiveness depends on many factors, chief among them the capacity to understand our own cultural preferences and how these influence, and are influenced by, those from other parts of the world. Cultural misunderstandings can be counterproductive for individual development, organizational effectiveness and profits, as well as international relations.

The Culture in the Workplace Questionnaire™ will provide you with insights about yourself and a better understanding of how your cultural preferences, as well as the cultural preferences of others, impact working relationships. It will also provide you with a framework for understanding diverse approaches to workplace interactions such as problem solving, working in teams and managing projects.

This questionnaire is licensed from Geert Hofstede, and in turn based on the research that created the first and best-known quantitative analysis of national cultures, as described in Hofstede's book *Culture's Consequences*, which helped to form the foundation of comparative management. Dr. Hofstede is a Dutch social scientist who developed this questionnaire to illustrate culturally dependent work preferences. He is Director (Emeritus) of the Institute for Research on Intercultural Cooperation (IRIC) at the University of Limburg at Maastricht, Holland. A number of questions in the Culture in the Workplace Questionnaire™ were designed and researched by Dr. Hofstede's colleague, Professor Andre Laurent, Emeritus Professor of Organizational Behavior at INSEAD.

This questionnaire focuses on understanding your own cultural profile and how that might compare to others. In global workplaces we are constantly building bridges across cultural and other boundaries in order to carry out our work more effectively and productively. Knowing your own profile will help you learn about others' preferences and build those bridges together.

		1 Strongly Disagree	2 Tend to Disagree	3 Undecided	4 Tend to Agree	5 Strongly Agree
1	The individual who pursues his or her own interest makes the best possible contribution to society as a whole.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	The main reason for having a hierarchical structure is so that everyone knows who has authority over whom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure H.1 CWQ2 Survey Example

