Volume 6, Number 1 **ISSN 1544-0222**

JOURNAL OF INTERNATIONAL BUSINESS RESEARCH

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Academy Information
is published on the Allied Academies web page
www.alliedacademies.org

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Whitney Press, Inc.

Printed by Whitney Press, Inc.
PO Box 1064, Cullowhee, NC 28723
www.whitneypress.com

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JOURNAL OF INTERNATIONAL BUSINESS RESEARCH

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EDITORIAL REVIEW BOARD

LETTER FROM THE EDITOR

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A CROSS-CULTURAL CONTEXTUAL MODEL OF WORK-FAMILY INTERFACES IN MANAGING INTERNATIONAL ASSIGNMENTS

Nini Yang, San Francisco State University

ABSTRACT

The study is focused on work-family interfaces pertaining to international assignments with special attention to the role of family and leader flexibility in managing expatriate performance and retention. It extends prior work in work-family research by developing a cross-cultural contextual model. Several research questions are addressed to identity contextual variables that contribute to the cultural distance across national boundaries (e.g., between an expatriate's home county and the host country), difference in complexity between domestic human resource management and international human resource management (e.g., regarding expatriate selection, training and development, relocation assistance, performance, and retention), different types of international assignments (e.g., short-term versus long-term, standard versus non-standard), and expatriate personal profiles relevant to international staffing and work-family related matters (e.g., gender, marital status, family structures, and personnel classification of parent country nationals, host-country nationals and third country nationals). Based on the existing IHRM literature, multivariate variables are incorporated in an effort to gain a better understanding of their direct or indirect influence on expatriate work-family adjustments and performance outcomes so that to help develop culturally appropriate IHRM practices and assistant programs for managing international assignments.

INTRODUCTION

The present study is focused on work-family interfaces pertaining to international assignments with special attention to the role of family and leader flexibility in managing expatriate performance and retention. It extends prior work in work-family research by developing a cross-cultural contextual model (Figure 1). Several research questions are addressed to identity contextual variables that contribute to the cultural distance across national boundaries (e.g., between an expatriate's home county and the host country), difference in complexity between domestic human resource management (HRM) and international human resource management (IHRM) (e.g., regarding expatriate selection, training and development, relocation assistance, performance, and

retention), different types of international assignments (e.g., short-term versus long-term, standard versus non-standard), and expatriate personal profiles relevant to international staffing and work-family matters (e.g., gender, marital status, family structures, and personnel classification of parent country nationals, host-country nationals and third country nationals). Based on the existing IHRM literature (e.g., Black & Stephens, 1989; Dowling & Welch, 2005; Tung, 1982; Marx, 1996; Yang 2005), those multivariate variables are incorporated in an effort to gain a better understanding of their direct or indirect influence on expatriate work-family adjustments and performance outcomes so that to help develop culturally appropriate IHRM practices and assistant programs for managing international assignments.

CONCEPTUAL GROUNDS

Economic globalization and business expansions across borders denote increased demand for human capital development and global mobility of human resources (Yang, 2005). At the firm level, human resource management plays a strategically important role in international staffing and in developing culturally appropriate polices and assistant programs to support and sustain international business operations. For example, an international survey of 273 companies from 17 nations indicates that the use of expatriates will continue to increase in response to the pressures for internationally mobile staff (Price Water House Coopers, 2002). In another survey of 500 U.S. firms (Hewitt Associates, 2004), 45% indicate that they are currently using a global sourcing model to obtain cost efficient human resources. The percentage of jobs being outsourced is averaged 13% for those 500 firms, and will roughly double in the next three years. Those data may be regarded as evidence of a growing global flow of human resources in multiple directions (e.g., inflow and outflow of employees with different nationalities).

Cross-cultural research and IHRM literature have consistently classified three categories of the international personnel based on nationality – parent country nationals (PCNs), host country nationals (HCNs) and third country nationals (TCNs). However, there has been an imbalance in addressing key issues associated with international assignments. For example, different terminologies are being used in defining expatriates, and by tradition, only PCNs are considered expatriates (Dowling & Welch, 2005). The existing IHRM literature is by and large focused on PCNs in the phase of expatriation. Organizations tend to view international assignments as a one way process (expatriation) and thus are likely to provide less or virtually no support for expatriate work-family adjustments in the phase of repatriation (when an expatriate returns home after the assignment) than in the phase of expatriation (departure and relocation in a foreign country). Given the growing flow of jobs and employees across national boundaries and the difficulty surrounding international assignments, it is imperative that such imbalance be addressed in IHRM research and practices.

Expatriates

An obvious difference between domestic and international HRM is the mobility of personnel across national boundaries, which necessarily involves an expatriation and repatriation process. Employees taking an international assignment through the expatriation-repatriation process are generally called expatriates. However, Dowling and Welch (2005) point out that there have been varying definitions of expatriates. Some firms simply call such employees international assignees, while others use different terminologies such as expatriates, inpatriates, transpatriates, and repatriates according the direction of the personnel transfer. In contrast, expatriates are outflow employees from a firm's parent country to its foreign operations while repatriates are those returning to the parent country after their international assignments. Inpatriates signify the inflow of foreign employees to a firm's parent country (e.g., from a foreign subsidiary to the headquarters), and transpatriates refer to employees who are transferred between foreign subsidiaries. Different terms used by different firms or as preferred by different researchers have added a level of confusion surrounding the definition of expatriates. Although it is clear that PCNs are expatriates, it is often overlooked that so are HCNs and TCNs when they are transferred to operations outside their home countries. For clarity, the present study follows a broad definition of expatriates as employees who are temporarily transferred out of their home base into some foreign operations (Dowling & Welch, 2005). This definition takes account of all three categories of the international personnel, commonly classified as PCNs, HCNs, and TCNs as they move across national boundaries.

Expatriation and Repatriation

When expatriates are transferred across borders, they carry with them both the cultural values and the work role assignment from the home country to a foreign environment. One the one hand, expatriates play a pivotal role in the global mobility of corporate competence and knowledge. On the other hand, expatriates themselves must adapt to the varying cultural, socioeconomic, and legal conditions in the host country. Previous cross-cultural research has identified some key factors that tend to influence expatriates' ability to adapt to a foreign culture and subsequently their ability to perform job assignments overseas, such as culture and language difficulties, willingness to move, length of assignment, different management styles, work-related factors, difficulty associated with family adjustment in the new environment, and psychological contact between the expatriate and the multinational (e.g., Black & Stephens, 1989; GMAC-GRS 2002; Marx, 1996; ORC Worldwide, 2002; Tung, 1982).

The process of an international assignment includes both expatriation and repatriation. The dilemma is that longer assignments allow expatriates more time to adjust to a foreign environment, but the longer they stay overseas, the more difficulty they and their family members are likely to encounter as they return home after the assignments. Adding to the problem is little evidence in the

literature that multinationals view the preparation and assistance for repatriation as important as pre-departure training and assistance programs for expatriation. Attention to the readjustment aspects of managing international assignments has been somewhat belated. As a result, repatriation is the least understood and most poorly handled. In an international survey (Harzing, 1996), over 52% of 287 subsidiaries reported repatriate re-entry problems. Among 181 multinationals surveyed by GMAC-GRS (2002), high expatriate turnover rates were reported with an average of 44%, 50% left the firm within one year, and 39% of the surveyed firms did not know their turnover rates. Adding to the problem, similar or different challenges for transpatriation and inpatriation are often overlooked. Organizations tend to provide less or virtually no support to TCNs and HCNs than to PCNs during the expatriation-repatriation process.

To counter the imbalance towards expatriate issues, the present study examines the expatriation-repatriation as a holistic process, rather than in one outbound direction per se. The cross-cultural contextual model of managing international assignments developed below embraces different types of international assignments (e.g., short-term versus long-term, standard versus non-standard) and expatriates of different nationalities (i.e., PCNs, TCNs and HCNs). The Key issues addressed include cultural dimensions pertaining to work versus family role priorities in different societies (e.g., between the parent country and the country of assignment), work role clarity across the corporate boundary (e.g., between the headquarters and a foreign subsidiary), role discretion (an expatriate's freedom to adjust work and family role behaviors to fit the situation), leader flexibility (listening empathy and responsiveness towards work-family matters), and types of international assignments that bear significantly on IHRM practices such as cross-cultural training and family-supportive policies through the expatriation-repatriation process. Outcome variables concern both the employing organizations (e.g., expatriate performance, job satisfaction, and retention) and individual expatriates (e.g., career development, personal wellbeing, and family welfare).

Work-Family Interfaces in International Assignments

Employees are transferred internationally for varying lengths of time depending on the purpose of the transfer and the nature of the task to be performed. Most of the research into the international assignment issues, however, has been around the long-term assignments. Dowling and Welch (2005) pointed out that short-term and extended international assignments have received limited research attention. As well, corporations tend to provide limited or no support to short-term and non-standard international assignments such as commuter assignments, rotational assignments, and virtual teams. There is also a paucity of organizational family-supportive activities for repatriation (PCNs returning to the home country after the assignment), inpatriation (HCNs assigned to the parent country), and transpatriation (relocation of TCNs). As an indication of expatriates' performance related problems and personal wellbeing, a survey by the World Bank (1997) revealed

an increase in psychological disorders associated with frequent international travels. Among the three main factors are separation from home and family, workload, and lack of backup aboard.

Understanding work-family interfaces is a pivotal concern of international assignments. Recent survey reports (e.g. GMAC-GRS 2003; SHRM Global Forum, 2003) indicate that expatriates are largely from married couples accompanied by spouses and non-grownup children (Table 1). Many are from dual-career couples with both work and family responsibilities (ORC Worldwide, 2003). For a practical concern, family adaptability has been identified as an important predictor of expatriates' performance and retention (e.g., Brewster, 1988; Hamill, 1989; Marx, 1996; Tung, 1981). Oftentimes, family instability leads to expatriates' premature return to the home country. Estimated costs of each failure to the parent firm could run between $250,000 and $1 million (Caudron, 1991), or averaged as high as three times an expatriate's annual domestic salary plus the cost of relocation (Harvey, 1983). Although detailed data are not available for all nations, a widely cited study (Tung 1981) revealed that inability of spouse to adjust to a new environment is the number one reason for the U.S expatriates to fail and is the only one reason that consistently explains the failure of European expatriates. Later studies appear to confirm the findings (Dowling & Welch, 2005).

Table 1: Current Expatriate Profile

Category:	**PCN (42%) HCN (16%) TCN (42%)**	
Gender **Age (Yrs)** **Marital status**	Male (82%) 30-49 (60%) Married (65%)	Female (18%) 20-29 (17%) Single (26%) Partner (9%)
Accompanied by **Duration** **Prior international experience**	Spouse (86%) 1-3 years (52%) 30%	Children (59%) Short-term (9%)

Source: Based on data from Global Relocation Trends: 2002 Survey Report, GMAC Global Relocation Services, National Foreign Trade Council and SHRM Global Forum, GMAC-GRS 2003.

Previous cross-cultural research found cultural relativity of role priorities a significant factor influencing sources of work versus family related role pressures and patterns of work-family relationship experienced by employees in different societies (e.g., Kinnunen & Mauno, 1998; Schein, 1984; Yang, 2000, 2005). In comparison, Americans tend to compartmentalize work and family life domains, and when in conflict, they tend to place work ahead of personal or family lives. The Europeans favor the term "work-family reconciliation" and seldom work extensive overtime.

In Japan, men do not normally return home after regular work hours, but spend more time for informal work-related activities. However, work-family relationship is perceived as being integrative and one's commitment to work is considered to the long-term benefit of the family rather than forcing family sacrifice for one's career success or vase versa.

Thus successful selection, development and retention of expatriates require more organizational awareness of the role of family in international assignments and IHRM responsiveness to work-family related matters in a new environment. Implications for effective international management and IHRM in particular include more culturally appropriate family-supportive policies, and more involvement in employees' personal lives, such as family adaptability and specific concerns of dual-career couples.

A MULTIVARIATE CROSS-CULTURAL CONTEXTUAL MODEL

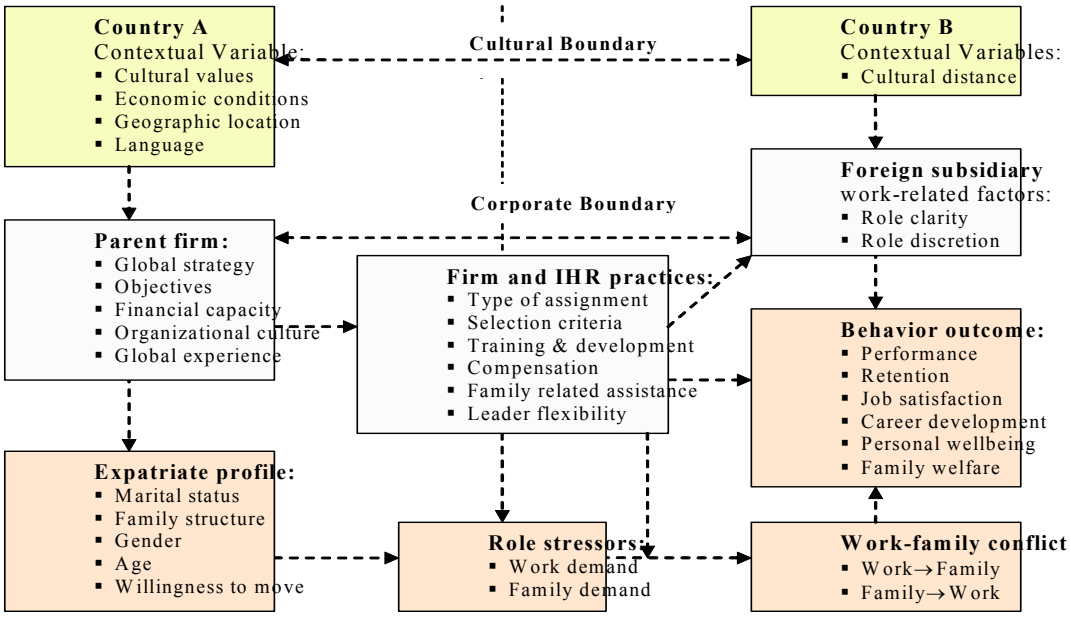
From a cross-cultural research perspective, a variety of work-family related value dimensions merits attention, which range from culturally linked social support and gender role explanations (e.g., individualism versus collectivism, masculinity versus femininity, Hofstede, 1980, 1997, 2001; Triandis, 1989, 1995; Yang, 2005) to cultural variation in a normative emphasis on segmentation versus integration of work and family role obligations and relative role priorities (e.g., Hofstede, 1991; Lobel, 1991; Schein, 1984; Yang, Chen, Choi, & Zou, 2000; Yang, 2005). A difficulty in managing the international workforce and particularly expatriates in different parts of the world and with differing home country backgrounds is to balance the organizational need for consistency in family-supportive policies and relocation assistance programs on a worldwide basis (standardization) while meeting the call for effective IHRM adaptation (differentiation) according to the target country cultural context, types of international assignments, and expatriate personal profiles.

While expatriates may experience similar strains and difficulty associated with international assignments and family relocation (e.g., travel logistics, housing, child care or school arrangements, job and career anxiety for dual-career couples, etc.) regardless of their nationality or home-country backgrounds, the magnitude of such strains and difficulty may vary significantly depending on the cultural toughness of the target country or the cultural distance between an expatriate's home country and the country of assignment (Mendenhall & Oddou, 1985; Triandis, 1989). Cultural toughness or cultural distance is the degree of difference between an expatriate's home culture and the new cultural environment of the host country. Differences in cultural orientations, languages and geographical locations present important aspects of cultural distance. As shown in Figure 1, there is a cultural boundary to be crossed through the process of expatriation and repatriation. There is also a corporate boundary to be crossed between the parent firm and a foreign subsidiary (or quite possibly a boundary between foreign operations). Keeping IHRM policies consistent on a worldwide basis or taking a geocentric approach, how well an expatriate can adjust to a particular

posting is related to the country of assignment (the degree of cultural toughness) and some individual variables in expatriate personal lives (e.g., nationality, family adaptability, prior international experience). Differentiating IHRM policies or taking an ethnocentric or a polycentric approach in the host country, conflicting role signals (Gregerson & Black, 1991) or perceived breach of the psychological contract (Guest, 1008; Welch, 2002) between the parent firm (role sender) and the expatriate (role recipient) may occur. The psychological contract refers to an employee's belief regarding reciprocal obligations between the person and the employing organization (e.g., delivery of fair treatment, support, and performance based on "the deal"). When applied overseas, the role sender may not fully recognize the barriers between cultural boundaries and between corporate boundaries that influence an expatriate's role conception and role accomplishment (e.g., international assignment and work-family role adjustment in the host country). Perceived changes in treatment or unmet expectations (e.g., work or family related support and role discretion) may increase difficulty in work-family adjustment and subsequently cause an expatriate's job dissatisfaction, turnover, or underperformance. Conflicting role signals may increase an expatriate's stress level and subsequently intensify work-family conflict and performance related problems. Conversely, work role clarity across the corporate boundary facilitates a healthy expatriation. Role discretion for an expatriate to adjust role behaviors in a new environment or upon repatriation lends a hand to work-family reconciliation and thus facilitates a smooth adaptation across the cultural boundary. Where IHRM family-supportive policies are not well established or workplace uncertainty is high (e.g., when a firm is relatively new in international business), leader flexibility (listening empathy and responsiveness towards work-family matters) may buffer or alleviate the impact of conflicting role stressors by providing emotional support or enhancing the role discretion of the expatriates.

To address the above raised issues associated with managing international assignments, the present study proposes a more comprehensive cross-cultural contextual model of work-family interfaces in managing international assignment. The model incorporates the existing theories of cultural distance and toughness (e.g., Triandis 1989, Mendenhall & Oddou, 1985), cultural values concerning the work-family relationship (e.g., Hofstede, 1980, 1991; Lobel, 1991; Schein, 1984; Yang, 2000, 2005), and types of work-family conflict (e.g., Frone, Russel, & Cooper, 1992; Yang 1993). As illustrated in Figure 1, the model integrates multivariate factors that independently or jointly influence work-family interfaces in international assignments and potential outcomes, leading to research questions such as 1) what cultural differences and particularly work-family related value dimensions present challenges to expatriates' cross-cultural adaptation; 2) what personal characteristics tend to influence expatriates' work-family adjustments and performance outcomes; 3) to what degree HRM and domestic IHRM differ in selecting, assisting, developing and retaining the international workforce; and 4) what factors may buffer or alleviate the impact of work and family role stressors in a new environment.

Figure 1
A Cross-cultural Contextual Model of Work-family Interfaces in International Assignments



From the cross-cultural contextual model of work-family interfaces and key issues revealed from the practical field of international assignments, several propositions can be developed for future research and theory building. Emerging as some common factors or barriers to global mobility of human recourses are assignment locations, types of assignments, expatriate personal and family profiles, level of organizational support (family-supportive practices and leader flexibility), role clarity across corporate boundaries, and role discretion for work-family adjustment in a new environment.

Country of Assignment and Leader Flexibility

Proposition 1: Keeping IHRM family-supportive policies consistent on a worldwide basis, the degree of cultural distance across borders will be positively related to work-family conflict experienced by individual expatriates.