Appendix I. Comparison Graph

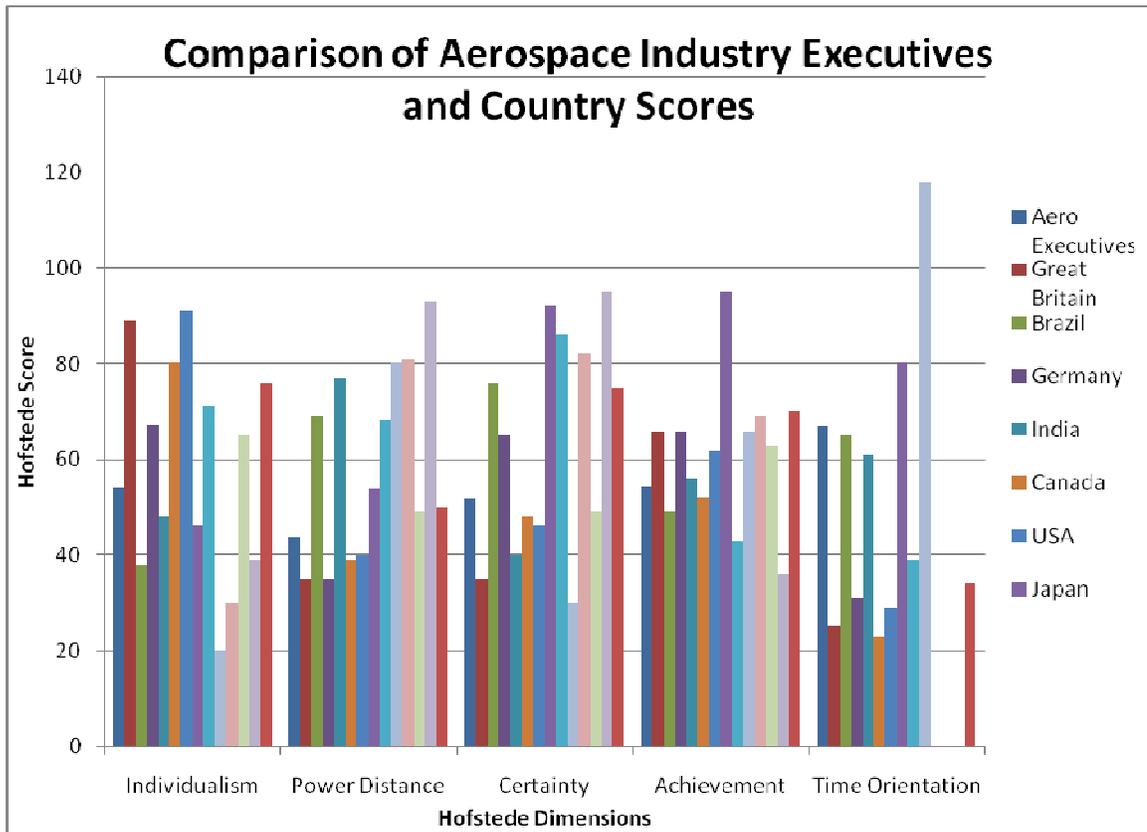


Figure I.1 Comparison Graph

Appendix J. Achievement Graph

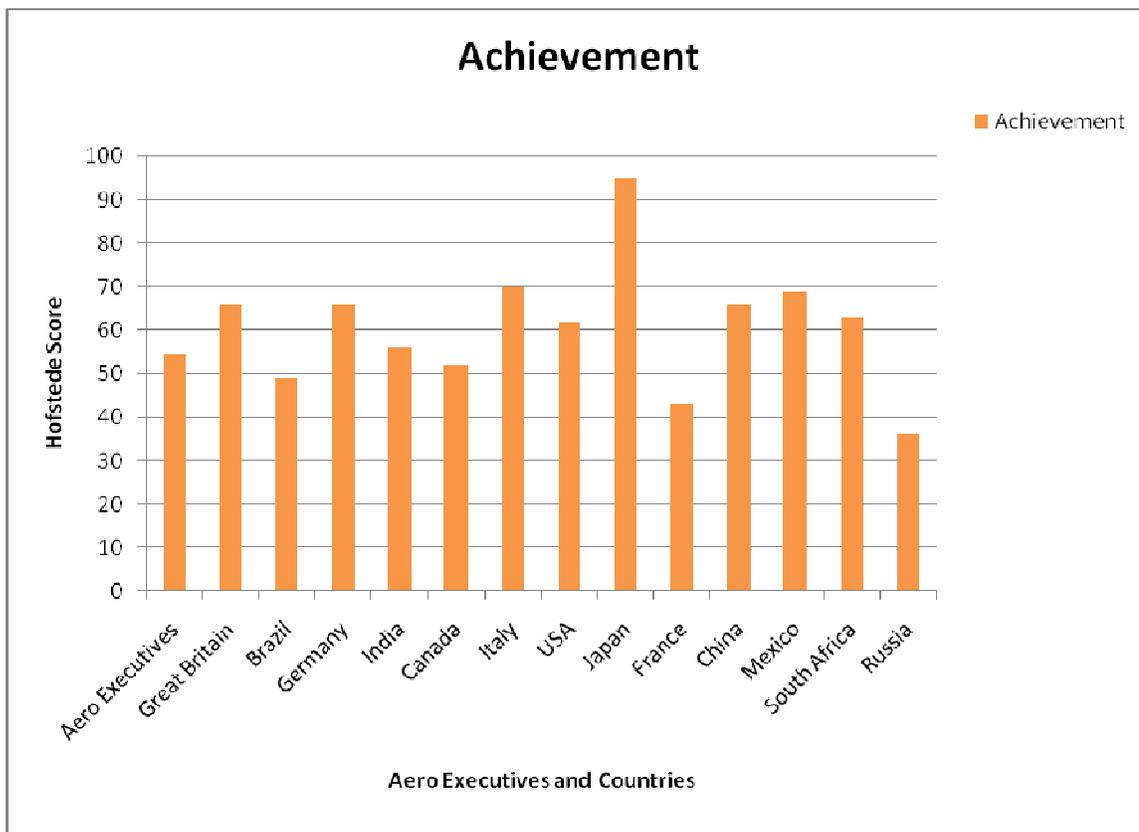


Figure J.1 Achievement Graph

Appendix K. Certainty Graph

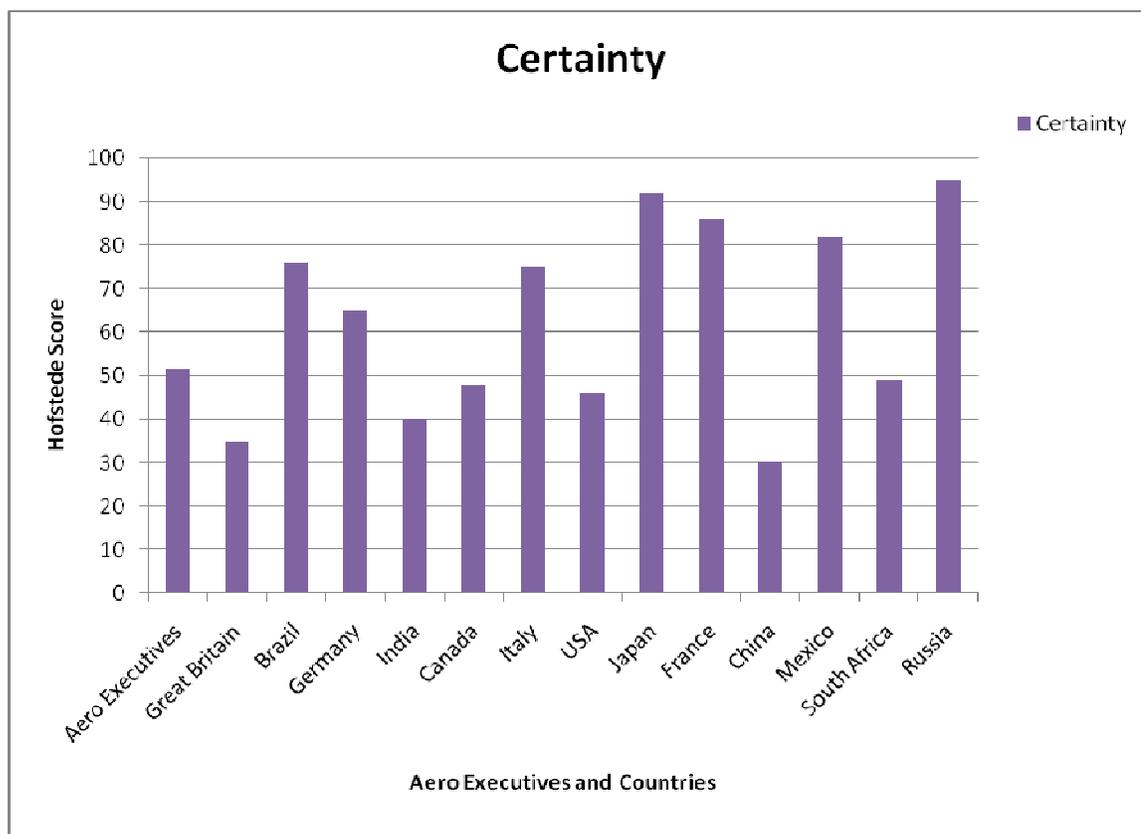


Figure K.1 Certainty Graph