Proposition 2: Regardless of the cultural distance across borders, leader flexibility will interact with expatriate work demand to determine organizational and personal outcomes of international assignments (e.g., work role effectiveness, job satisfaction, retention, personal well-being, and family welfare).

Proposition 3: Regardless of the cultural distance across the country boundary, leader flexibility will interact with expatriate family demand to determine organizational and personal outcomes of international assignments (e.g., work role effectiveness, job satisfaction, retention, personal well-being, and family welfare).

Types of International Assignments and Leader Flexibility

Proposition 4: Differentiating IHRM family-supportive policies according to types of international assignments, leader flexibility will interact with work demand to determine levels of work-family conflict experienced by individual expatriates.

Proposition 5: Differentiating IHRM family-supportive policies according to types of international assignments, leader flexibility will interact with family demand to determine levels of work-family conflict experienced by individual expatriates.

Expatriate Profiles and the Corporate Boundary

Proposition 6: Keeping IHRM family-supportive policies consistent on a worldwide basis, role clarity across the corporate boundary will be negatively related to work-family conflict experienced by individual expatriates.

Proposition 7: Differentiating IHRM family-supportive policies according to expatriate profiles (e.g., PCNs, HCNs, and TCNs), role discretion across the corporate boundary will be negatively related to work-family conflict experienced by individual expatriates.

Proposition 8: Differentiating IHRM family-supportive policies according to expatriate profiles (e.g., PCNs, HCNs, and TCNs), role discretion across the corporate boundary will interact with work demand to determine organizational and personal outcomes of international assignments (e.g., work role effectiveness, job satisfaction, retention, personal well-being, and family welfare).

Proposition 9: Differentiating IHRM family-supportive policies according to expatriate profiles (e.g., PCNs, HCNs, or TCNs), role discretion across the corporate boundary will interact with family demand to determine organizational and

personal outcomes of international assignments (e.g., work role effectiveness, job satisfaction, retention, personal well-being, and family welfare).

Family Involvement in International Assignments

Proposition 10: Spouse involvement in the IHRM selection process will be negatively related to work-family conflict experienced by individual expatriates.

Proposition 11: Spouse involvement in the pre-departure cross-cultural training will be negatively related to work-family conflict experienced by individual expatriates.

Proposition 12: Spouse willingness to relocate will interact with work demand to determine organizational and personal outcomes of international assignments (e.g., work role effectiveness, job satisfaction, retention, personal well-being, and family welfare).

Proposition 13: Spouse willingness to relocate will interact with family demand to determine organizational and personal outcomes of international assignments (e.g., work role effectiveness, job satisfaction, retention, personal well-being, and family welfare).

CONCLUSION

The cross-cultural contextual model of work-family interfaces in managing international assignments extends existing concepts of cultural values and the work-family relationship in four aspects. First, one step further from grouping and comparing employees by country, the model is particularly focused on the role of family in global mobility of human recourses, with recognition that the increased business expansion across borders alters the mix of the international workforce (e.g., PCNs, HCNs, and PCNs) and types of international assignments (e.g., short-term versus long-term, standard versus nonstandard). As jobs and employees are transfer in multiple directions, effective management of international assignment should take accounts of employees of different nationalities and view expatriation-repatriation as a holistic process rather than an outbound direction per se. Expatriates assigned to a foreign operation may come from different country backgrounds. Expatriates of the same nationality may be transferred to different country locations. As well, their assignments can be short-term, extended, long-term, or non-standard such as commuter assignments, rotational assignments, and virtual teams. The cross-cultural contextual model posits that the cultural boundary and the corporate boundary to be crossed by different expatriates for different types of assignments may present similar but unequally challenges for work-family adjustments and outcomes.

Second, the model looks beyond formal IHRM family-supportive policies by addressing the role of leader flexibility as a potential buffering effect on expatriates' work-family adjustments and performance outcomes in a new environment. It draws attention to expatriate profiles (e.g., nationality, gender, marital status, family structure) and types of international assignments that tend to differentiate levels of organizational support (e.g., family-supportive policies and relocation assistance programs).

Third, the model discriminates the cultural boundaries and the corporate boundaries to be crossed by individual expatriates. It stands to reason that variations in the cultural distance across borders entail unequal challenges to work-family adjustments in international assignments. Variations in role clarity and role discretion across the corporate boundary bear significantly on the successful transfer of organizational competence as well as a healthy relocation of individual expatriates and their families.

Finally, the propositions and key issues derived from the model provide insights for future research and theory building. They also provide implications for developing effective IHRM family-supportive practices, which can be consistent on a worldwide basis and at the same time offer sufficient flexibility according to countries of assignment, types of assignments, and expatriate personal and family profiles. The contextual model developed by the present study of course calls for further refinement and the propositions derived await empirical testing.

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A REVIEW OF THE FINANCIAL MARKETS IN THE GULF COOPERATION COUNCIL (GCC) COUNTRIES

James Reagan McLaurin, American University of Sharjah

ABSTRACT

With the advent of globalization, which necessitated economic and financial development across the globe, the notion of setting the rules and regulations that would govern ethical domestic and international dealings became a foremost priority to many nations. Be it an employment contract, an entrepreneurial venture, or a global-scale stock market transaction, clarity, integrity and transparency are constructs that have nowadays become highly delineated and sought.

The Gulf Cooperation Council (GCC) countries provide a concrete example of nations that have perceived the significance of regulating their market affairs. This can be seen in their almost-uniform call for the creation of Financial Markets in interest of further promoting privatization in a time where traditional reliance on the oil sector proved – like all things – transient.

Given the importance of regulating such Financial Markets, Kuwait, Qatar, Bahrain, and the United Arab Emirates have set-up their markets in such a way that policies be based on solid grounds. The Kuwait Stock Exchange – under the supervision of the Kuwait Investment Authority, the Doha Securities Market – in collaboration with Qatar Central Bank, the Bahrain Stock Exchange – working closely with the Bahrain Monetary Agency, and the Dubai Financial Market – in adherence to the directives set forth by the Emirates Stocks and Commodities Authority – have devised and adhered to regulations that clearly drew the line between ethical and unethical market behavior.

The fact that transparency measures based on the Transparency International's 2003 Corruption Perception Index for all four countries were quite comparable indicates that the possibility of joining forces and creating a single GCC Financial Market is not a remote or unfeasible one.

INTRODUCTION

In a time where economic and financial development have become constructs highly related to globalization and international trade, it becomes of increasing importance that government entities further incorporate guidelines that would regulate ethical domestic and international transactions. The call for such standards as simplicity and integrity on both the local and the global levels has

necessitated that nations pass rules and regulations that would standardize business and political relations.

The notion of privatization has lately become a critical issue in developing countries including the Gulf Cooperation Council (GCC) countries in interest of keeping up with the fast pace of the global economy. Privatization in many instances is perceived as a convenient means to limit reliance on the oil sector for the survival of the GCC countries.

The advocacy and importance of transparency and ethical trade, which in essence are fundamental principles to which most market dealers need to adhere, serve as a basis upon which legal entities may set their regulatory rules and decisions.

This paper presents a cross comparison of four GCC Financial Markets – Kuwait, Qatar, Bahrain, and United Arab Emirates, namely Dubai. A brief recount of the Judicial System prevalent in each of the four countries is presented and an introduction to the regulating Investment Authority – or its equivalent – in each country.

Further, the concept of privatization shall be explored as relevant, followed by an introduction to the Financial Market and its regulations as applicable across the countries in question. The fundamental notions of transparency and integrity shall be presented accordingly, followed by a comparison of the most prominent findings and the conclusion.

STATE OF KUWAIT

State of Kuwait Judicial System

In Kuwait, the legal system "is an amalgam of British common law, French civil law, Islamic legal principles, and Egyptian law" (Pogar – Kuwait: Judiciary, 2004). Judiciary in Kuwait consists of three levels, the first of which is the Courts of First Instance that "handle civil, commercial, personal status and penal matters separately" on which sanctions on wrongdoings "by less than three years of imprisonment or fines of less than 250 Kuwaiti dinars cannot be appealed to a higher level court [whereas] commercial and civil judgments involving fines less than 1000 dinars are final." Subsequent to that come the Courts of Appeal, which serve "as both the intermediate and final court" (Pogar – Kuwait: Judiciary, 2004). Then, at the final level comes the Court of Cassation serving as the final court of appeal.

Kuwait Investment Authority (KIA)

The concept of an Investment Authority in Kuwait originated from the foundation of key institutions. The major transition into the investment and financial sectors of the country occurred following the discovery of oil in the fifties. As a result of the increasing financial surpluses gained

from oil revenues, the country created the General Reserve in the year 1960 with an objective to organize public finances.

With future outlooks in the 1970s into ways to guide the country towards prosperity and growth, "the State [of Kuwait] issued Law 106/1976 to form the Future Generations Fund which consisted of 50% of the General Reserve at that time, 10% of the annual budgetary revenues of the State, plus the profit of these assets" (Kuwait Investment Authority, 1996). To act as a source of income in anticipation of such critical events as the depression of oil markets, crude oil dry up, or war, the Future Generations Fund was established and its assets were and continue to be "invested in the stocks of reputed international companies, first grade foreign bonds, deposits in major currencies, and various economic projects, under the supervision of economic & financial experts in Kuwait & prime international financial institutions" (Kuwait Investment Authority**,** 1996). Generally, Kuwait seems to follow a rather "conservative investment policy" (Background Note: Kuwait, 2003).

The mounting amount of allocated investment funds has led to the development of the Kuwait Investment Authority (KIA) in interest of "improving the quality of investment operations and processes [consequently,] Law 47/1982 was issued establishing KIA as an independent legal entity operating under the auspices of the Ministry of Finance" (Kuwait Investment Authority, 1996).

As a substitute to the Ministry of Finance, "KIA is authorized to develop and manage the General Reserve, and the assets of the Future Generations Fund as well as any other funds entrusted to it by the Minister of Finance" (Kuwait Investment Authority, 1996). KIA aims to continue with the investment of the Future Generations Fund assets and the General Reserve Funds in the usual most appropriate manner where the generated income is eventually "to be used to implement state economic and social policies for local development on the one hand and regional and international cooperation on the other" (Kuwait Investment Authority, 1996).

Privatization

The aspect of privatization is greatly emphasized in the ongoing practices of the KIA in its continuous attempts at developing "national financial systems" through "training nationals in various investment fields" (Kuwait Investment Authority, 1996). This strategy looks at opening the door for continuing privatization programs that would encourage owning shares in local companies thereby promoting involvement and development in economic activities.

KIA plays a crucial role in involving the private sector in the "financing of the establishment of companies and projects, which have feasible economic returns" such as "Gulf Cable, Electrical Industry Company, Mobile Telephone Systems Company, Touristic Enterprises Company, [and] Kuwait Hotels Company" (Kuwait Investment Authority, 1996). Among the most notable financial companies in which KIA holds shares are "Bank of Kuwait and Middle East, Kuwait Investment

Company, Kuwait Financial House, The Financial Group, [and] Gulf Insurance Company" (Kuwait Investment Authority, 1996).

Kuwait Stock Exchange: An Introduction

Established in 1977, the Kuwait Stock Exchange (KSE) was the "twelfth largest stock exchange" prior to the Iraqi invasion in 1990 because of which it had to halt its operations and reopen in 1992 (Kuwait Information Office – USA, 2002). However, it "recovered strongly after it adopted an automated trading system in 1995 [and became] the most active market in the Arab World" with "77 listed companies in 2002" (Kuwait Information Office – USA, 2002; Pogar – Kuwait: Financial Management, 2004). The "Difficult Debts Law" enacted in 1993 also assisted the successful return by providing "sufficient debt relief and a mechanism by which large Kuwaiti investors could recover from losses incurred during the Iraqi invasion, and from losses dating back to the Souk Al-Manakh crisis," the unofficial stock market which collapsed in 1982 (Kuwait Information Office – USA, 2002).

In 2000, *Law No 20/2000 – Foreign Participation in Kuwaiti Companies Listed on the Kuwait Stock Exchange* – was enacted to permit "overseas investors to participate in the Kuwait Stock Exchange through ownership of shares of Kuwaiti shareholding companies"(AsiaLaw Profiles 2002: Middle East- Kuwait, 2001). This law was passed to further regulate share cross-trading amongst the Kuwait Stock Exchange and its neighboring Bahraini, Egyptian, and Lebanese Stock Markets which took place in 1998. In May 1999, Kuwait and Jordan "signed a memorandum of understanding that permitted cross-listing on their respective Stock Exchanges" (Pogar – Kuwait: Financial Management, 2004). "Trading on the bourse had been restricted to Kuwaitis and nationals of the GCC states. Foreigners could own Kuwaiti stocks only through mutual funds" (Kuwait Information Office – USA, 2002).

Kuwait Stock Exchange: Foremost Regulations

In terms of rules and regulations governing the Kuwait Stock Exchange, it is important to note that the Kuwait Stock Exchange Committee is the authorized body that sets forth all such regulations.

The most important directives that the Committee decreed in order to allow companies to trade their shares on the Stock Market are as follows:

1. the company capital shall not be less than two million Kuwaiti dinars and the reserves and forwarded profits shall not be less than 3 million Kuwaiti dinars;
2. the company should have realized a net profit not less than 5% of its paid up capital from its main activity during the last two years;

3. the company capital should be distributed among a sufficient number of shareholders according to the capital amount;
4. the company should submit a document for the approval of the relevant government authority if such company was carrying out an activity of special nature;
5. if the registration application was filed by a company which increased its capital effectively, there should have elapsed at least one complete fiscal year as of that increase before submission of the registration application;
6. the registration application should be enclosed with a preliminary pamphlet for identification of the company, its history and financial situation, given that the pamphlet is prepared according to the form approved by the Stock Exchange and the company auditor;
7. the company should have fulfilled the time clause for the circulation of its stocks in the Exchange according to the provisions of law subject to which it was incorporated;
8. the Exchange Committee may exclude certain companies from some of the foregoing rules given that the Committee thinks that their overall situation justifies exemption;
9. the Committee reserves the right to reject any of the Registration Applications (Kuwait Stock Exchange, 2004).

Transparency & Integrity

In August 1996, the Kuwaiti Government passed Law 25 in which it "require[d] full transparency and accountability in all government contracts in excess of one hundred thousand dinars (approximately $300,000) in value… [as well as] a stipulation by the contracting party as to whether it has paid or will pay a commission of any kind to a disclosed or concealed intermediary." Furthermore, this "law imposes an obligation on both the payer and the payee to disclose in a separate declaration, the amount of the commission, the type of currency, and the place and manner of the commission." Failure to do so will result in "sanctions for non-disclosure or misinformation [which] range from civil and criminal penalties equal to the value of the payment to imprisonment" (Ali & Partners, 2004).

To further elaborate on the issue of integrity, a survey that was conducted by "the Higher Committee for Economic Development and Reform… in conjunction with the World Bank that probed public attitudes about government decision-making, including issues of governance, corruption, privatization and public sector reform" showed that "on [the] Transparency International's 2003 Corruption Perception Index, Kuwait ranked fourth among Arab countries and 35th out of 133 countries worldwide with a score of 5.3 on a scale from 1 to 10, where 10 represents no corruption" (Pogar – Kuwait: Financial Management, 2004).

STATE OF QATAR

State of Qatar Judicial System

The legal system in Qatar focuses on following Shari'a principles "although it has been influenced by the Egyptian legal traditions." While the judicial structure is composed of Shari'a and Civil Courts, "those two systems are unified in a single structure" and judiciary in Qatar is made up of three levels (Pogar – Qatar: Judiciary, 2004). The first of which are the Courts of Justice and the Shari'a Courts of First Instance where the former "are empowered to hear civil, criminal, and commercial matters" and the latter are dedicated to dealing with "cases involving personal status" (Pogar – Qatar: Judiciary, 2004). Depending on the nature of the case, "decisions rendered in these courts may be appealed" either to the Appeal Court of Justice or the Shari'a Court of Appeal. The third level in the judicial system, the decision of which is deemed final, is the Court of Cassation that includes "one chamber for Shari'a cases and one to serve as the appellate court for Court of Justice appeals" (Pogar – Qatar: Judiciary, 2004).

Central Bank & Doha Securities Market

Qatar does not have an Investment Authority that would regulate the financial procedures in the country from a single body but rather encompasses two key players, Qatar Central Bank (QCB) and Doha Securities Market (DSM) that take hold of these responsibilities.

Originally founded in 1973 as the Qatari Monetary Authority under Law No. 14, the entity's title was changed to Qatar Central Bank in 1993 (Pogar – Qatar: Financial Management, 2004). It is mainly responsible for "issuing currency and act[ing] as the bank of the government and the bank of banks in addition to its main task of managing the monetary policy of the State" (Ministry of Foreign Affairs, 2001). As for the standards, the "QCB requires that all banks in the country meet the standards of the Bank of International Settlements" (Pogar – Qatar: Financial Management, 2004).

Later on in 1997, the Doha Securities Market was established as an independent government body that aims at "consolidating the financial and economic structure of the country" (Doha Securities Market, 2004). As of March 2004, the market had a listing of 30 companies.

Privatization

Arising from the fact that the government of Qatar viewed privatization as an essential basis that would "reduce pressure on the budget," the process of privatization came into effect in 1998. It was during that same year that its "first major public sale of government assets… [involved selling] 45% of its shares in the state monopoly, the Qatar Public Telecommunications Corporation

(Q-Tel)" (Pogar – Qatar: Financial Management, 2004). Further reinforcement to privatization became evident during 2002 from their set "targets for divestment… in the steel, fertilizers, and petrochemical industries" in such fully state-owned companies as Qatar Steel Company (QASCO) or partially state-owned companies as Qatar Fertilizers Company (QAFCO) and Qatar Petrochemical Company (QAPCO) (Pogar – Qatar: Financial Management, 2004).

Doha Securities Market: An Introduction

Law 13/ 2000 was enacted in October 2000 to confer "upon foreign investors privileges, benefits and protection." This law allows "foreign investors to invest in 'all national economy sectors' except banking, insurance, commercial agencies and trading in real estate" (The Law Offices of Sultan M. Al Abdulla Advocates & Legal Consultants, 2001).

In the Doha Securities Market, "GCC nationals can own up to 25% of the shares of any traded company, and other foreigners can only participate in the market by means of local mutual funds"(Pogar – Qatar: Financial Management, 2004). Moreover, "The Council of Ministers approved on 29 May 2002 the Law of Investment Funds draft allowing non-Qataris to invest in all listed companies"(Ministry of Foreign Affairs, 2001). Recently, as reported by Gulf News "Qatar has issued regulations for the establishment of mutual funds that will allow foreigners to invest in the Doha Securities Market for the first time… Only banks and securities firms with three years or more of experience in the local market will be able to set up mutual funds" (Cooper, 2004).