Appendix L. Individualism Graph

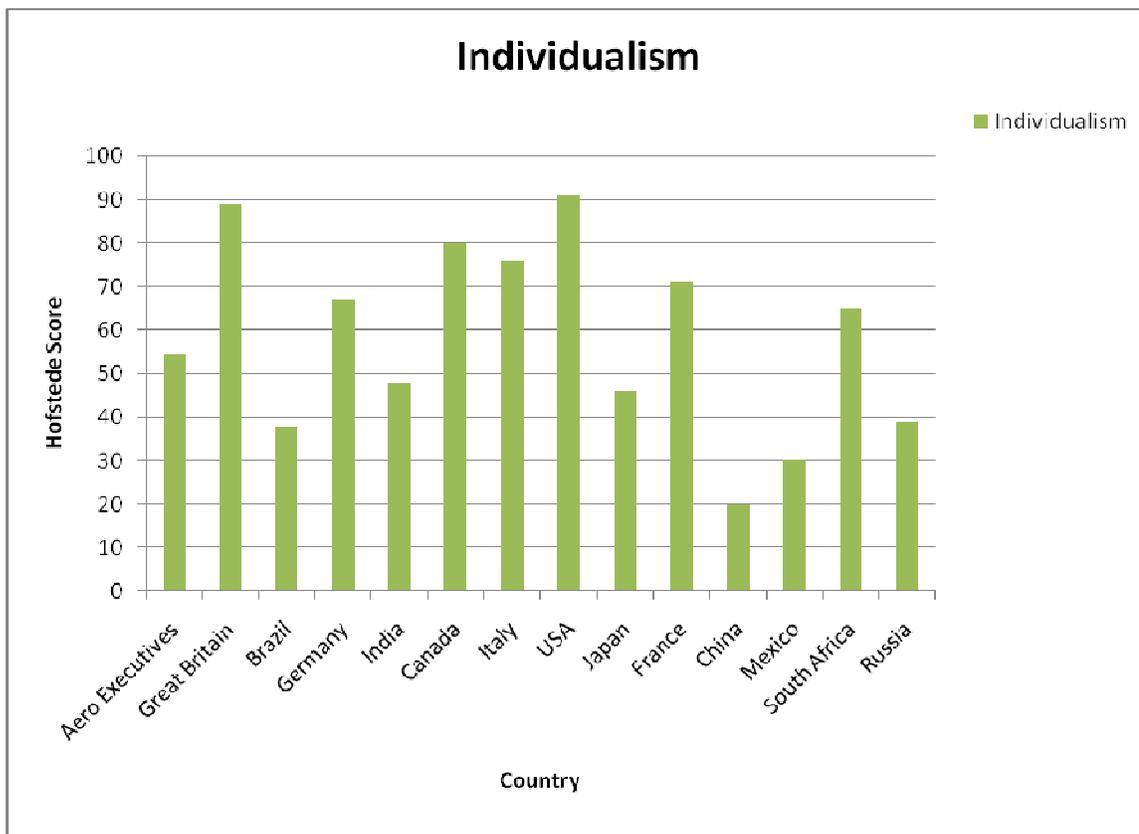


Figure L.1 Individualism Graph

Appendix M. Power Distance Graph

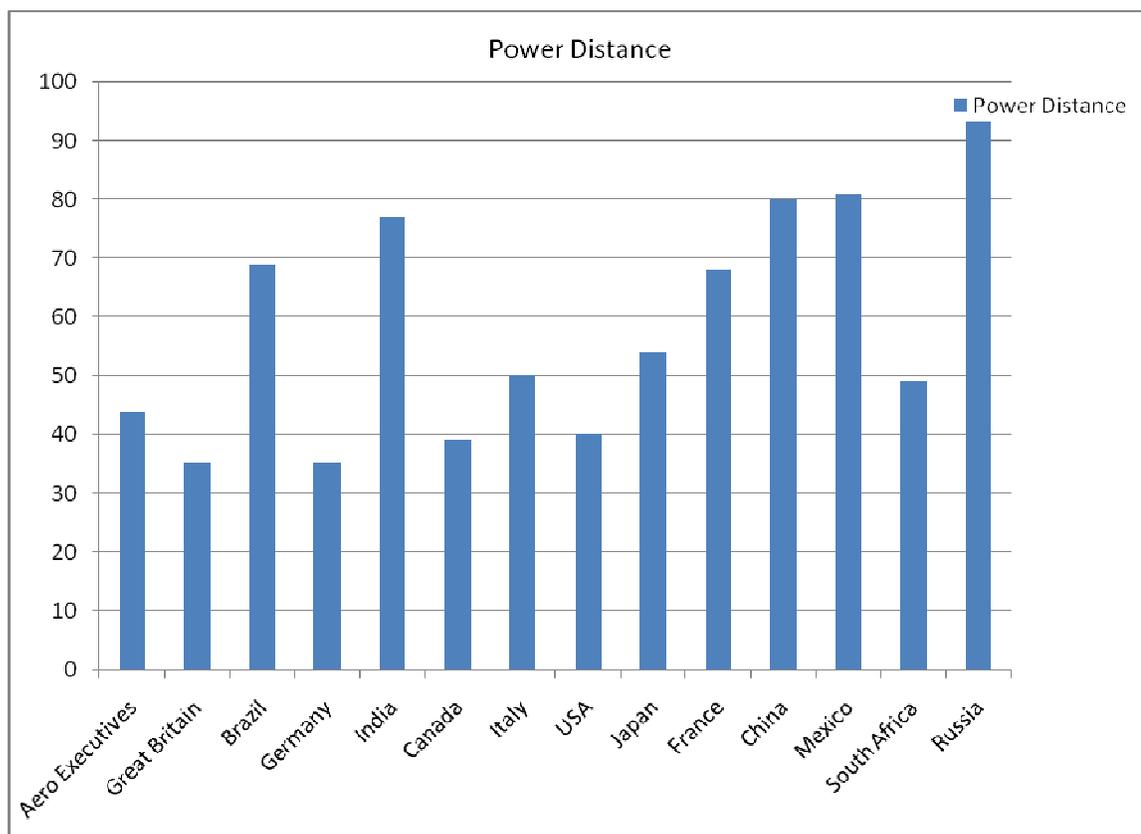