Doha Securities Market: Foremost Regulations

Under article 3 of section 2 – Market Formation – of Unit 1, the Securities Market Committee is the authorized body that sets forth the regulations governing company share listing, stock trade transactions and stock ownership requirements. The Committee, under article 37 of section 1 – Company Registration & Listing – of Unit 4, decreed that the capital of any company wishing to be listed on the Doha Securities Market shall not be less than 10 million Qatari Riyals. Other articles delineated the most prominent regulations pertinent to company registration requirements, which include, but are not limited to, the following:

1. the number of shareholders shall not be less than one hundred shareholders;
2. the company capital should be distributed among the shareholders so that no shareholder owns shares in excess of the maximum allowed capital value;
3. excluding new-founded companies, all companies seeking registration shall submit their annual reports approved by a certified auditor and shall commit to publishing these reports in two daily, local newspapers, one of which is English;

4. the company shall submit a copy of the Commercial Trade License along with the Application Form (Doha Securities Market: Internal Regulations; Trans.).

Transparency & Integrity

Upon the inauguration of the Doha Securities Market, Hussain Al-Abdullah – Director – advised that the "key success factors of the [Doha Securities Market] will be integrity, liquidity, efficiency, and transparency" (Stock Market Director Addresses ABC Qatar, 1997).

To further actualize his statement, the Market Authorities, under article 51 of Section 2 – Listed Company Obligations – of Unit 4, decreed that, under the discretion of the Doha Securities Market, all listed companies are required to publish quarterly and monthly summary reports in two daily, local newspapers in order to convey the company's current financial status to the public to promote ethical trading. In addition, article 52 of the same section further aims at reinforcing transparency as it requires that companies provide the Market Authorities with their publications for verification purposes in interest of inhibiting fraudulent misrepresentation (Doha Securities Market: Internal Regulations; Trans.).

The elimination of corruption and the advocacy of transparency can further be noted in the fact that Qatar ranked third in the Arab World on the Transparency International's Corruption Perception Index with a worldwide score of 5.6 (Transparency International's Corruption Perception Index, 2003).

KINGDOM OF BAHRAIN

Kingdom of Bahrain Judicial System

The Bahraini legal system is "a mixed system based on British Common Law models and Sunni and Shi'a Shari'a traditions [; however,] the Constitution declares that Shari'a is [the] principal source of law" (Pogar – Bahrain: Judiciary, 2004).

The Judiciary in Bahrain is the authorized body "empowered to review the constitutionality of laws." Essentially, the judicial system is divided into two main branches – the Civil Law Courts and the Shari'a Law Courts. The Civil Law Courts reserve the authority to resolve all "commercial, civil, and criminal cases, and all cases involving disputes related to the personal status of non-Muslims." The Civil Law Courts are structured in a "three-tier system." The preliminary level, which has jurisdiction over civil and commercial matters, is the "Courts of Minor Causes, also called the Lower Courts and the Court of Execution. The Middle Courts have jurisdiction over criminal matters." The second judiciary level accounts for the "High Court of Appeal, or the Senior Civil Court." All cases brought forward before the High Court of Appeal are "presided over by a minimum of two judges." The "Supreme Court of Appeal," also known as the Court of Cassation,

serves as the "final court of appeal" for all lawsuits involving civil, commercial, and criminal matters. The Shari'a Courts, on the other hand, are composed of "two levels: the Senior Shari'a Court and the High Shari'a Court of Appeal" (Pogar – Bahrain: Judiciary, 2004).

The Economic Development Board of Bahrain

The Economic Development Board (EBD) of Bahrain is "an autonomous semi-private agency [that] was established by Amiri Decree in April 2000, and is chaired by His Highness the Crown Prince Sheikh Salman bin Hamad Al-Khalifa." "The Board was designed to ensure the active participation of the private sector in Bahrain's economic development" (Economic Development Board, 2004).

In essence, the EDB devises and monitors the economic development strategy of Bahrain. This semi-private agency aspires to attract Foreign Direct Investment to Bahrain and has "identified six main economic clusters which capitalize on Bahrain's competitive advantages and present significant investment opportunities," such as Information & Communications Technology, Tourism, Business Services, and Healthcare services (Economic Development Board, 2004).

Moreover, The EDB strives to create "the right climate to attract more foreign investment to Bahrain in order to ensure sustainable GDP growth and to create increased employment opportunities" and contends with the following functions, among others (Economic Development Board, 2004):

- To promote investment, particularly in the key economic clusters

  The EDB plays a central role in attending and hosting seminars, investment forums, conferences, and exhibitions that serve the purpose of heightening the public's awareness of what Bahrain can offer potential investors. The EDB also targets individual companies and approaches them directly to discuss investment opportunities

- To assist and streamline the registration process for investors and businesses setting up in Bahrain

  The EDB is authorized to review any investment opportunity and consequently propose more suitable offers to the Board of Directors with the aim of reducing bureaucracy and expediting decision-making.

Privatization

"Privatization of some state-owned industries and economic diversification with the aim of providing more jobs for Bahraini nationals" is considered one of the main priorities of the EDB (Pogar – Bahrain: Financial Management, 2004). In response to such a necessity, by spring 2001, "utilities, banks, financial services, and telecommunications have started to come under the control of the private sector" (Nationmaster.com, 2003).

Bahrain Stock Exchange: An Introduction

In 1957, the National Bank of Bahrain became the first public shareholding company in Bahrain. During the late 1970s and early 1980s, Bahrain realized there was a growing need for a regulated stock market; therefore, the Government, in collaboration with the International Finance Corporation "prepared a feasibility study highlighting the importance of establishing an official stock market in Bahrain." This study resulted in establishing the Bahrain Stock Exchange (BSE), which commenced operations in June 1989, under Amiri Decree No. 4 (Bahrain Stock Exchange, 2004).

In addition to serving as a regular stock exchange, the BSE acts as a securities regulator and undertakes supervision of the capital market. The BSE has additionally implemented agreements with similar neighboring agencies, such as the Muscat Securities Market in 1995, the Amman Financial Market in 1996, the Egypt Capital Market Authority in 1997,and the Kuwait Stock Exchange in 1998 (Pogar – Bahrain: Financial Management, 2004).

By the end of 2002, there were 40 domestic companies listed on the Bahrain Stock Exchange. The Commerce & Industry Ministry was responsible for regulating and supervising the operations of the stock market up to 2002. Subsequent to that, certain decrees were issued, the aim of which was to increase the role of the Bahrain Monetary Agency (BMA) in the financial sector. The BSE consequently became "governed by its own rules and regulations" under the review and approval of the BMA (Bahrain Stock Exchange, 2004).

Transparency & Integrity

Bahrain has been renowned for its "solid international reputation for low occurrence of corruption. It ranks in the top quarter of all countries worldwide on Transparency International's Corruption Perception Index, with a CPI of 6.1 on a scale from 1 to 10…" which ranks it second in the Arab World after Oman (Pogar – Bahrain: Financial Management, 2004).

Additionally, the Economic Development Board contributes to ensuring that the right kind of information is provided to all potential investors to facilitate their decision-making. In general,

"Bahrain has a reasonably strong record of preventing and prosecuting corruption" (Pogar – Bahrain: Financial Management, 2004).

THE UNITED ARAB EMIRATES

The United Arab Emirates Judicial System

"The Constitution, first written in 1971 and reaffirmed several times since then, declares Shari'a to be a principle source for law in the United Arab Emirates." Other sources that might influence the UAE legal system include Common Law and Egyptian legal traditions (Pogar – UAE: Judiciary, 2004).

Civil matters are usually dealt with by the "federal judiciary structure of UAE, although two emirates, Dubai and Ras Al Khaimah, remain outside of this structure." The first-level or so-called "lowest courts in the system are the Courts of First Instance" and are located in each of the emirates. Beyond the Courts of First Instance, the UAE judiciary system houses a "two-tiered appellate system." This system encompasses the "Federal Appeal Court, located in each of the emirates, and the highest court in the structure, the Court of Cassation." Separate criminal and Shari'a courts are also part of the UAE judiciary system. "While the criminal courts have a separate appeal system, cases heard in the Shari'a Courts of First Instance may be appealed to the Civil Courts of Appeal and the Court of Cassation in Abu Dhabi" (Pogar – UAE: Judiciary, 2004).

Dubai Development & Investment Authority

The Dubai Development and Investment Authority (DDIA) is a "Government Authority entrusted with catalyzing the growth and development of Dubai's economy by attracting corporate and private investors to the UAE and by facilitating the growth of leading local businesses and encouraging local entrepreneurs" (Dubai Development & Investment Authority, 2004).

In essence, the areas of activity on which the DDIA focuses include, but are not limited to, the following:

- Matching Investors with investment opportunities: The DDIA is keen on attracting and encouraging local investment through founding and supporting sizeable projects in Dubai. Most projects "enjoy the risk mitigation that arises from having Government backing and a well defined government role."
- Multinational Corporations: The DDIA shows particular interest in global multinationals and aims to facilitate their set-ups in Dubai through "comprehensive value-added offering[s]."

- The DDIA is a main provider of Government and Convenience services to major investors and corporations with the aim of facilitating the establishment of operations, easing legal clearances, and delivering world-class support services (Dubai Development & Investment Authority, 2004).

The Dubai Development & Investment Authority mainly strives to promote constructs highly favored by the International Monetary Fund, the World Trade Organization, and the World Bank, such as openness, diversity, and international accounting standards. This Regulatory Governmental Authority, according to Saeed Al Muntafiq – Director General – has as a mission, among other missions, diversifying Dubai's economy so that "70% of its GDP [comes] from the service sector." Besides DDIA's "macro strategy role," it is also concerned with the development of several projects of high caliber and complexity. Citing the Dubai Healthcare City as an example, S. Al Muntafiq indicated that such multi-million projects would add value to the UAE generally and Dubai specifically (Cooper, 2003).

S. Al Muntafiq asserts that "the DDIA is not a Free Zone," and thereby creates no "conflict of interest with other free zones." He adds that the DDIA, which aims at naming Dubai a "global gateway," is "part of the Dubai Government and can issue [its own] regulations and make laws" (Cooper, 2003).

Dubai International Financial Center

The instigation of the Dubai International Financial Center (DIFC), one of the milestones delivered by the DDIA and Dubai Government, aims at facilitating the transformation of Dubai into a key financial hub since the Center serves as a liaising point accounting for the trade time gap imposed by other international financial centers. As advised by Naser Al-Nabulsi, DIFC's Chief Executive Officer, the DIFC houses 200 of the most prominent financial institutions in the world and is projected not only to enhance the economic and financial well-being of the UAE, but also of the wider region, including the GCC (Interview, 2003).

Privatization

The UAE Federal Government encourages diversification and privatization of the economy. In a critical period where National Income resources had to be redefined as a result of projected oil and petroleum deficits, Dubai Government, under the able guidance of His Highness Sheikh Mohammed Bin Rashid Al-Maktoum, set the path that would stimulate privatization and local stock trading. Amongst the initial implementation stages of His Highness' vision was the creation of the Dubai Financial Market.

Dubai Financial Market: An Introduction

The Dubai Financial Market (DFM), an internationally-recognized market espoused by the DDIA and Dubai Government, formally commenced operations in June 2000. His Highness Maktoum Bin Rashid Al-Maktoum, Ruler of Dubai, "after perusal of the Federal Law No. 4 of 2000 concerning the establishment of the Emirates Authority and Market for Securities and Commodities…promulgate[d]…The Decree for the Establishment of the Dubai Financial Market for the year 2000" – Decree Number 14 (Dubai Financial Market, 2004a). The Emirates Securities and Commodities Authority, which was established early during the year 2000, is the regulatory and licensing body responsible for instituting chief directives in terms of the Dubai Financial Market listed companies and honest & transparent trade regulations.

Currently, the Dubai Financial Market is comprised of 25 listed companies including Emaar Properties, National Central Cooling Company, Emirates Bank International, Shua'a Capital, the National Bank of Dubai, and the Emirates Equity Fund.

Dubai Financial Market: Foremost Regulations

The Dubai Financial Market essentially bases its rules and regulations on the policies espoused by the United Arab Emirates Stocks and Commodities Authority (ESCA). Where the DFM is concerned, the ESCA serves as the legal body approving the "trading of securities issued by public shareholding companies, bonds issued by the Federal Government or any of the Local Governments and public institutions in the country, investment units issued by local investment funds and any other financial instruments, local or foreign" (Emirates Freezones.com, 2004).

The ESCA requires that the following conditions be met in order for a joint stock company to be decreed a licensed listed company:

A. No joint stock company incorporated in the State shall apply to the Authority or the Board for listing of Securities on the Market unless:
   1. a period of 2 years has passed subsequent to the incorporation of the company and two audited financial reports by an auditor registered in the practicing auditor's schedule and authorized to audit the accounts of joint stock companies in the State are published;
   2. the paid up capital of the company is not less than 50% of the shareholders funds which shall not be less than Dhs. 20 Million;
   3. the rights of shareholders in relation to each type of share issued by the company are equal;
   4. the net assets of the company are not less than 20% of its paid up capital; or

5. the company must have made net profits distributable to shareholders averaging not less than 5% of the paid up capital during the two years prior to the submission of the listing application;
6. ordinary general assemblies of the company have been held at least once a year; and
7. the company has published the financial reports of its business in a daily publication in the State prior to its Securities being traded on the Financial Market.

B. All Companies must comply with the conditions set down by the Authority from time to time (United Arab Emirates: Stocks and Commodities Authority, 2000).

Internal Regulations Governing the DFM

In addition to adopting the ESCA rules and regulations where most issues pertinent to the DFM are concerned, the DFM Authorities have also set forward their own internal regulations to complement the ESCA rules. For instance, the DFM has allowed for disciplinary regulations – upon the discretion of the brokerage's general manager – that would be applicable in instances where a broker might commit one or more of the following faults:

1. a broker's failure to settle all his/her transactions with the "clearance house" or his/her clients.
2. a broker's failure to comply with any of the DFM regulations.
3. a broker's fraudulent misrepresentation of material facts in the form of forged documents and reports, regardless of whether or not clients had detrimental reliance on the misrepresented material (Dubai Stock Market, Trans.).

Furthermore, the DFM has explicitly imposed regulations where defamatory statements and expressions are concerned. The regulations are as follows:

1. a broker is prohibited from defaming another broker's reputation or accusing the latter of negligence.
2. all brokers are obliged to seek the approval of the DFM Authorities on the content of the brokerage's advertising campaigns to ensure that they do not impose harm on or lead to defaming other brokerage firms. (Dubai Stock Market).

Transparency & Integrity

Given that the Dubai Financial Market adheres to the regulations imposed by the Emirates Securities & Commodities Authority, it is inherent that the former pay strict attention to the notion of transparency, which calls for ensuring that integrity and accuracy of dealings is maintained at all times. The ESCA sets specific rules that ascertain that investors are protected at all times, and that guarantee the reliability of the "interaction between supply and demand which allows for the natural setting of prices" (Dubai Financial Market, 2004b; Appendix A).

A recent case published in the 9,139th issue of Al-Khaleej Newspaper – dated May 27th, 2004 – recounted the initiative taken by the Dubai Financial Market Authorities at canceling stock trade transactions for Dubai Islamic Bank for the latter's failure to adhere to reporting and transparency regulations. This initiative was the first of its kind in the local stock market and was enforced as a response to Dubai Islamic Bank's failure to notify the DFM Authorities of the increase in its capital (Al-Khaleej Al-Iqtisadi, 2004).

In terms of The Transparency International's Corruption Perception Index in 2003, the UAE ranked fifth among Arab countries and 37th out of 133 countries Worldwide with a score of 5.2 (Appendix B).

CROSS COMPARISON OF THE FOUR GCC MARKETS

In an attempt to closely analyze the markets previously discussed, Table (1) below presents a comparison among these markets – Kuwait, Qatar, Bahrain, and the United Arab Emirates – in terms of their legal systems and financial market positions.

Table 1: Kuwait, Qatar, Bahrain, & UAE:
Cross Comparison of Legal Systems & Financial Markets

Country	Judicial System		Investment Authority or Equivalent	Stock Exchange Body	Number of Listed Companies	Privatization
State of Kuwait	3 levels: - Courts of First Instance - Courts of Appeal - Courts of Cassation		Kuwait Investment Authority (KIA)- 1982	Kuwait Stock Exchange (KSE)- 1977	77 listed companies as of 2002	Came into effect in 2000
State of Qatar	Shari'a Courts: - Courts of First Instance - Shari'a Court of Appeal - Court of Cassation	Civil Courts: - Courts of Justice - Appeal Court of Justice - Court of Cassation	Qatar Central Bank (QCB)- 1993	Doha Securities Market (DSM)- 1997	30 listed companies as of March 2004	Came into effect in 1998

Table 1: Kuwait, Qatar, Bahrain, & UAE: Cross Comparison of Legal Systems & Financial Markets						
Country	**Judicial System**		**Investment Authority or Equivalent**	**Stock Exchange Body**	**Number of Listed Companies**	**Privatization**
Kingdom of Bahrain	Shari'a Courts: - Senior Shari'a Court of Appeal - High Shari'a Court of Appeal	Civil Courts: - Courts of Minor Causes - High Court of Appeal - Court of Cassation	Economic Development Board (EDB)- April 2000	Bahrain Stock Exchange (BSE)- June 1989	40 listed companies by end of 2002	Came into effect in Spring 2001
United Arab Emirates- Dubai	Shari'a Courts: - Courts of First Instance - Civil Courts of Appeal - Court of Cassation in Abu Dhabi	Civil Courts: - Courts of First Instance - Federal Court of Appeal - Court of Cassation	Dubai Development & Investment Authority (DDIA)- 2002	Dubai Financial Market- 2000; Third biggest Stock Exchange in the Arab World	25 listed companies as of 2004	Came into effect in 2000

It is evident that the countries in question display shared principles and undergo, to a certain extent, similar functions. Specifically, all four countries' judiciary systems include three levels and apply Shari'a law in cases involving personal status. Moreover, each country appears to have gained a certain amount of financial market experience, although fairly limited, given the relative novelty of its operations. Additionally, the concept of privatization has been greatly emphasized and applied in all four countries.

Diagram 1: Transparency- CPI 2003 & Ranking Among Arab Countries

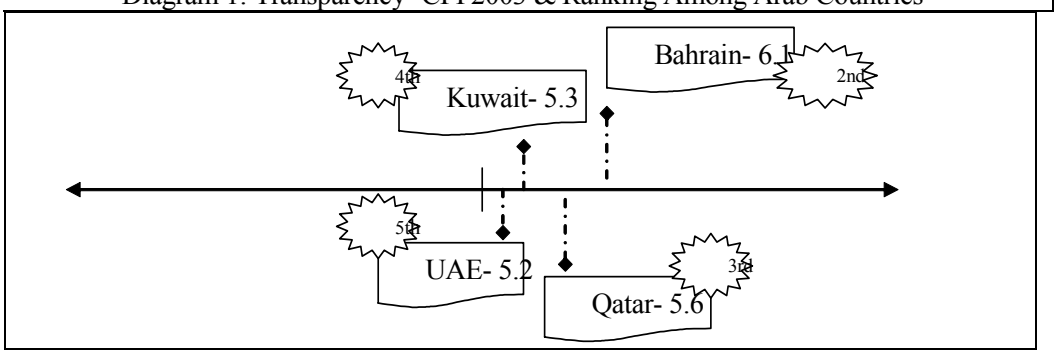

Diagram (1) above further asserts the similarity of concerns and position of each of the countries under consideration as per their scores on the CPI 2003, which describes "the degree to which corruption is perceived to exist among public officials and politicians… in line with the misuse of public power for private benefit, with a focus, for example, on bribe-taking by public officials in public procurement" (Transparency International's Corruption Perception Index, 2003).

In a time characterized by globalization and openness to trade, it becomes imperative to combine efforts in the GCC region in order to effectively respond to the challenging business environment. In 2002, Dr. Ghanem Al Hamadi, director of the Doha Securities Market, "proposed the creation of a single GCC stock market to attract capital, activate growth and support a drive for economic integration among members." He further explained that the "creation of a unified GCC bourse capable of attracting funds on the local, regional and international levels should now be a priority given the fact that most GCC countries have small stock markets which make them less competitive" (Kawash, 2002). Moreover, Dr. Al Hamadi mentioned that the main objectives of this proposition should include: "boosting the competitiveness of the GCC markets in the field of attracting capital from Gulf and other countries, increasing liquidity in the markets, upgrading accuracy and transparency, and diversification of investment instruments" (Kawash, 2002).

CONCLUSION

In keeping with the aforementioned facts and details, it becomes indispensable that all nations and their citizens attest that rules and regulatory policies are what contribute to the progression of civilizations. Be it on a small domestic scale or a global scale, the effect regulations have on our daily lives cannot be overlooked.

This research document has briefly looked into the judicial systems of four main GCC countries – Kuwait, Qatar, Bahrain, and the United Arab Emirates. As noted, all four countries rely mainly on Shari'a Law as a basis upon which the local legal system is built. In addition to the national judicial system, these countries have set forth policies and procedures that regulate domestic and foreign trade. A critical area where such policies and regulations are made evident is the Financial Market or Stock Exchange housed by each of the individual countries.

Despite their relative short operational time-span, the Kuwait Stock Exchange, the Qatar Securities Market, the Bahrain Stock Exchange, and the Dubai Financial Market have brought upon their respective countries the actualization of the notion of privatization while adhering to the integral constructs of clarity and transparency. These markets – in collaboration with and under the supervision of their respective Investment Authority or its equivalent – have added value to investments in the region. This can be seen in the all-time record high achieved at the Dubai Financial Market at the closing of Trade on June 13th, 2004. The DFM realized an overall trade volume in excess of AED 837 million. This "surge in the UAE's market capitalization maintained

its position as the third biggest stock exchange in the Arab world after those of Saudi Arabia and Kuwait" (Investor stampede takes UAE shares to record, 2004).

Given the incessant attempts at diversification, privatization, and continued growth brought forward by the aforementioned countries, the concept of joining forces in one major GCC Stock Market seems quite attractive to many investors and advisors. The value allotted to limiting economic and trade barriers across these countries in interest of keeping up with the fast pace of globalization, the importance of creating a more competitive, uniform Stock Market, and the call for further transparent deals serve as major elements further promoting the feasibility of a GCC Stock Market. The vision that "the Arab world must utilize its common interests and act as a concerted whole in order to have influence on the trade policies that will reach into the heart of their individual economies" might not be as remote as initially perceived (Al-Habtoor, 1997).

In light of the dominant similarities prevalent amongst the four Financial Markets, the notion of an integrated GCC Market further proves a feasible establishment. The fact that the region's four markets tend to rely on relatively comparative regulations, such as capital and liquidity requirements and registration procedures, among others, indicates that joining forces in one market shall not only increase trade volume, but shall also allow the region further international recognition as a dominant body. Moreover, creating a sole GCC Market would imply a boost in capital inflow into the region from increased foreign trade and would lead to more solid domestic investment grounds.

Inherent in the inauguration of the common GCC Financial Market, which we highly recommend, is the process of setting the regulations that would guide transparent trade in that Market. These regulations need not be adopted from one specific market, but rather decreed by a central authoritative regulatory body within this common Market in reference to the individual markets. Where transparency is concerned, the common GCC Market might set the Sultanate of Oman Market as a model to emulate since it ranked first within the Gulf Region Markets and 26th on an international scale (Appendix B).

The fact that the United Arab Emirates – Dubai specifically – has adopted international standards and regulations where several business – related aspects are concerned, and given the relative openness of the business society and the local community, as well as its constant aim at positioning itself as a major economic, financial, and touristic hub, it might be advisable that the initiative of a common GCC Market be brought into life within Dubai itself.

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APPENDIX A: TRANSPARENCY REGULATIONS

THE SECURITIES AND COMMODITIES AUTHORITY
CABINET RESOLUTION NO. 3/2000
CONCERNING THE REGULATION FOR
DISCLOSURE AND TRANSPARENCY

The Chairman of the Securities and Commodities Authority Board of Directors,

After perusal of Federal Law No 4/2000 concerning the Emirates Authority and Market for Securities and Commodities, and

Cabinet Resolution No. 193/18/2000 dated March 13, 2000 concerning the formation of the Securities and Commodities Authority Board of Directors, and

After consultation and coordination with the parties concerned with the establishment of the Markets in the State, and

Based on the Authority's Board of Directors Resolution at its Meeting on October 29, 2000.

It was resolved to approve the following regulation relating to disclosure and transparency:

Definitions

Article (1)

The words and expressions hereunder shall have the meaning set forth against each of them unless the context otherwise implies:

Law	Federal Law No. 4/2000 concerning the Emirates Authority and Market for Securities and Commodities
State	The United Arab Emirates
Authority	The Securities and Commodities Authority
Board	The Board of Directors of the Authority
Market	The Securities and Commodities Market Licensed in the State by the Authority
Broker	The corporate body authorized under the provisions of the law to conduct brokerage business in the Market.
Broker's Representative:	The natural person assigned by the broker to conduct brokerage business relating to securities and commodities on its behalf.

Market Participants	Brokers operating in the market and joint stock companies and other parties whose securities are listed on the Market.
Parent Company	The company that establishes another company and supervises its activities.
Subsidiary:	The company that is owned at least one half by another company.
Associated Company:	The company that relates to the same group as another company.
Affiliated Company:	The company that is related to another company through a cooperation agreement.

Article (2)

To ensure the integrity and accuracy of dealings and the interaction between supply and demand which allows for the natural setting of prices, and the protection of investors by enforcing the principles of fair and proper dealings, the following shall be complied with as they relate to disclosure and transparency:

First: General Provisions

Article (3)

Every natural person whose shareholding, or whose shareholding along with that of his minor children, has reached 5% or more of a listed company's shares, shall notify the Market of such holdings immediately.

Article (4)

Every juridical person whose shareholding has reached 5% or more of a listed company's shares, shall notify the Market of such holdings immediately.

Article (5)

Every natural person whose shareholding, or whose shareholding along with that of his minor children, and every juridical person whose shareholding has reached 10% or more of a listed company's parent, subsidiary, associated or affiliated company, shall notify the Market of such holdings immediately.

Article (6)

Any natural or juridical person whose holding reaches 10% or more of a listed company's shares, and who wishes to purchase 20% or more of that company's shares, shall notify the Market before he submits a purchase order for execution on the trading floor. The Market's Director General, after consultation with the Authority, may forbid the deal if he assesses that it may hurt the national economy.

Article (7)

Any bank or financial institution which conducts banking operations shall obtain the Central Bank's approval before it executes any deal that will allow it to own 5% or more of a listed company's shares.

Second: Disclosures Relating to the Authority

Article (8)

The Authority shall ensure that disclosure and transparency is maintained and is organized in the manner indicated in the law and the regulations in implementation thereof.

Article (9)

The Board may inspect market participants on a regular basis, or based on the request of a concerned party, to verify the extent of compliance with the law, or the regulations in implementation thereof, based on the regulations which it establishes in this regard.

Article (10)

The Authority may not practice commercial business, have an interest in any project, or own or issue any securities.

Article (11)

Each member of the Authority's Board of Directors shall, once he takes up his functions, provide a written declaration regarding the securities owned by him or his spouse and minor children, and regarding their contribution with any broker. He shall also provide a written declaration regarding any change that may occur thereto, within one week from the date he learns of such change.

Article (12)

A member's membership in the Board is revoked if he is sentenced for criminal conduct, a crime affecting his honor or trustworthiness, or if he is declared bankrupt.

Article (13)

The board may, by a majority of its attending members, suspend dealing in the Market, or in the securities of any company for a temporary period, or to stop dealing in any securities in the event of extraordinary circumstances or any incident that may affect the proper functioning and organization of work in that Market.

The board may also decide, by a majority of its members, to freeze, suspend or reactivate any regulation relating to the market or any of its operations.

Article (14)

The board may suspend the listing of any security in the Market in several cases including:

A. If the Company fails to comply with one of the listing conditions.
B. If the Company's net shareholders equity falls below 50% of its capital.
C. If the Market value of the security decreases to less than 60% of its par value or increases unexpectedly.

D. If the extraordinary general meeting passes a resolution to reduce the company's capital.
E. If the Company does not issue annual, semi-annual or quarterly reports about its activities.
F. If the extraordinary general meeting makes a decision to sell most of the Company's assets.

Article (15)

The Authority may cancel the listing of any security on the Market in any of the following cases:

1. If a decision has been made to dissolve or liquidate the company.
2. If listing remains suspended for six months or more.
3. If the main activities of the Company change significantly
4. If the Company ceases to carry out its activities.
5. If the company merges with another company, or companies, which causes its original identity to be terminated.

Article (16)

The board may require any person, natural or juridical, who has activities related to securities, to disclose his activities in public or private, and submit any data relating to his activities.

The board may also, in order to perform its duties, order any investigation which it deems necessary in accordance with the law and the regulations and decisions in implementation thereof.

Third: Market Disclosure

Article (17)

The Market shall commit to the Authority to take all necessary steps in ensuring the disclosure by listed companies of all material developments relating to such companies and providing the Authority with the reports and data it requests.

Article (18)

The Market's Board of Directors shall issue the necessary press releases that ensure the transparency of information and disclosures.

Article (19)

The Market shall disclose all matters covered under articles (3), (4), (5) and (6) of this regulation.

Article (20)

All information relating to listed securities shall be registered in the Market's records. Any dealing in securities which was not registered per the law and the regulations and decisions in implementation thereof, shall be void.

Article (21)

Markets in the State shall be electronically linked together.

Article (22)

It is forbidden for a member of the Board of Directors of a Public Joints Stock Company or a Financial Broker or a Broker Representative, to be a member of the Market's Board of Directors.

Article (23)

Each member of the Market Board of Directors, its Director General and his Deputey shall declare, in writing, once he takes up his functions, the securities owned by himself, his wife or minor children. He shall also declare his shareholding, and those of his wife or his minor children, with any broker. He shall also declare in writing any changes to the above within one week of the date on which he becomes aware of such change.

Article (24)

A Board member shall have his membership revoked if he is convicted of a felony, or a crime or offence related to honor or breach of trust, or is declared bankrupt.

Article (25)

The Market shall submit to the Authority its balance sheet, profit and loss statement and annual financial statements audited by an auditor entered in the schedule of approved auditors, within one month from the end of its financial year.

Article (26)

The Market shall provide the Authority with the following periodic reports relating to the trading activity of securities listed on it:

1. A daily report on trading activity including the type of securities traded, the price of each, the quantity traded and total deals for the day.
2. A semi-monthly and a monthly report on trading activity including trading volume, total trading value, number of executed deals and last closing price.
3. An annual report on trading activity including the quantity of traded securities, their value, number of deals and comparison with previous year, distribution of trading activity on the various sectors, the most significant events of the year, the extent of their effect on the Market, and the Board of Directors' suggested remedies to the negative consequences of such events.

Article (27)

The Market shall prepare a daily price bulletin relating to trading and including the following information:

a) Type of traded securities.
b) The trading prices at which trading was conducted

c) Closing price for each security as well as the bid and offer prices, even if no execution was done.
d) Comparison of the day's closing prices with the previous closing prices.

Fourth: Disclosure of parties and companies whose securities are listed in the Market and its administration

A) Pre-listing disclosure

Article (28)

No security may be listed in the Market without prior approval by the Authority, and no security may be traded except through one of the brokers registered in the Market.

Article (29)

The following documents and information, which would disclose the actual position of the company, shall be attached to the listing application:

A. A report from the Company's Board of Directors including the following:

1. A brief about the Company's incorporation, its main objectives, and its relationship with related companies including parent, subsidiary, associated or affiliated companies (if any).
2. The securities that the Company has previously issued and details of the securities it wishes to list.
3. The evaluation of the Board of Directors, corroborated by figures, regarding the performance and accomplishments of the Company in comparison with its plan.
4. The significant events that the Company has witnessed as of the date of its incorporation until the submission of the listing application.
5. The names of Board of Directors Members, managing executives, and securities owned by them and their first degree relatives, and issued by the company, its parent, subsidiary, associated or affiliated company (if any), and their membership on the board of directors of other public joint stock companies.
6. Names of the persons who own or whose ownership with their minor children reaches 5% of the securities issued by the Company requiring listing.
7. The contributions of non-U.A.E. nationals in the Company's capital.

B. A financial statement containing the following:
1. The company's annual report for the financial year prior to the submission of the listing application accompanied by the Company's Board of Director report and auditor's report.
2. The transitional financial statements which cover the period from the end of the financial year prior to the listing application until the end of the last quarter prior to the application date, approved by the Company auditor.

Article (30)

The Board of Directors of any listed company or company applying for listing shall acknowledge the completeness and accuracy of all information submitted to the Market and the Authority. The fact that the Authority or the Market has viewed such documents or approved them in their bulletins does not constitute an acknowledgment from them of the accuracy of the contents, or the legality of actions taken by any person which are based on them.

Article (31)

The Company whose securities have been approved by the Authority for listing on the Market shall, within ten days from its listing on the Market, announce in two daily and widely circulated newspapers, issued in Arabic, its annual and interim financial statements, and a summary of the Board of Directors' report submitted for the purpose of listing.

A) Post-listing disclosure

Article (32)

The company whose listed securities have been traded shall not change the ownership of shares in the company share register unless such change was authorized by the Market management or was conducted according to the law and the rules and regulations in implementation thereof.

Article (33)

The company whose securities have been listed in the Market shall notify the Authority and the Market Management of any material developments affecting the prices of such securities as soon as they occur such as catastrophes, fire, merger, issue of new securities, the discontinuation of a production line, voluntary liquidation, or lawsuits made by or against the company which may effect its financial position.

The Market's Board of Directors may publish any statement relating to such developments in local newspapers and other media it deems necessary.

Article (34)

The company or party issuing securities listed in the Market shall, whenever required, publish any information clarifying its position and activities to ensure proper dealing and well being of investors.

If a change occurs in a material fact included in a newspaper announcement previously published, the company or issuing party shall issue a press release reflecting the true situation after the change. The newspaper announcement shall be published at a later stage in the same newspaper or newspapers which contained the previous announcement.

Article (35)

The company or party may not issue a newspaper announcement regarding certain information if its executive management had reasonable basis to believe that revealing such information will be seriously detrimental to its interests. The company shall confirm that no trading has been or will be conducted in its shares by the company's Board of

Directors' members, its executive directors or their first degree relatives, based on the information which has not been publicly disseminated, and that it will provide the Market's Director General with the information and data, and request him to consider them confidential until the termination of the reasons which caused this situation.

The Market's Director General, in coordination with the Authority, may accept such request or oblige the company to announce the information and data.

Article (36)

Companies and parties whose securities have been listed on the Market shall notify and provide the Authority and the Market with the following:

1. All information and statistics required by the Authority or the Market
2. Trading conducted in its securities outside the Market before it was recorded in the share register.
3. The number of shares owned by the company's Board of Directors within fifteen (15) days from the date of taking-up membership, as well as at the end of each financial year, and on all trades conducted by the Company's Board of Directors and executive management.
4. Details of purchase or sale of major assets which could affect the company's position.
5. Documents relating to amendments made to the company's Articles of Association, as soon as they are ratified.
6. Any other change relating to the administrative structure of the company's Board of Directors and executive management.
7. Annual, semi-annual and quarterly financial reports covering its activities, results of its operations and financial position as soon as they are issued. These reports shall be approved by the company's auditors, and shall include all information requested by the Authority and the Market from time to time.
8. Copies of all publications intended for investors as soon as they are issued.
9. The Board of Directors' decision relating to the distribution of profits to investors or the announcement of profits or losses, to obtain approval from the Market management for its publication.
10. The names of the owners of shares whose share ownership, or whose share ownership with their minor children, has reached 5% or more of the company shares, while ensuring that each time the ownership exceeds the 5% by 1%, such disclosure shall be made.

Article (37)

According to Federal Law No. 4/2000 concerning the Emirates Authority and Market for Securities and Commodities, any person may be punishable with a jail term not less than three months and not to exceed three years and/or a fine of not less than AED 100,000 (one hundred thousand dirhams) and not to exceed AED 1,000,000 (one million dirhams) if the person:

a) Submits any information or gives any information which is false and which could affect the market price of securities or the investor's decision to invest or not to invest;
b) Trades securities based on non-public information which he was able to obtain based on his position;
c) Disseminates rumors concerning purchase or sale of shares;
d) Takes advantage of non-public information which could influence the prices of securities for his personal benefit.

Any action or trade done based on the above shall be deemed null.

Article (38)

A punishment in the form of a jail term not to exceed three years and/or a fine of not less than one hundred thousand dirhams and not to exceed one million dirhams, may be imposed on the Chairman or member of a listed company's Board of Directors, its Director General, or any of its employees, if he personally, or through another person, conducts any trade in the securities of the company before disclosing to the market the buy or sell transaction, its quantities and prices, and any other information required by the Market, and before obtaining the Market's Board of Directors' approval on the transaction.

Any trade not done based on the disclosure referred to above shall be deemed null.

Article (39)

A punishment in the form of a jail term not less than three months and not to exceed three years and/or a fine of not less than one hundred thousand dirhams and not to exceed one million dirhams, may be imposed on the Chairman or member of a company's Board of Directors, or any of its employees who uses the company's insider information for the purpose of buying and selling the company's shares in the Market.

Any trade done based on the above shall be deemed null.

Article (40)

This resolution shall be published in the Gazette and enacted as of the date of publication.