Figure M.1 Power Distance Graph

Appendix N. Time Orientation Graph

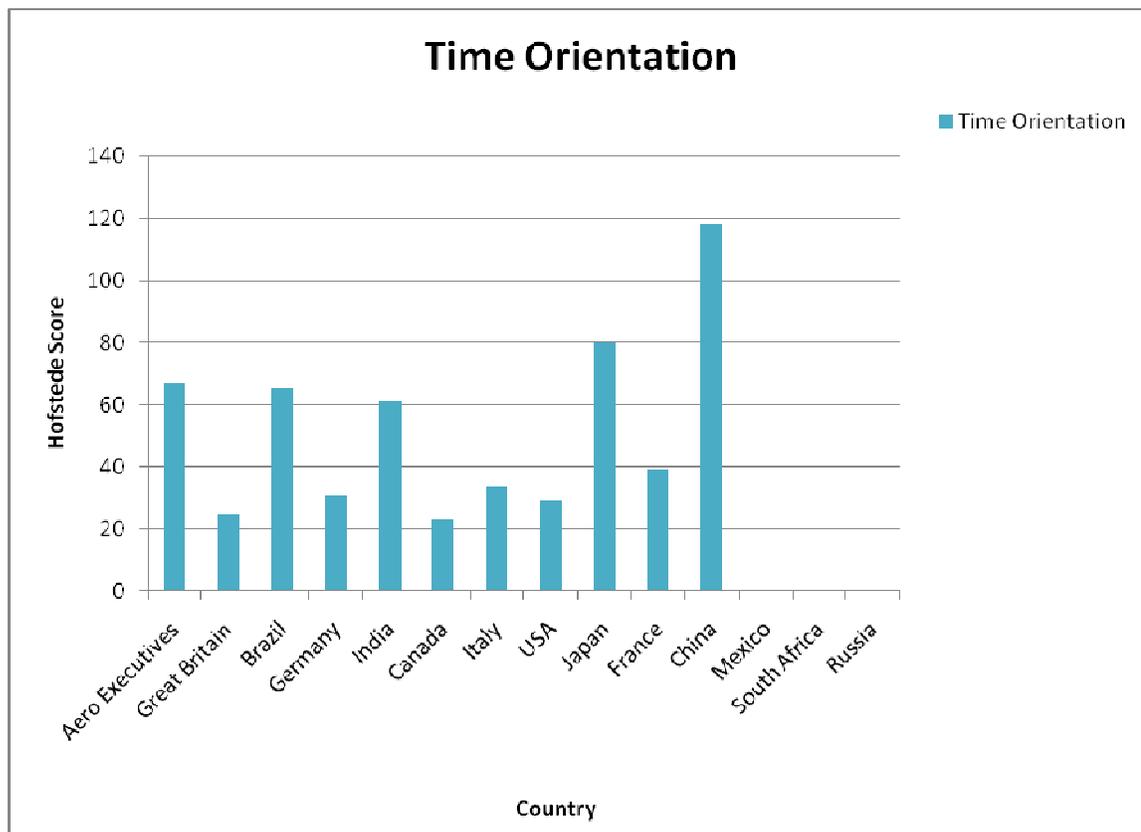


Figure N.1 Time Orientation Graph