Fahem Bin Sultan Al Qassimi
Chairman of the Securities and Commodities Authority

Appendix B: CPI 2003

Transparency International Corruption Perceptions Index 2003					
Country rank	**Country**	**CPI 2003 score**	**Surveys used**	**Standard deviation**	**High-low range**
1	Finland	9.7	8	0.3	9.2 - 10.0
2	Iceland	9.6	7	0.3	9.2 - 10.0
3	Denmark	9.5	9	0.4	8.8 - 9.9
4	New Zealand	9.5	8	0.2	9.2 - 9.6
5	Singapore	9.4	12	0.1	9.2 - 9.5
6	Sweden	9.3	11	0.2	8.8 - 9.6
7	Netherlands	8.9	9	0.3	8.5 - 9.3
8	Australia	8.8	12	0.9	6.7 - 9.5
9	Norway	8.8	8	0.5	8.0 - 9.3
10	Switzerland	8.8	9	0.8	6.9 - 9.4
11	Canada	8.7	12	0.9	6.5 - 9.4
12	Luxembourg	8.7	6	0.4	8.0 - 9.2
13	United Kingdom	8.7	13	0.5	7.8 - 9.2
14	Austria	8.0	9	0.7	7.3 - 9.3
15	Hong Kong	8.0	11	1.1	5.6 - 9.3
16	Germany	7.7	11	1.2	4.9 - 9.2
17	Belgium	7.6	9	0.9	6.6 - 9.2
18	Ireland	7.5	9	0.7	6.5 - 8.8
19	USA	7.5	13	1.2	4.9 - 9.2
20	Chile	7.4	12	0.9	5.6 - 8.8
21	Israel	7.0	10	1.2	4.7 - 8.1
22	Japan	7.0	13	1.1	5.5 - 8.8
23	France	6.9	12	1.1	4.8 - 9.0
24	Spain	6.9	11	0.8	5.2 - 7.8
25	Portugal	6.6	9	1.2	4.9 - 8.1
26	Oman	6.3	4	0.9	5.5 - 7.3
27	Bahrain	6.1	3	1.1	5.5 - 7.4
28	Cyprus	6.1	3	1.6	4.7 - 7.8
29	Slovenia	5.9	12	1.2	4.7 - 8.8
30	Botswana	5.7	6	0.9	4.7 - 7.3

Transparency International Corruption Perceptions Index 2003					
Country rank	**Country**	**CPI 2003 score**	**Surveys used**	**Standard deviation**	**High-low range**
31	Taiwan	5.7	13	1.0	3.6 - 7.8
32	Qatar	5.6	3	0.1	5.5 - 5.7
33	Estonia	5.5	12	0.6	4.7 - 6.6
34	Uruguay	5.5	7	1.1	4.1 - 7.4
35	Italy	5.3	11	1.1	3.3 - 7.3
36	Kuwait	5.3	4	1.7	3.3 - 7.4
37	Malaysia	5.2	13	1.1	3.6 - 8.0
38	United Arab Emirates	5.2	3	0.5	4.6 - 5.6
39	Tunisia	4.9	6	0.7	3.6 - 5.6
40	Hungary	4.8	13	0.6	4.0 - 5.6
41	Lithuania	4.7	10	1.6	3.0 - 7.7
42	Namibia	4.7	6	1.3	3.6 - 6.6
43	Cuba	4.6	3	1.0	3.6 - 5.5
44	Jordan	4.6	7	1.1	3.6 - 6.5
45	Trinidad and Tobago	4.6	6	1.3	3.4 - 6.9
46	Belize	4.5	3	0.9	3.6 - 5.5
47	Saudi Arabia	4.5	4	2.0	2.8 - 7.4
48	Mauritius	4.4	5	0.7	3.6 - 5.5
49	South Africa	4.4	12	0.6	3.6 - 5.5
50	Costa Rica	4.3	8	0.7	3.5 - 5.5
51	Greece	4.3	9	0.8	3.7 - 5.6
52	South Korea	4.3	12	1.0	2.0 - 5.6
53	Belarus	4.2	5	1.8	2.0 - 5.8
54	Brazil	3.9	12	0.5	3.3 - 4.7
55	Bulgaria	3.9	10	0.9	2.8 - 5.7
56	Czech Republic	3.9	12	0.9	2.6 - 5.6
57	Jamaica	3.8	5	0.4	3.3 - 4.3
58	Latvia	3.8	7	0.4	3.4 - 4.7
59	Colombia	3.7	11	0.5	2.7 - 4.4
60	Croatia	3.7	8	0.6	2.6 - 4.7
61	El Salvador	3.7	7	1.5	2.0 - 6.3

Transparency International Corruption Perceptions Index 2003					
Country rank	**Country**	**CPI 2003 score**	**Surveys used**	**Standard deviation**	**High-low range**
62	Peru	3.7	9	0.6	2.7 - 4.9
63	Slovakia	3.7	11	0.7	2.9 - 4.7
64	Mexico	3.6	12	0.6	2.4 - 4.9
65	Poland	3.6	14	1.1	2.4 - 5.6
66	China	3.4	13	1.0	2.0 - 5.5
67	Panama	3.4	7	0.8	2.7 - 5.0
68	Sri Lanka	3.4	7	0.7	2.4 - 4.4
69	Syria	3.4	4	1.3	2.0 - 5.0
70	Bosnia & Herzegovina	3.3	6	0.7	2.2 - 3.9
71	Dominican Republic	3.3	6	0.4	2.7 - 3.8
72	Egypt	3.3	9	1.3	1.8 - 5.3
73	Ghana	3.3	6	0.9	2.7 - 5.0
74	Morocco	3.3	5	1.3	2.4 - 5.5
75	Thailand	3.3	13	0.9	1.4 - 4.4
76	Senegal	3.2	6	1.2	2.2 - 5.5
77	Turkey	3.1	14	0.9	1.8 - 5.4
78	Armenia	3.0	5	0.8	2.2 - 4.1
79	Iran	3.0	4	1.0	1.5 - 3.6
80	Lebanon	3.0	4	0.8	2.1 - 3.6
81	Mali	3.0	3	1.8	1.4 - 5.0
82	Palestine	3.0	3	1.2	2.0 - 4.3
83	India	2.8	14	0.4	2.1 - 3.6
84	Malawi	2.8	4	1.2	2.0 - 4.4
85	Romania	2.8	12	1.0	1.6 - 5.0
86	Mozambique	2.7	5	0.7	2.0 - 3.6
87	Russia	2.7	16	0.8	1.4 - 4.9
88	Algeria	2.6	4	0.5	2.0 - 3.0
89	Madagascar	2.6	3	1.8	1.2 - 4.7
90	Nicaragua	2.6	7	0.5	2.0 - 3.3
91	Yemen	2.6	4	0.7	2.0 - 3.4
92	Albania	2.5	5	0.6	1.9 - 3.2

Transparency International Corruption Perceptions Index 2003					
Country rank	**Country**	**CPI 2003 score**	**Surveys used**	**Standard deviation**	**High-low range**
93	Argentina	2.5	12	0.5	1.6 - 3.2
94	Ethiopia	2.5	5	0.8	1.5 - 3.6
95	Gambia	2.5	4	0.9	1.5 - 3.6
96	Pakistan	2.5	7	0.9	1.5 - 3.9
97	Philippines	2.5	12	0.5	1.6 - 3.6
98	Tanzania	2.5	6	0.6	2.0 - 3.3
99	Zambia	2.5	5	0.6	2.0 - 3.3
100	Guatemala	2.4	8	0.6	1.5 - 3.4
101	Kazakhstan	2.4	7	0.9	1.6 - 3.8
102	Moldova	2.4	5	0.8	1.6 - 3.6
103	Uzbekistan	2.4	6	0.5	2.0 - 3.3
104	Venezuela	2.4	12	0.5	1.4 - 3.1
105	Vietnam	2.4	8	0.8	1.4 - 3.6
106	Bolivia	2.3	6	0.4	1.9 - 2.9
107	Honduras	2.3	7	0.6	1.4 - 3.3
108	Macedonia	2.3	5	0.3	2.0 - 2.7
109	Serbia & Montenegro	2.3	5	0.5	2.0 - 3.2
110	Sudan	2.3	4	0.3	2.0 - 2.7
111	Ukraine	2.3	10	0.6	1.6 - 3.8
112	Zimbabwe	2.3	7	0.3	2.0 - 2.7
113	Congo, Republic of the	2.2	3	0.5	2.0 - 2.8
114	Ecuador	2.2	8	0.3	1.8 - 2.6
115	Iraq	2.2	3	1.1	1.2 - 3.4
116	Sierra Leone	2.2	3	0.5	2.0 - 2.8
117	Uganda	2.2	6	0.7	1.8 - 3.5
118	Cote d´Ivoire	2.1	5	0.5	1.5 - 2.7
119	Kyrgyzstan	2.1	5	0.4	1.6 - 2.7
120	Libya	2.1	3	0.5	1.7 - 2.7
121	Papua New Guinea	2.1	3	0.6	1.5 - 2.7
122	Indonesia	1.9	13	0.5	0.7 - 2.9
123	Kenya	1.9	7	0.3	1.5 - 2.4

Transparency International Corruption Perceptions Index 2003					
Country rank	**Country**	**CPI 2003 score**	**Surveys used**	**Standard deviation**	**High-low range**
124	Angola	1.8	3	0.3	1.4 - 2.0
125	Azerbaijan	1.8	7	0.3	1.4 - 2.3
126	Cameroon	1.8	5	0.2	1.4 - 2.0
127	Georgia	1.8	6	0.7	0.9 - 2.8
128	Tajikistan	1.8	3	0.3	1.5 - 2.0
129	Myanmar	1.6	3	0.3	1.4 - 2.0
130	Paraguay	1.6	6	0.3	1.2 - 2.0
131	Haiti	1.5	5	0.6	0.7 - 2.3
132	Nigeria	1.4	9	0.4	0.9 - 2.0
133	Bangladesh	1.3	8	0.7	0.3 - 2.2

POSSIBLE EFFECTS OF NATIONAL POPULATION HOMOGENEITY ON HAPPINESS

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ABSTRACT

This cross-country study investigates what influence, if any, different measures of homogeneity have on happiness. Using self-perceived life satisfaction as an indicator of happiness, data from 65 nations are analyzed with regression analysis. The results of the study indicate that income inequality and ethnic homogeneity are related to happiness. Other variables determined to be significant indicators of happiness include income levels (GDP per capita), inflation, and life expectancy.

INTRODUCTION

What leads to happiness? This question is one basis for every philosophical and ethical system. Extended to the political and economic realm, we are reminded of "life, liberty, and the pursuit of happiness" as inalienable rights in the Declaration of Independence. Happiness is the purported goal of most everyone, but finding an efficacious metric has proved elusive for researchers in fields such as psychology, sociology, economics, political science, and evolutionary biology. These past failures have not deterred researchers over the centuries.

Economists refer to "utility" as a happiness measure (See, e.g., Mankiw 2004). Jeremy Bentham and John Stuart Mill developed the concept of "utilitarianism" as aiming to maximize the greatest good for the greatest number (See Ekelund and Hebert 1990). Von Neumann and Morgenstern (1944) formulated game theory based on the premise that individuals and groups reach decisions in an attempt to maximize utility. The issue of systemic maximization of happiness obviously has ramifications in socioeconomic and legal/political realms.

A potentially related (and somewhat more easily measured) issue of interest is cultural homogeneity. How similar (or diverse) are the people in a given geographic area? Many past studies have focused on ethnic and linguistic (or ethnolinguistic), religious, or economic homogeneity (See, e.g., Masters and McMillan 2003). These studies overlap the aforementioned fields. In most cases, the homogeneity dimensions were considered separately. Recent studies have combined them to assess an overall level of homogeneity (See, e.g., Barrett and Couch 2006).

The main issue of interest in the current study is what relationship, if any, exists between cultural homogeneity and happiness for nations of the world. The happiness metric employed is self-perceived life satisfaction and is obtained from studies by Veenhoven (1991, 1996, 2001). A sample of 65 countries is analyzed using regression analysis with a set of control variables to determine whether happiness (life satisfaction) is influenced by income homogeneity, ethnic homogeneity, and religious homogeneity.

LITERATURE REVIEW

The topic of "national happiness" has suddenly become ubiquitous in the sociological and economic literature, due mainly to Ruut Veenhoven. The Dutch sociologist used a survey to obtain happiness indices for 91 countries. (See Veenhoven 1991, 1996, 2001). Following the seminal study, many authors have used the Veenhoven data in other investigations linking happiness to multiple sociological and economic variables. A recent entire issue of the Journal of Socio-Economics (Vol. 35, 2006) was devoted to papers on happiness.

Veenhoven (2000) assessed the relationship between freedom and happiness, and found a significant positive relationship between the two. Such an association is expected, as well as being appreciated for advocates of increased political and economic freedom. Helliwell (2002), Frey and Stutzer (2002 a, b), and Inglehart and Klingemann (2000) also studied freedom-intensive variables and freedom. In each case, the given freedom metric was significantly positively related to national happiness.

Ovaska and Takashima (2006) investigated economic policy and happiness, using a large set of independent variables as controls. Their study yielded significance of health (as measured by life expectancy) and economic freedom as related to happiness. Veenhoven (1991), Easterly (1999), Frey and Stutzer (2000 a, b), and Blanchflower and Oswald (2000) found that income is positively related to happiness. The conclusions tend to suggest that money can't buy happiness, but it surely ameliorates pain.

Di Tella et all (2001) showed that a sudden drop in the unemployment rate coincides with a significant drop in happiness. This result is consistent with Clark and Oswald (1994), Gerlach and Stephan (1996), and Winkelmann and Winkelmann (1998), who each also showed that unemployment is negatively related to happiness. Peiro (2006) specifically addresses overall economic conditions and happiness. His study confirms the significance of the aforementioned economic variables.

Blanchflower and Oswald (2000) and Frey and Stutzer (2002 a, b) looked at educational attainment as a potential predictor for happiness. Each showed a significant result, though Helliwell (2002) found no significance in an analogous test. Blanchflower and Oswald (2004), Argyle and Martin (1991), and Lee et al (1999) assessed social relationships, finding that married people tend to be happier. Political stability was also studied extensively, including Argyle (1987) and Frey and

Stutzer (2000 a, b), with a more stable political environment tending to be associated with a happier populace.

With respect to homogeneity, there is a plethora of literature on all dimensions, though they are generally considered separately. Masters and McMillan (2003) used an evolutionary analysis on the effects of ethno-linguistic diversity on economic growth. Borjas (1998) investigated residential segregation in industrialized countries. Easterly and Levine (1996) looked at African countries and the corresponding relationship ethnic divisions and policies. Peterson (1997) discusses homogeneity in general in the tome *Ethnicity Counts*. Much of the work in the area contains analyses of the relationships between ethno-linguistic homogeneity and measures of economic well-being. A major difficulty exists with regard to establishing the boundaries of "ethnicity."

Religious homogeneity presents an equally vexing concept, as the lines between certain divisions are unclear. Religious deviations differ between nations, as well as within-nation divisions in different areas of the world. Barro and McCleary (2003) studied religion and economic growth in nations, finding that economic growth responds positively to certain (vague) religious beliefs, but negatively to church attendance rates. Guiso, Sapienza, and Zingales (2003) found that economic attitudes differ based on religious background. Perhaps most relevant to the current study, Mookerjee and Beron (2005) found that religious fractionalization is negatively correlated with happiness.

There is hardly a dearth of economic inequality studies. There is also no consensus on whether such disparity is "good," though the prevailing opinion of the relevant author(s) surely impact the nature of given studies. Frank and Freeman (2002) found that American income inequality and economic growth are slightly negatively related. Similar studies on state data were conducted by Kuznets (1955), Kakwani (1980), Galor and Zeira (1993), Meltzer (1998), Partridge (1997), and Forbes (2000). Akhand and Liu (2002), Al-Samarrie and Miller (1967), Cowell (1995), and Piketty and Saez (2003) studied international economic homogeneity data. The common thread in each study is that "freer" countries tend to exhibit more income equality.

Recent studies have combined information from multiple dimensions of homogeneity. Alesina et al (2003) used data from 190 countries to obtain measures of ethnic, linguistic, and religious fractionalization (heterogeneity). They then looked at how the fractionalization measures help determine economic success, finding that economic and linguistic fractionalization tend to be significant positive indicators of GDP growth, literacy rate, health factors, and political freedom. The religious fractionalization was seen to be much more weakly related to the other variables.

Barrett and Couch (2006) created a "homogeneity index" for the fifty states using measures for all four dimensions. The measures were combined to obtain an overall measure of homogeneity as a basis for comparing the states. The indices may be used in future studies on state homogeneity as it relates to other economic and sociological variables. In the same vein as in Alesina et al

(2003), one must view more than one dimension to determine a truer "homogeneity" of a given geographic entity.

No study to date has considered all dimensions of homogeneity for international data. Alesina et al (2003) come close, but their study did not take into account economic inequality. The current study seeks to extend the literature by considering all dimensions of homogeneity and how they relate to other measures for different nations of the world.

DATA AND METHODOLOGY

The measure used for happiness is life satisfaction, obtained from the World Database of Happiness (Veenhoven, 2006). While the World Database of Happiness offers several measures of happiness and self-perceived well-being, two of the most commonly used measures are happiness and life satisfaction. The distinction between the two is that the happiness measure is considered to be self-perception of current well-being, whereas life satisfaction measures perception about overall life fulfillment. We chose to use life satisfaction, as it offers the advantage over happiness in that life satisfaction may be less heavily influenced by short-term economic and emotional factors (Helliwell, 2002). The life satisfaction measures were obtained through survey data. The respondents to the survey ranked how much they liked their lives as a whole on a scale of 0 to 10. According to Veenhoven (1996, 2000), life satisfaction or well- being scores are comparable across nations and cultures.

This study uses three measures of homogeneity for income, ethnicity, and religion. The Gini coefficient is a commonly used as a measure of income inequality. A Gini coefficient of zero indicates perfect income equality and, at the opposite extreme, a Gini coefficient of 100 indicates perfect income inequality. The ethnic homogeneity measure is the Vanhanen Ethnic Homogentity Index (Vanhanen, 1991). This is the percentage of the population belonging to the largest homogenous ethnic group in a country. The religious homogeneity is measured in like manner (percentage of the population belonging to the nation's chief religious affiliation). These three homogeneity measures will allow us to study whether life satisfaction across countries is related to income, ethnic, and religious homogeneity as measured by these three variables.

Other economic and social variables are also used in this study. Several of the variables selected for this study are based upon the recent work of Ovaska and Takashima (2006). In their study, variables measuring economic growth, unemployment, inflation, income (GDP per capita), level of foreign trading, income of neighboring countries, economic freedom, political freedom, government size, female labor participation, religion, life expectancy, and aging population were used. While they performed multiple regression analysis in stages, the two variables that had the most consistent impact on life satisfaction were economic freedom and life expectancy. Many of the economic variables turned out to be insignificant statistically or the coefficients were so small that they would be considered economically insignificant (income of neighboring countries,

inflation, government spending, unemployment, and foreign trade). Several of the socio-demographic variables were also found to be insignificant (political freedom, female labor participation, education, and aging population).

In addition to the three homogeneity measures, we used foreign aid per capita, arable land, GDP per capita, GDP growth, government spending, inflation, female labor force participation, life expectancy, enrollment in secondary school, and illiteracy rate as additional control variables. We started using the sample of 91 nations for which life satisfaction was available, as we gathered data from the World Development Indicators, Freedom House (Economic Freedom Index), Human Development Report (Gini Coefficients), The World Almanac (ethnic, religious homogeneity, and illiteracy). Data were not available for all 91 countries, and the sample size was subsequently reduced to 65 countries. Table 1 shows the descriptive statistics for the data used in the final statistical model (descriptive statistics for the full data set are available by contacting the authors). Appendix A describes the data used for the study as well as their sources. Appendix B lists the countries used for the study. Since the thrust of this research is to explore the relationships between life satisfaction and homogeneity, multiple regression analysis was used to analyze the data.

Table 1: Descriptive Statistics for Variables Used in Final Multiple Regression Model

Variable	Number of Obs.	Mean	Standard Deviation	Minimum	Maximum
Life Satisfaction	65	5.99	1.25	3.2	8.1
Gini Coefficient	65	38.14	9.55	24.9	59.3
Aid per Capita	65	27.16	38.49	0	210.35
GDP Growth	65	2.82	2.72	-2.79	18.38
GDP per Capita	65	10490.76	9521.94	532.09	33316.37
Inflation	65	16.38	28.88	-1.00	154.24
Life Expectancy	65	69.41	9.59	40.70	80.88
Ethnic Homogeneity	65	75.40	21.39	17	100

RESULTS

Table 2 presents the results of the most parsimonious regression model. This model explains approximately 71% of the variation in life satisfaction across the 65 nations used in this study. The error terms were checked for normality, serial correlation, and hetroskedasticity. The diagnostics for the regression results indicated that the residuals are normally distributed and there was no evidence of serial correlation or hetroskedasticity. Correlation analysis of the independent variables

did not reveal any substantive multicollinearity (see Appendix C). The strongest correlation between two independent variables exists between GDP per capita and life expectancy. Also, as different models were explored, the coefficients for the significant variables maintained their signs, significance, and exhibited minimal changes in magnitude.

Table 2: Regression Analysis Results Dependent Variable: Life Satisfaction Included observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	1.053190	0.998550	1.054719	0.2960
Gini Coefficient	0.032855	0.011049	2.973616	0.0043
Aid per Capita	-0.004658	0.002779	-1.676134	0.0992
GDP Growth	-0.074820	0.041372	-1.808462	0.0758
GDP per Capita	4.46E-05	1.44E-05	3.101399	0.0030
Inflation	-0.010257	0.003229	-3.176481	0.0024
Life Expectancy	0.066353	0.013981	4.745980	0.0000
Ethnic Homogeneity	-0.011722	0.004532	-2.586403	0.0123
R-squared	0.739524			
Adjusted R-squared	0.707536			
S.E. of regression	0.678141			
F-statistic	23.11860			
Prob(F-statistic)	0.000000			
Durbin-Watson stat	2.291274			

Of the three homogeneity variables, income inequality (Gini coefficient) and ethnic homogeneity were statistically significant. The income inequality measure shows a positive relationship with life satisfaction. Since lower Gini coefficients indicate greater income equality, a negative relationship is counterintuitive. The results indicate that life satisfaction is improved with greater differences in income. Many believe that having greater income equality would equate to less strife and more life satisfaction in a society. Our results run contrary to that view. The ethnic homogeneity index was negatively related to life satisfaction, implying the higher the ethnic majority, the lower life satisfaction. This suggests that ethnic diversity is a source of life enrichment. The religious homogeneity index was not statistically significant.

Aid per capita was marginally significant (10% level) and the coefficient was negative indicating that more aid relates to lower life satisfaction, but it is hard to define the cause and effect. Countries that receive more aid tend to have lower standards of living, which would be related to lower levels of life satisfaction. GDP per capita is positively related to life satisfaction. Higher incomes are associated with higher levels of life satisfaction. Inflation and life satisfaction are negatively associated. Since inflation creates uncertainty, our results confirm that nations with higher inflation rates have lower levels of life satisfaction. The coefficient for GDP growth, while only marginally significant (10% level), is negative signifying that countries with higher economic growth have lower levels of life satisfaction. This is not surprising since developed nations tend to have low stable growth rates compared to lesser-developed nations. The most important determinant of life satisfaction is life expectancy. Higher life expectancy in a nation is associated with higher life satisfaction. Life expectancy is used as a measure of health. Health has been found to be one of the most important variables explaining self-perceived level of well-being (Helliwell, 2002).

Comparing our major outcomes to the study by Ovaska and Takashima (2006), we too find that life expectancy is a crucial determinate of life satisfaction. Contrary to Ovaska and Takashima (2006), our analysis indicates that greater economic freedom is not a significant indicator of life satisfaction. It is possible that economic freedom is being measured through other variables included in this study such as the Gini Coefficient, but this result warrants additional investigation.

CONCLUSIONS

Based on our multiple regression analysis, we obtained some expected and at least one unexpected relationship(s) with respect to the relationships between homogeneity measures and happiness as measured by life satisfaction. The results suggest that life satisfaction is significantly negatively related to ethnic homogeneity in the presence of our control variables. This is consistent with the "melting pot" concept, as multiple cultural influences create a richer living environment. Religious homogeneity was not significantly related to life satisfaction, and this is due in part to the overwhelming significance of income as an explanatory variable. Also, differences in the tenets of diverse religions may well be expected to lead to different views of what constitutes "happiness."

The most surprising result is the significant positive association between life satisfaction and income inequality in the presence of the other variables. One may defer to the opinion that "wealth" is not a zero-sum game. Perhaps it is overall standard of living, and not the gap between "rich" and "poor" that tends to most influence life satisfaction. However, this does not explain why there is a positive relationship even when holding standard of living constant. It is possible that people in some cultures are inured to the inherent existence of such gaps, and even embrace them for rewarding such traits as talent, hard work, and perseverance. At this point, we can at most note the result and conclude that further tests using other explanatory variables is required before we can offer more definitive interpretations regarding this interesting finding.

Future investigations on homogeneity and happiness are needed to assess the aforementioned relationship between income inequality and life satisfaction. In addition, alternative measures of homogeneity (such as the "fractionalization" metrics of Alesina et al) may be employed. The Vanhanen indices used in the current study are adequate measures of homogeneity, but the fractionalization indices offer a greater degree of variation in heterogeneity. Other studies separately examining national homogeneity/heterogeneity are also warranted, as no study to date has assessed the relationships between the four separate dimensions (income, ethnic, linguistic, and religious) therein. Such inquiry should be of interest to virtually every social science.

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APPENDIX A: VARIABLE DEFINITIONS AND SOURCES		
Variable	Comments	Source
Happiness	How much people enjoy their life-as-a-whole on a scale of 0 to 10; average 1995-2005	World Database of Happiness
Gini Coefficient	0 indicates perfect equality and 100 indicates perfect inequality; most recent index value used	Human Development Report (2005)
Economic Freedom	Average of Economic Freedom Index over 2000-2004	Freedom House
Ethnic Homogeneity	Percentage of population belonging to the major ethnic category in nation	World Almanac (2006)
Religious Homogeneity	Percentage of population belonging to the major religion in nation	World Almanac (2006)
Illiteracy	Percentage of population that is illiterate	World Almanac (2006)
GDP per capita	Average GDP per capita, PPP, in constant 2000 dollars from 1995-2004	World Development Indicators online database
GDP Growth	Average growth rate in GDP per capital from 1995-2004	World Development Indicators online database
Government Consumption	Average government consumption as a percent of GDP from 1995-2004	World Development Indicators online database
Inflation	Average annual GDP Deflator from 1995-2004	World Development Indicators online database
Arable Land	Average arable land per capita (hectares) from 1995-2004	World Development Indicators online database
Female Labor Force	Female Participation in the labor force as measure as the percent of total labor force; average 1995-2004	World Development Indicators online database
Life Expectancy	Average life expectancy at birth from 1995-2004	World Development Indicators online database
Secondary School Enrollment	Ratio of total enrollment in secondary school, regardless of age, to the population of the age group that officially corresponds to the level of education shown. The average is taken over 1995-2004.	World Development Indicators online database

APPENDIX B: LIST OF NATIONS			
Albania	Dom Rep	Mali	United Kingdom
Algeria	Egypt	Mexico	United States
Argentina	El Salvador	Moldova	Uruguay
Armenia	Estonia	Morocco	Uzbekistan
Australia	Finland	Netherlands	Zimbabwe
Austria	Georgia	New Zealand	
Azerbaijan	Germany	Peru	
Bangladesh	Ghana	Philippines	
Belarus	Greece	Poland	
Belgium	Honduras	Romania	
Bolivia	Hungary	Senegal	
Bosnia	India	Singapore	
Brazil	Indonesia	Slovenia	
Bulgaria	Iran	South Africa	
Canada	Israel	Spain	
Chile	Japan	Sweden	
Columbia	Jordon	Switzerland	
Cote d'Ivoire	Kenya	Tanzania	
Croatia	Lithuania	Turkey	
Czech Rep	Macedonia	Uganda	

APPENDIX C: CORRELATIONS							
	Life Satisfaction	Gini	Aid per Cap.	GDP Growth	GDP per Cap.	Inflation	Life Exp.
Gini Coefficient	0.03						
Aid per Capita	-0.37	-0.10					
GDP Growth	-0.29	-0.38	0.52				
GDP per Capita	0.69	-0.36	-0.33	-0.13			
Inflation	-0.46	0.00	-0.06	0.01	-0.31		
Life Expectancy	0.58	-0.42	-0.10	0.18	0.67	-0.22	
Ethnic Hom.	0.03	-0.23	-0.13	0.01	0.21	0.07	0.42

AN EXPLORATORY ANALYSIS OF THE RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE, REGIONAL CULTURE, CAUSAL AMBIGUITY AND COMPETITIVE ADVANTAGE IN AN INTERNATIONAL SETTING

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ABSTRACT

It is important for managers to understand the dynamics of competitive advantage in the global environment. Today, companies find more difficulties in distinguishing their core competencies and achieving a competitive advantage. The current global environment is changing and some competitive advantages may be losing their sustainability as new firms entering an industry imitate distinctive competencies of incumbent firms. This research is a preliminary exploratory analysis of the relationship between the social complexity of the firm, causal ambiguity and susceptibility to imitation as affected by regional/national and organizational culture. The research is important since it has been shown that causal ambiguity limits imitation and increases the sustainability of competitive advantage. Our results confirm the relationship between organizational culture, national/regional culture, imitation and causal ambiguity through a survey and factor analysis. Thus, firms should take advantage of the unique complexity of their corporate culture to limit imitation and increase competitive advantage.

INTRODUCTION

The evolution of economic organizations throughout the world is influencing the nature of competition due to technological advances, changes in the operating environment, and managerial developments. The number of players in the world economy is increasing significantly and competition beyond national borders is creating a complicated business environment (Threlkel, 1999). Due to this ever growing pool of competitors companies find more difficulties in distinguishing their core competencies and achieving a competitive advantage. Market boundaries

are changing quickly and strategies to develop competitive advantage are becoming less sustainable. But, for many firms constant changes in the world economy are providing more opportunities.

For example, automobile manufacturers in the United States are finding difficulties in differentiating their products from their competitors. They have also had problems with improving quality, reducing inventory costs and improving efficiency. One of the main international competitors, Toyota, has become the largest car manufacturer in the world in recent years. Toyota has been able to accomplish this by being the low-cost leader in product and the differentiator in quality, styling and customer service.

It is probable that firms, such as GM (General Motors), Ford and Chrysler are continuously attempting to duplicate/copy the capabilities and resources of the new industry leader, Toyota. Particular resources and capabilities of Toyota such as the *kanban* inventory system, quality teams and supplier management systems should be relatively easy for these companies to imitate. Yet, these capabilities are the competencies that allow Toyota to sustain its competitive advantage. In trying to explain the seeming inability of U.S. auto makers to fully imitate and utilize these capabilities there are several unexplainable factors that create a barrier to imitation. So we know that Toyota's competitive advantage clearly does not lie in just the visible resources and capabilities listed above.

The objective of this research is a preliminary exploratory analysis of the relationship between the social complexity of the firm, causal ambiguity and susceptibility to imitation as affected by national, regional and organizational culture. We feel that these are the hidden factors that make imitation difficult and deserve further research in order to explain their contribution to sustainable competitive advantage in the global marketplace.

CONCEPTUAL DEVELOPMENT AND DEFINITIONS

Global competition, especially in established markets, is leading companies to realize that traditional strategies have become inadequate. Prahalad and Hamel (1990) observed that only a few companies are able to adapt themselves to inventing new markets, quickly entering new markets, and/or shifting patterns of customer choice. Only these few firms will be able to sustain competitive advantage because they can differentiate themselves from their competitors. This is, as Barney (1991) observed, because homogeneous resources would lead all firms to implement the same strategies. There are three basic types of resources that may provide a firm with competitive advantage: physical capital resources, such as the firm's plant, equipment and finances; organizational capital resources, such as the firm's structure, planning, controlling and coordination; and, human capital resources, such as the skills, judgement and intelligence of the firm's employees (Barney & Wright, 1998). The human resources, planning, controlling and coordination are all contributors to the organizational culture of the firm. When a resource like the culture of the firm

is valuable, rare and not easily imitable it can provide a temporary competitive advantage that allows some firms to consistently outperform others by sustaining performance differences and protecting these resources and capabilities (Barney, 2001.)

Firm Level Sources of Sustained Competitive Advantage

Studies have shown that firms that build their strategies on path dependent, causally ambiguous, socially complex, and intangible assets outperform firms that build their strategies on tangible assets. It is the fit and linkage between these interdependencies that is viewed as a potential factor in creating sustained competitive advantage (Barney, 2001).

Porter (1996) stated that companies must be flexible in order to respond rapidly to competitive and market changes because rivals can quickly copy any changes in market position and/or strategies. Therefore, companies' competitive advantage can be sustained only temporarily. But, the purpose of a competitive strategy is to achieve a sustainable competitive advantage (SCA) and long-term, enhanced a firm performance. As stated earlier, Competitive Advantage can come from valuable and rare organizational resources. However, these resources only become a source of SCA when they cannot be obtained and/or imitated by the firm's competitors (Barney, 1991; King & Zeithaml, 2001.) Resources may be protected from imitation in a variety of ways. Research has shown that there is a positive relationship between causal ambiguity and inimitability (King & Zeithaml, 2001); and, social complexity and inimitability (Porter, 1980; Barney, 1986). Therefore, regarding competencies, firms need to understand how social complexity, causal ambiguity and imitation are related in order to build stronger constraints against imitation.

Causal Ambiguity and Imperfectly Imitable Resources

Causal ambiguity is present in every process of the competition between firms (Gonzalez-Alvarez & Nieto-Antolin, 2005). Causal ambiguity is defined in the literature as a lack of clarity regarding the link between firm resources and sustained competitive advantage (King & Zeithaml, 2001) and occurs when competitors are unable to detect how a firm uses its competencies as a foundation for its competitive advantage. Barney (1991) stated that causal ambiguity occurs when a competing firm does not understand the link between the resources and capabilities of the incumbent firm and its sustained competitive advantage. The less observable the resource and the more difficult it is to understand, the greater the likelihood to be a source of SCA (Fahy, 2000). The firm's resources and capabilities characterized by causal ambiguity are associated with high firm performance (King & Zeithaml, 2001). The firm's resources, such as its unique history contributing to the firm's organizational culture, cannot be easily imitated and can provide a source of sustainable competitive advantage (Barney, 1986; Barney & Wright, 1998).

Organizational Culture

Empirical evidence consistently supports the distinctiveness of organizations' culture for those who are trying to ensure their position in the business environment (King & Zeithaml, 2001; Oliver, 1997; Wooldridge & Minsky, 2002). Organizational culture can be defined as the pattern of shared assumptions (at the deepest levels), values and beliefs that help individuals understand organizational functions thus providing them with the norms of behaviour in the organization; therefore, both the firm's outcomes and the means to achieve these outcomes are affected (Wooldridge & Minsky, 2002). Building competencies that reside in the culture of the firm helps build and sustain competitive advantage (King & Zeithaml, 2001). The phenomena of social complexity and culture play an important role in competitive advantage. A firm with a strong organizational culture must be organized and able to exploit this resource (Rashid, Sambasivan, & Johari, 2003). Trust and good relationships among organizational members are firm specific assets that provide value, are quite rare, and are extremely difficult for competitors to imitate (Barney, 1991). Only organizations in which these organizational relationships are developed benefit and can create advantage.

Oliver (1997) proposed a model stating that a firm's ability to generate above-normal profits from resources and capabilities will depend primarily on the firm's effectiveness in managing social context of these resources and capabilities. The competitive global business environment moves fast; therefore, firms face challenges developing strategies that will allow them to survive and sustain their competitive advantage.

National Culture

Because organizations are, in many ways, embedded in the larger society in which they exist, research on cultural differences of cross-national businesses lead to an examination of both national and organizational cultures. A company's performance or success depends on adaptability, flexibility and speed to manage the uncertainties of the future (Winston, 1996). However, business operations throughout the world have increased the interest in the relationship between organizational and national/regional cultures. Since many competitors may not understand and relate corporate culture to the national/regional cultures this may lead to increased social complexity and causal ambiguity.

Though there has been much research on organizational culture, none has yet been able to definitively link organizational performance to national/regional culture performance. In order to sustain its competitive advantage, a company should be able to create, support and apply an organizational culture responsive and suitable to the global competitive environment (Augsdorfer & Harding, 1995; Barney & Wright, 1998). In other words, how companies could meet the

increasingly complex world markets' challenges and respond quickly to new opportunities would contribute to the sustainability of their competitive advantage.

METHODOLOGY

The data collected to test the propositions was collected by means of a self-administered questionnaire. For the purposes of a better respondent understanding and error deduction, the survey instrument began with the description of a current situation with two of the world's largest automotive companies: Toyota and General Motors (GM, representing all US manufacturers).

Automobile manufacturers in the United States are having difficulties in differentiating their products from their competitors. They have also had problems with improving quality, reducing inventory costs and improving efficiency. And one of the main international competitors, Toyota, continues its quest to become the largest car manufacturer in the world. Toyota will accomplish this by being the low-cost leader in production and the differentiator in quality, styling and customer service. The relationship with its suppliers, the commitment with customers, innovation on process and products, a flexible production process, and the organizational commitment to quality are the main characteristics of the Toyota system.

Competitors have copied many of Toyota's process innovations, such as its *kanban* inventory system and team production. However, it is difficult for competitors to duplicate and/or to take full advantage of many of Toyota's competencies. These factors are not visible to outsiders; they are embedded firmly in Toyota's socially complex organizational culture and become difficult to imitate. It is probable then that a challenger firm, such as GM may continuously attempt to duplicate/copy the capabilities and resources of the new industry leader, Toyota. Particular resources and capabilities allow Toyota to sustain its competitive advantage. Competitors in the automotive industry seem to be unable to understand and imitate Toyota's distinctive competencies.

In trying to explain the seeming inability of GM to imitate and utilize these capabilities, there are several unexplainable factors that create a barrier to imitation. In this survey instrument, Toyota will be referred as the "incumbent firm," while GM will be the "challenger/copier firm." The definition of causal ambiguity is also given for respondents' better understanding. Thus, it is proposed that there is some causal ambiguity that limits imitation and helps Toyota maintain a competitive advantage.

The instrument included two parts, looking from the perspective of the "incumbent" firm, and from the perspective of the "challenger/copier" firm. A Likert scale was utilized; therefore, each respondent was asked to rate each item on a 1-to-5 scale (1=strongly disagree; 5=strongly agree).

PROPOSITIONS

Figure 1 presents the tested and the hypothesized relationship among organizational culture, national/regional culture and causal ambiguity. The review of the literature leads to the following propositions. As noted by Martin-de-Castro, Navas-Lopez, Lopez-Saez and Alama-Salzar (2006), organizational culture can be highly valuable and difficult to imitate. If a company is able to develop a strong culture, competitors are disadvantaged in imitation since culture requires specific conditions and time for its formation. A strong organizational culture can be a source of sustained competitive advantage (Martin-de-Castro, 2006; King & Zeithaml, 2001). Inimitability is the difficulty that competitors find in copying the resources and capabilities of the company through internal development (Barney, 1991, 2001). Martin-de-Castro, Navas-Lopez, Lopez-Saez and Alama-Salzar (2006) stated that it is almost impossible for the potential imitator to copy something that cannot be described clearly. Giving these findings, it is reasonable to propose that a company's strong and homogeneous culture will limit imitation by the firm's competitors. Thus,

P_1: The stronger the organizational/corporate culture within the firm, the more difficult imitation by competitors will be.

Building competencies that reside in organizational culture helps build and sustain competitive advantage; however, changes in the environment put the value of these competencies at risk (King & Zeithaml, 2001). According to Martin-de-Castro, Navas-Lopez, Lopez-Saez and Alama-Salzar (2006) culture and organizational learning allow firms to adapt to market requirements.

The changes in the global marketplace require a flexible and adaptable corporate culture (Elashmawi, 2000). To ensure that current organizational resources add value in the face of environmental change, companies may continually question the organizational culture (King & Zeithaml, 2001). Corporate culture is a key element in ensuring that as the business environment evolves (due to new technology, client segmentation, regulation, competition, and other factors) organizations respond effectively to the global market changes before their competitors (Elashmawi, 2000). Successfully reacting to changes in the global marketplace requires a flexible and adaptable corporate culture. A new horizon of multicultural management is necessary in anticipation of globalization; managers must become skilled in the multicultural aspects of the company (Elashmawi, 2000). This results in the following proposition:

P_2: Social complexities of the firm will make imitation by competitors more difficult in the global competitive environment.

In order to become a successful global business, companies must become skilled in the multicultural aspects of the company (Elashmawi, 2000). As noted by Oliver (1997), a firm's ability to generate revenues from resources and capabilities depend primarily on the firm's effectiveness in managing the social context of these resources and capabilities. The challenge for an organization is identifying the specific culture that exists within the firm (Pool, 2000); therefore, a firm that operates in different cultural environments should be able to recognize, support and combine these differences with the organizational culture. Chow, Haddad, and Wu (2003) discovered that the most valued corporate cultural aspects differed from country to country. Some aspects of corporate culture may enhance performance in one national setting; however, they may not be effective, and may be even dysfunctional in another country (Chow, Haddad & Wu, 2003). The above discussion leads to the following proposition:

$P_{3:}$ *Firms with a strong combination of corporate culture and national/regional culture will be able to limit imitation and create competitive advantage.*

SAMPLE

As exploratory research, our sample consisted of 36 undergraduate, six graduate students, and nine faculty and staff members at a university located in the south eastern US. The undergraduate and graduate students were enrolled in a business policy and strategy class; therefore, the items on the scales were pertinent. The faculty and staff members are part of the College of Commerce and Business Administration (CCBA). Therefore, this study examined issues relevant to their interest. Current subject matters, such as business strategy, organizational/corporate culture, national/regional culture, causal ambiguity, and limitations for imitation were analyzed.

The sample data was evaluated with an independent *t*-test comparing the three different groups: undergraduate students, graduate students and faculty/staff. The results showed that there is a significant ($\alpha = .05$) difference in the responses between groups. These differences may have been due to sample size, since our samples were small. The difference in means was on the following groups and items:

Graduate compared to undergraduate

1-a7) Of the following, which provides the firm with a "clear competitive advantage"? Organizational or firm culture
2-e) A company must continually improve its efforts to extend its uniqueness
2-h) The stronger the organizational/corporate culture within the firm, the more difficult imitation of the incumbent firm will be.

2-I) Efforts to imitate the incumbent firm's competency in quality will blur uniqueness, reduce fit, and ultimately undermine the core competencies of the challenger/copier firm

Graduate compared to faculty

Questions 2-e, 2-h and 2-i showed significant differences in the means.

Table 1: Analysis of Means

Question	Category*	N	Mean	Std. Deviation
I-a1	F	9	3.56	0.882
	G	6	3.50	1.225
	U	36	3.61	0.964
I-a2	F	9	4.22	0.833
	G	6	4.83	0.408
	U	36	4.53	0.560
I-a3	F	9	4.00	0.707
	G	6	4.17	0.753
	U	36	4.03	0.774
I-a4	F	9	3.78	0.833
	G	6	3.33	1.211
	U	36	4.31	0.624
I-a5	F	9	2.67	1.118
	G	6	3.00	1.265
	U	36	3.33	1.042
I-a6	F	9	3.56	0.882
	G	6	3.83	0.408
	U	36	3.64	0.867
I-a7	F	9	4.33	0.707
	G	6	4.83	0.408
	U	36	4.08	0.770
I-b	F	9	4.00	0.707
	G	6	3.83	0.983
	U	36	3.69	0.710

Table 1: Analysis of Means				
Question	**Category***	**N**	**Mean**	**Std. Deviation**
I-c	F	9	3.44	0.882
	G	6	3.33	1.033
	U	36	3.53	0.696
I-d	F	9	4.44	0.726
	G	6	4.33	0.516
	U	36	4.25	0.770
I-e	F	9	4.33	1.000
	G	6	4.67	0.516
	U	36	4.17	0.737
II-a	F	9	3.33	1.000
	G	6	3.67	0.516
	U	36	3.44	0.695
II-b	F	9	3.33	1.000
	G	6	3.00	1.095
	U	36	3.19	0.951
II-c	F	9	2.56	0.726
	G	6	3.00	0.894
	U	36	3.17	0.971
II-d	F	9	3.56	1.014
	G	6	3.50	1.225
	U	36	3.56	1.027
II-e	F	9	2.56	0.882
	G	6	4.17	0.408
	U	36	3.19	1.064
II-f	F	9	2.78	0.972
	G	6	3.33	0.816
	U	36	2.97	1.055
II-g	F	9	2.56	0.726
	G	6	3.17	0.983
	U	36	2.81	0.980

Table 1: Analysis of Means				
Question	**Category***	**N**	**Mean**	**Std. Deviation**
II-h	F	9	4.56	0.527
	G	6	5.00	0.000
	U	36	4.67	0.535
II-i	F	9	4.33	0.500
	G	6	5.00	0.000
	U	36	3.94	1.068

Table 2: Comparison of Means									
	G compared with U		Sig	F compared with U		Sig	G compared with F		Sig
Question	t	Sig. (2-tail)	*	t	Sig. (2-tail)	*	t	Sig. (2-tail)	*
I-a1	-0.212	0.839		-0.166	0.871		0.096	0.926	
I-a2	1.600	0.146		-1.043	0.322		-1.886	0.083	
I-a3	0.417	0.690		-0.103	0.919		-0.430	0.676	
I-a4	-1.924	0.108		-1.779	0.105		0.784	0.455	
I-a5	-0.612	0.562		-1.621	0.131		-0.523	0.612	
I-a6	0.882	0.393		-0.254	0.803		-0.822	0.427	
I-a7	3.566	0.004	*	0.932	0.368		-1.732	0.107	
I-b	0.332	0.751		1.159	0.269		0.358	0.729	
I-c	-0.445	0.673		-0.264	0.797		0.216	0.833	
I-d	0.338	0.743		0.709	0.491		0.346	0.735	
I-e	2.049	0.071		0.469	0.649		-0.845	0.414	
II-a	0.924	0.381		-0.315	0.759		-0.845	0.414	
II-b	-0.410	0.695		0.376	0.713		0.598	0.563	
II-c	-0.417	0.689		-2.098	0.052		-1.014	0.336	
II-d	-0.105	0.920		0.000	1.000		0.092	0.929	
II-e	3.995	0.001	*	-1.861	0.083		-4.768	0.000	*
II-f	0.958	0.366		-0.528	0.607		-1.195	0.255	
II-g	0.833	0.433		-0.856	0.405		-1.304	0.226	
II-h	3.742	0.001	*	-0.564	0.583		-2.530	0.035	*
II-i	5.933	0.000	*	1.595	0.122		-4.000	0.004	*
(*) *t*-test shows significant difference in means at $\alpha = .05$									

RESULTS

The survey instrument was divided into two parts. The first part was from the "incumbent firm" perspective, while the second part was from the "challenger/copier firm" perspective. The data was measured by using the confirmatory factor analysis. Stevens (1996) suggested the use of the Varimax rotation method; therefore, a factor rotation using the Varimax method with Kaiser Normalization was applied. This rotation approach was designed to reduce the number of variables to simplify the factor analysis. To obtain more easily interpretable results, the original data was summarized with four factors, which explains 76.3 % of the cumulative variance. The fourth factor did not show a strong relationship between the variables. The analysis could also be carried out with only 3 factors, which explains 63.69% of the total variance (see Table 3).

Table 3: Cumulative Percent of Variance Explained by Confirmatory Factor Analysis

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.133	26.663	26.663
2	1.556	19.450	46.113
3	1.406	17.578	**63.690**
4	1.007	12.591	**76.281**

Eight questions were chosen from the survey instrument to be analyzed in the rotated component matrix. The questions that formed factors could be classified as (see Table 4):

Factor 1 – For the challenger firm, imitation will blur their uniqueness

2e) Efforts to imitate the incumbent firm's competency in quality will blur uniqueness, reduce fit, and ultimately undermine the core competencies of the challenger/copier firm

2f) Efforts to imitate the incumbent firm's competency in supply chain relationship will blur uniqueness, reduce fit, and ultimately undermine the core competencies of the challenger/copier firm

2g) Efforts to imitate the incumbent firm's competency in flexible manufacturing will blur uniqueness, reduce fit, and ultimately undermine the core competencies of the challenger/copier firm

Factor 2 – For the incumbent firm, causal ambiguity is based on organizational and national culture

1b) There is a positive relationship between organizational culture and causal ambiguity

1c) There is a positive relationship between national culture and causal ambiguity

Factor 3 – For the incumbent firm, clear competitive advantage roots come from complexity

1a) Of the following, which provides the firm with a "clear competitive advantage"?
1. Complex company resources
5. High social complexity within the firm

Factor 4 – For the copier firm, national culture affects the industry

2a) National culture has a positive effect on the culture of the industry (ex. auto industry)

Table 4: Rotated Component Matrix

	Component			
	1	2	3	4
Part I: a-1	-0.069	-0.253	**0.847**	0.104
Part I: a-5	0.100	0.284	**0.805**	-0.168
Part I: b	-0.196	**0.819**	0.02	-0.203
Part I: c	0.063	**0.864**	-0.018	0.102
Part II: a	0.051	-0.045	-0.042	**0.941**
Part II: e	**0.636**	-0.053	0.022	0.356
Part II: f	**0.889**	0.023	-0.131	-0.145
Part II: g	**0.870**	-0.097	0.134	0.044

Proposition 1 examined the importance of a strong organizational culture within the firm. The third factor converged with a commonality of complexity. According to this indicator, social

complexity within the firm and complex company resources may provide a firm with a clear competitive advantage. Thus, Proposition 1 was supported (see Table 2).

Proposition 2 dealt with the firms' relationship between the degree of corporate flexibility, and how quickly they respond to the changes in the global competitive environment. The first factor component of the rotated matrix showed a strong correlation between three questions indicating how firms, in trying imitation, may blur their uniqueness, reduce fit among their operations and undermine their core competencies. Therefore, validity to the Proposition 2 is provided.

Proposition 3 examined the effect of a firm's relationship between the combination of corporate/regional culture and national/regional culture. The second factor indicates that organizational/corporate culture and national/regional culture has an impact on causal ambiguity. This factor converged to support Proposition 3. A fourth factor indicates some relationship between national culture and industry culture; however, more than one question may be needed to support this proposition. As it is described above, the factor rotation could be applied with only the first three factors.

RECOMMENDATIONS AND MANAGERIAL IMPLICATIONS

In this global era, it is critical for companies to understand several cultures. Over time, competencies derived from the culture of a firm may be understood by competitors; however, replicating this environment outside the company may be difficult, if not impossible (King & Zeithaml, 2001). Additionally, companies should be able to design a new goal-oriented corporate culture strategy considering the changes in the global environment. The results of this study indicate that firms that concentrate on retaining the relationship between their corporate culture and their national/regional culture will be able to limit imitation and create competitive advantage.

This information can be used for organizations to understand and improve cross-national organizational cultural differences. Therefore, by discovering new sources of competitive advantage, a company can sustain its above average returns in the current global economic environment.

FUTURE RESEARCH

Many times, competencies that reside in organizational culture and values are characterized as causally ambiguous; therefore, they are protected from acquisition or imitation by competitors (Barney, 1991; King and Zeithaml, 2001; Threlkel, 1999). The long-term inimitability, and hence value, of resources is never certain; therefore managers have to undertake activities that attempt to maximize their chances of survival in conditions of incomplete knowledge (Jenkins, 2005). Oliver (1997) stated that future research on sustainable advantage should focus not only on the attributes

of firm resources, such as their rarity, uniqueness and non-substitutability, but also on how resources are developed, managed, and diffused. In addition, further study needs to be encouraged on imitation and the affect trying to copy "incumbent firm" (ex. Toyota) competencies may have on the "challenger/copier firm" (ex. GM). The attempt at imitation by the challenger/copier may blur firm uniqueness, reduce internal fit, and negatively affect the core competencies of the firm.

It is clear that this study has many limitations, such as the size and the nature of the samples. To the extent that the findings of this study are valid, future research would include a larger sample in testing the research propositions suggested. Research directed to these issues and others will continue to form the understanding of these important relationships. There is much yet to be analyzed about why particular aspects of the relationship between corporate/organizational culture, national/regional culture and causal ambiguity seem to be performance-relevant between firms in different countries.

In conclusion, this study has contributed to an exploration and analysis of how causal ambiguity around a flexible and suitable organizational culture limits imitation and influences firm performance. The findings of this study suggest that there is a relationship between companies' corporate and national culture and the linkage between inimitability and causal ambiguity. Therefore, companies need to consider culture differences as they adapt their resources and expand their capabilities internationally. Discovering the drivers of these relationships can enable international companies to understand the impact of their organizational culture with the national/regional culture of each country. In other words, the current global environment is changing the way competitive advantage could be sustained; therefore, it is important to understand the dynamics of the global environment.

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AN EXAMINATION OF STRUCTURAL CHANGE AND NONLINEAR DYNAMICS IN EMERGING EQUITY MARKETS

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ABSTRACT

Recent equity market collapses in many emerging nations have made many of these markets the subject of much concern. Several emerging nations underwent a dramatic overhaul of their financial infrastructure in the 1990s as a result of radical changes in regulatory attitudes. This study uses nonlinear dynamics to examine whether such regime changes have made these capital markets more efficient in recent years. This study examines ten emerging countries' equity markets, i.e. Argentina, Chile, Jordan, Korea, Malaysia, Mexico, Philippines, Taiwan, Thailand, and Turkey using daily data covering the periods 1988-1992 and 1999-2003. Informational efficiency for each examined stock market over each examined subperiod is gauged by the extent of stochastic and deterministic nonlinear predictability inherent in the market. Results indicate that the hypothesized financial regime changes during the 1990's have had no conclusive impact on the examined nonlinear predictability of these markets. The good news is that no compelling evidence was uncovered to suggest that any of the examined markets have become less informationally efficient over the ensuing period.

INTRODUCTION

Recent equity market collapses in many emerging nations have made many of these markets the subject of much concern. Several emerging nations underwent a dramatic overhaul of their financial infrastructure in the 1990s as a result of radical changes in regulatory attitudes, sometimes shaped by external pressures applied from creditor nations and the International Monetary Fund (IMF) (Radelet and Sachs, 1998; Dornbush and Werner, 1994). Have such regime switches made these capital markets more efficient in recent years? This study will seek to determine whether nonlinear predictability of emerging markets have changed due to these regime switches. While there has been much investigation of nonlinear dynamics and chaos in the capital markets of the developed world (e.g., see Hsieh, 1995; Kohers et al., 1997; Pandey et al., 1998), examinations of nonlinear dynamics in emerging markets have been limited in scope to stochastic nonlinearities (Sewel et al., 1993) or to sporadic coverage (Barkoulas and Travlos, 1998). Some recent literature has focused on regime switching models to explain exchange rates (Van Norden, 1996) and capital

market integration (Bekaert and Harvey, 1995). Some studies (e.g., Guillermo and Mishkin, 2003) have tried to explore the impact of currency regime switches on capital markets. Moving beyond currency regimes, the intent of this study is to explore the equity market impact of regime shifts in the broader financial infrastructure of emerging countries, such as the ones mentioned in Radlett and Sachs (1998). Hence this study examines emerging country equity markets before and after apparent regime changes using nonlinear dynamics, both stochastic and deterministic, in order to ascertain the predictability of these markets in these separate periods.

DATA AND METHODOLOGY

This study will examine the Morgan Stanley Capital International Markets (MSCI) daily stock index returns from ten emerging markets (i.e., Argentina, Chile, Jordan, Korea, Malaysia, Mexico, Philippines, Taiwan, Thailand, and Turkey) for evidence of the existence of nonlinear processes under various financial infrastructure regimes. This data set consists of daily index values in each country's local currency, the observations span from the origin (base) date of the index, the earliest date, starting from Jan 4, 1988 to December 31, 2003. These indexes, representing market-weighted price averages, were retrieved from Datastream database and are compiled by Morgan Stanley Capital International Perspective (MSCI) of Geneva, Switzerland. These indices represent emerging stock markets worldwide for which data was available on a consistent and reliable basis. The Morgan Stanley Capital International indexes are considered performance measurement benchmarks for global stock markets and are accepted benchmarks used by global portfolio managers as well as researchers (e.g., Cochran et al., 1993). Each one of the country indexes is composed of stocks that broadly represent the stock compositions in the different countries. To avoid the possibility that any detected systematic pattern is due to foreign exchange rate developments, the various national stock markets are measured in terms of their respective local currencies.

The sample period examined in this study extends from 1988 through 2003. However, the intermediate period 1993-1998 is hypothesized to be a period of structural change in the financial infrastructure of many emerging markets as enumerated in Radelet and Sachs (1998) and Dornbush and Werner (1994). The intent of this study is to examine the impact of these structural shifts in nonlinear dynamics inherent in the equity markets of these emerging nations. Hence the overall time frame is also subdivided into two subperiods of approximately equal length, that is 1988-1992 and 1999-2003, and the data sample is then examined for stationary nonlinear dynamics across the two subperiods.

Since the intent of this study is to investigate nonlinear dynamics, prior to proceeding with their examination for nonlinearity, each index returns series is filtered for linear correlations using autoregressive models of order p denoted AR (p) of the form:

$$Y_t = \theta_0 + \sum_{i=1}^{P} \varphi_i Y_{t-1} + \omega_t$$

where ω_t is a random error term uncorrelated over time, while $\varphi = (\varphi_?, \varphi_2 \ldots, \varphi_n)$ is the vector of autoregressive parameters. The lags (or order, p) used in the autoregressions for the appropriate model are determined via the Akaike Information Criterion (AIC) (Akaike 1974).

In examining the efficiency of financial markets, the first step lies in testing for the randomness of security or portfolio returns. Such an approach was adopted in earlier studies of market efficiency using linear statistical theory and very general nonparametric procedures. Examinations of chaotic dynamics have revealed that deterministic processes of a nonlinear nature can generate variates that appear random and remain undetected by linear statistics. Hence, this study employs tests that have recently evolved from statistical advances in chaotic dynamics. One of the more popular statistical procedures that has evolved from recent progress in nonlinear dynamics is the BDS statistic, developed by Brock et al. (1991), which tests whether a data series is independently and identically distributed (IID).

The BDS statistic, which can be denoted as $W_{m,T(\epsilon)}$ is given by

$$W_{mT}(\varepsilon) = \sqrt{T}\left[C_{mT}(\varepsilon) - C_{1T}(\varepsilon)^m\right] \div \sigma_{mT}(\varepsilon)$$

where:

T = the number of observations,
ϵ = a distance measure,
m = the number of embedding dimensions,
C = the Grassberger and Procaccia correlation integral, and
σ^2 = a variance estimate of C.

For more details about the development of the BDS statistic, see Brock et al. (1991). Simulations in Brock et al. (1991) demonstrate that the BDS statistic has a limiting normal distribution under the null hypothesis of independent and identical distribution (IID) when the data series is sufficiently large (over 500 observations). The use of the BDS statistic to test for independent and identical distribution of pre-whitened data has become a widely used and recognized process (e.g., Hsieh, 1991, 1993, 1995; Kohers et al., 1997; Pandey et al., 1998; Sewell et al., 1993). After data has been pre-whitened and nonstationarity is ruled out, the rejection of the null of IID by the BDS statistic points towards the existence of some form of nonlinear dynamics.

Rejection of the null hypothesis of IID by the BDS statistic is not considered evidence of the presence of chaotic dynamics. Other forms of nonlinearity, such as nonlinear stochastic processes, could also drive such results. In addition, structural shifts in the data series can be a significant contributor to the rejection of the null.

In order to minimize the possibility of stochastic nonlinearity affecting the results of tests for chaotic dynamics, a series of stochastic filters are employed. As there is a wide range of identified stochastic processes in existence, no exhaustive filter exists for the general class of stochastic nonlinear processes. The alternative is to fit stochastic models to the data and capture the residuals. If these are IID, we know that stochastic nonlinearity explains away all the nonlinearity identified by the BDS statistics of pre-whitened data series.

However, since it is possible to construct an infinite number of stochastic models, fitting each model to the pre-whitened data is an impossible task to undertake. Fortunately, prior research indicates that Generalized Autoregressive Conditional Heteroskedasticity (Engel, 1982) model of the first order, i.e., GARCH (1,1) is able to explain away the latent stochastic nonlinearity in a wide range of financial time-series (e.g., Brock et al., 1991; Errunza et al., 1994; Hsieh 1993, 1995; Sewell et al., 1996). Bera and Higgins (1993) provide an extensive survey of the application of GARCH models to the studies of many financial assets. Hence it is imperative, that any pre-whitened financial series exhibiting non-IID behavior be subjected to filters for the GARCH (1,1) process first.

The GARCH process may be described as:

$$y_t = \beta_0 + \sum_{i=1}^{m} \beta_i x_{t-i} + \varepsilon_t$$

where ϵ_t (conditional on past data) is normally distributed with mean zero and variance h_t such that:

$$h_t = \omega + \sum_{i=1}^{q} \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^{p} \gamma_j h_{t-j}$$

Hence the GARCH series becomes and iterative series where past conditional variances feed into future values of the series x_t and the solution is obtained when the computing algorithm achieves convergence. The GARCH (1,1) series is a GARCH model estimated with values of p = q =1 in the above scheme.

The GARCH(1,1) model is fitted to each data series and the residuals captured in the filtering process. If this conditional heteroskedasticity model explains any observed non-IID behavior of the data series, one can be certain that stochastic nonlinearity is the contributing factor.

If the data sets examined pass the abovementioned stochastic filter and still displays non-IID behavior as per recomputed BDS statistics, then one can employ tests specifically aimed at detecting chaotic nonlinearity latent in the datasets. The test for chaos employed in this study is the third moment test (Brock et al., 1991; Hsieh 1989, 1991).

Hsieh (1989, 1991) and Brock et al. (1991) developed the third moment test to specifically capture mean-nonlinearity in a given series. Briefly stated, this test uses the concept that mean-

nonlinearity implies additive autoregressive dependence, whereas variance-nonlinearity implies multiplicative autoregressive dependence. Using this notion and exploiting its implications, Hsieh (1989, 1991) constructed a test that examines the third order moments of a given series. Additive dependencies will lead to some of these third order moments being correlated. By its construction, this test will not detect variance nonlinearities.

The third order sample correlation coefficients are computed as:

$$r_{(xxx)}(i,j)=\left[\frac{1}{T}\sum x_t x_{t-i} x_{t-j}\right] \div \left[\frac{1}{T}\sum x_t^2\right]^{1.5}$$

where:

$r_{(xxx)}$ (i,j) = the third order sample correlation coefficient of x_t with x_{t-I} and x_{t-j}

T = the length of the data series being examined.

Hsieh (1991) developed the estimates of the asymptotic variance and covariance for the combined effect of these third order sample correlation coefficients which can be used to construct a χ^2 statistic to test for the significance of the joint influence of the $r_{(xxx)}$ (i,j)'s for specific values of j, such that $1 \leq I \leq j$. If the χ^2 statistics for relatively low values of j are significant, this outcome would be a strong indicator of the presence of mean-nonlinearity in the examined series. As chaotic determinism is a form of mean-nonlinearity, the third moment test provides strong evidence of the presence of chaos.

Hence, the methodology employed follows a sequential series of steps where each country's index values are used to compute returns using differenced logs. Next, each returns series is then filtered for latent linearity by fitting it with an appropriate autoregressive model and capturing the residuals. The appropriate lag lengths for constructing these autoregressive models are determined by employing the Akaike Information Criterion. These filtered data series are then be tested for nonlinear dynamics by employing the BDS statistics. Rejection of the null of IID for stationary data indicates the presence of nonlinear dynamics. To ensure that the results from the above step is not merely an artifact of nonstationarity of the examined index returns series, the BDS test is conducted on subsets of the larger data set. If the BDS test results for the subsets are not consistent with those for the entire data set, then nonstationarity of the data sets will taint the results of tests for nonlinearity employed in subsequent steps. Hence those returns series will not be examined further in this study.

Each index returns series is then filtered for latent GARCH effects by employing the popular GARCH(1,1) model. If the residuals of the pre-whitened returns series fitted with the above models do not reject the null of IID, as per recomputed BDS statistics, one may conclude that the source of the observed nonlinear behavior is stochastic nonlinearity. The series for which non-IID behavior of pre-whitened returns are not explained by either nonstationarity of data or via the examined

stochastic influences, are then tested for deterministic nonlinearity (chaos) using the Third Moments test.

RESULTS

Since all tests for nonlinear dynamics are also sensitive to inherent linearities, each examined series is filtered for linear autocorrelation before tests for nonlinear dynamics are applied. The order of the linear filter applied is determined by the Akaike Information Criterion (AIC), (Akaike, 1974). Table 1 presents the autoregressive lags used to filter each examined equity index return series for each of the subperiods studied. As mentioned before, the two subperiods examined are before the hypothesized structural change (1988-1992) and after (1999-2003).

Table 1: Autoregression Lags Used to Filter Returns on the Stock Markets Analyzed

Country Stock Market Index	Autoregressive Model Used: (Subperiod 1, Subperiod 2)
Argentina	AR(5), AR(1)
Chile	AR(3), AR(1)
Jordan	AR(2), AR(3)
Korea	AR(3), AR(2)
Malaysia	AR(3), AR(1)
Mexico	AR(7), AR(2)
Philippines	AR(1), AR(3)
Taiwan	AR(2), None
Thailand	AR(1), AR(1)
Turkey	AR(5), None

NOTE:
AR = Autoregressive model with (x) lags. Lags are determined via the Akaike Information Criterion (AIC).
Subperiod 1: Daily observations from 1988-1992; Subperiod 2: 1999-2003.

Table 2 presents the computed BDS statistics for the sample subperiod 1, 1988-1992. The BDS statistics used in this study report computed statistics of each data series for dimensions m = 2, …, 10 and the distance measure $\epsilon = 0.5\ \sigma$ and $1.00\ \sigma$. A lower ϵ value represents a more stringent criteria since points in the m-dimensional space must be clustered closer together to qualify as being

"close" in terms of the BDS statistic. The BDS statistic has an intuitive explanation. For example, a positive BDS statistic indicates that the probability of any two m histories, $(x_t, x_{t-1}, \ldots, x_{t-m+1})$ and $(x_s, x_{s-1}, \ldots, x_{s-m+1})$, being close together is higher than what would be expected in truly random data. In other words, some clustering is occurring too frequently in an m-dimensional space. Thus, some patterns of stock return movements are taking place more frequently than is possible with truly random data.

In this study, the values of m examined go only as high as 10. Two reasons dictate the choice of 10 as the highest dimension analyzed. First, with m = 10, only about 130 non-overlapping 10 history points exist in each examined return series. Examining a higher dimensionality would restrict the confidence in the computed BDS statistic. Second, the interest of this study lies only in detecting low-dimensional nonlinearity. High-dimensional nonlinear dynamics is, for all practical purposes, just as good as IID behavior where index predictability is concerned.

Table 2: BDS Statistics for Filtered Returns for Emerging Stock Markets
Sample Subperiod 1: 1988-1992
Country Stock Market Index:

e/σ	m	Argentina	Chile	Jordan	Korea	Malaysia	Mexico	Philippines	Taiwan	Thailand	Turkey
0.5	2	8.8727	8.2886	3.6639	5.9014	8.2574	9.3310	6.9320	8.1250	11.1850	12.8440
0.5	3	12.1130	12.5900	5.2559	9.0117	9.7951	11.7330	9.9521	11.8140	14.2960	18.1580
0.5	4	16.0930	16.2420	7.2941	11.6550	11.5850	14.2310	11.7590	15.2440	17.8340	22.3250
0.5	5	21.6290	20.1130	8.6243	13.2970	13.0300	16.8520	13.7670	19.0440	21.8620	27.3360
0.5	6	29.9260	25.4820	10.6150	14.8110	14.4850	19.5230	16.1740	24.9340	26.6530	35.1500
0.5	7	40.8530	32.3830	13.3290	15.6830	16.1620	22.3940	19.7380	32.3740	32.5250	46.7310
0.5	8	58.1560	42.0500	15.8360	16.0000	18.0770	27.1070	25.8450	40.7150	39.3350	60.1380
0.5	9	86.1490	53.3320	18.2590	16.5420	20.4360	32.8200	36.5640	51.0340	47.1460	77.7310
0.5	10	131.7700	66.5960	21.9850	18.0250	23.3570	41.1090	57.4490	68.6550	57.3360	99.0300
1	2	10.4220	7.9397	4.0167	7.1223	9.4056	8.9309	6.5045	9.3970	12.4120	12.0540
1	3	12.5780	10.8060	5.2862	9.4619	11.3050	10.8170	9.0120	13.3840	14.7290	15.9430
1	4	15.0290	13.1450	6.6094	11.3620	12.6430	12.3220	10.1550	16.3160	16.5470	18.3840
1	5	17.3550	14.7010	7.4459	12.6500	13.5940	13.7740	11.0680	18.8000	18.1190	20.7010
1	6	19.8820	16.4710	8.1532	13.7180	14.5250	15.2110	12.2410	21.8340	19.8420	23.4310
1	7	22.3620	18.3910	8.9216	14.5280	15.3370	16.4920	13.4900	25.5520	21.7030	27.0250
1	8	25.4680	20.4430	9.5589	15.3030	16.3130	17.7740	15.1580	30.3070	23.4150	31.3600
1	9	29.7170	22.6090	10.2250	15.8510	17.3450	18.6980	17.0270	36.2940	25.6310	36.6630
1	10	35.2480	25.3550	10.9550	16.8500	18.5210	19.9070	19.2970	43.7790	28.1930	42.7190

NOTE: m = embedding dimension. Except where noted with *, all BDS statistics are significant at the 5% level.

As noted in the Table 2, all reported BDS statistics reject the null of independent and identical distribution (IID). Hence it is possible that some nonlinearities exist in all examined equity indices during the 1988-92 subperiod. A similar examination of BDS statistics for the 1999-2003 subperiod in Table 3 shows that except for the Korean equity index, all examined indices still exhibit possible signs of nonlinear influences.

Table 3: BDS Statistics for Filtered Returns for Emerging Stock Markets
Sample Subperiod 2: 1999-2003
Country Stock Market Index:

e/σ	m	Argentina	Chile	Jordan	Korea	Malaysia	Mexico	Philippines	Taiwan	Thailand	Turkey
0.5	2	5.4889	4.5514	4.8915	1.6234*	7.9697	3.2922	1.4201*	1.2363*	5.4060	3.3901
0.5	3	7.3548	5.5112	5.7258	0.6716*	10.0410	4.4196	2.2758	2.0039	6.4503	5.0194
0.5	4	8.4475	5.8131	6.4798	0.0139*	12.1120	5.5476	3.5001	2.1041	7.9052	5.6853
0.5	5	8.7866	6.6721	7.7796	0.0286*	15.0350	5.9605	4.3034	2.9906	8.8495	6.5085
0.5	6	9.7123	7.0271	8.8790	0.9903*	18.1670	5.9340	4.6487	3.8327	9.9777	8.3116
0.5	7	10.0140	7.3442	9.3009	1.7033*	21.8130	6.9197	4.8014	5.4745	11.2790	10.1120
0.5	8	10.6580	8.4612	10.3430	2.3763	28.5460	7.6257	5.7979	5.4372	13.2970	10.2620
0.5	9	10.6020	9.3171	11.9260	2.0715	37.3290	10.1850	6.0584	5.3961	12.5830	11.5290
0.5	10	9.0572	7.6701	13.8460	1.9225*	51.9110	16.9000	7.7051	4.5580	12.2390	13.0930
1	2	6.5388	5.4693	4.6663	1.1945*	8.3870	3.0938	2.3465	0.9722*	6.0332	4.6278
1	3	8.4945	6.5597	5.4627	0.1567*	10.5690	4.3891	3.5207	1.9060*	7.4018	6.1217
1	4	9.5272	7.0808	5.7935	1.1177*	11.8390	6.1041	4.7063	2.5185	8.5904	6.3347
1	5	10.2910	7.8601	6.1573	1.5894*	13.4130	6.8335	5.4678	3.2064	9.5520	6.9550
1	6	11.0560	8.7478	6.1731	2.1041	14.8290	7.6016	6.0919	3.5727	10.0980	7.9020
1	7	11.7730	9.4106	5.7996	2.4849	16.4380	8.5162	6.5544	3.9628	10.7300	8.7893
1	8	12.8180	10.3410	5.4687	2.5978	18.3220	9.3126	7.0837	4.2297	11.7130	9.6186
1	9	13.7160	11.2470	5.2873	2.9086	20.5220	10.2910	7.4910	4.4768	12.6110	10.1900
1	10	14.9340	12.2360	4.9462	3.3555	23.2190	11.3480	7.7451	4.9235	13.3750	10.9970

NOTE: m = embedding dimension. Except where noted with *, all BDS statistics are significant at the 5% level.

Given the plethora of evidence in existence that points towards the existence of stochastic nonlinearites in equity markets (e.g., Brock et al., 1991; Errunza et al., 1994; Hsieh ,1993, 1995; Sewell et al., 1996), a stochastic GARCH(1,1) model is employed to filter the pre-whitened returns. These GARCH filtered series are examined again using the BDS statistics. As noted from Tables 4 and 5, the GARCH(1,1) filters do not significantly alter the outcomes observable from the reported

BDS statistics. Hence, commonly observed stochastic influences do not seem to affect the examined emerging market equity indices.

Table 4: BDS Statistics for Garch (1,1) Filtered Pre-Whitened Returns for Emerging Stock Markets
Sample Subperiod 1: 1988-1992
Country Stock Market Index:

e/σ	m	Argentina	Chile	Jordan	Korea	Malaysia	Mexico	Philippines	Taiwan	Thailand	Turkey
0.5	2	8.8595	8.2900	3.6636	5.9014	8.2577	9.3307	6.9760	8.1228	11.1840	12.8450
0.5	3	12.0970	12.5900	5.2568	9.0117	9.7962	11.7340	10.0650	11.8130	14.2960	18.1560
0.5	4	16.0760	16.2430	7.2949	11.6550	11.5850	14.2320	11.9080	15.2440	17.8350	22.3310
0.5	5	21.6080	20.1130	8.6252	13.2970	13.0310	16.8530	13.9130	19.0440	21.8610	27.3360
0.5	6	29.8910	25.4870	10.6160	14.8110	14.4830	19.5240	16.2900	24.9340	26.6510	35.1500
0.5	7	40.7990	32.3890	13.3310	15.6830	16.1610	22.3950	19.7540	32.3740	32.5230	46.7310
0.5	8	58.0960	42.0590	15.8370	16.0000	18.0740	27.1080	25.7890	40.7150	39.3320	60.1370
0.5	9	86.0540	53.3440	18.2600	16.5420	20.4330	32.8210	35.5900	51.0340	47.1430	77.7310
0.5	10	131.6200	66.6120	21.9880	18.0250	23.3540	41.1110	54.9080	68.6550	57.3320	99.0300
1	2	10.4230	7.9384	4.0167	7.1223	9.4055	8.9308	6.4707	9.3959	12.4120	12.0530
1	3	12.5800	10.8050	5.2862	9.4619	11.3050	10.8170	8.9641	13.3830	14.7290	15.9420
1	4	15.0310	13.1450	6.6094	11.3620	12.6430	12.3210	10.1160	16.3160	16.5470	18.3820
1	5	17.3570	14.7010	7.4459	12.6500	13.5930	13.7740	11.0110	18.8000	18.1190	20.6990
1	6	19.8840	16.4700	8.1532	13.7180	14.5250	15.2110	12.1040	21.8340	19.8420	23.4300
1	7	22.3640	18.3910	8.9216	14.5280	15.3370	16.4920	13.2770	25.5520	21.7030	27.0220
1	8	25.4680	20.4420	9.5589	15.3030	16.3120	17.7730	14.8240	30.3070	23.4150	31.3550
1	9	29.7170	22.6080	10.2250	15.8510	17.3450	18.6980	16.5510	36.2940	25.6310	36.6560
1	10	35.2480	25.3550	10.9550	16.8500	18.5210	19.9060	18.5900	43.7790	28.1930	42.7130

NOTE: m = embedding dimension. Except where noted with *, all BDS statistics are significant at the 5% level.

The results of the third moments test are presented in Table 6. This table shows the $\times^2$ statistics for a combined test of the significance of all examined three moment correlations $r_{(xxx)}(i,j)$ up to a certain lag length. Where $1 \leq I \leq j \leq 5$, the $\times^2$ statistic has 15 degrees of freedom. When $1 \leq I \leq j \leq 10$, the $\times^2$ statistic has 55 degrees of freedom. As one may observe from Table 6, the $\times^2_{15}$ statistics for the Thai index returns series is significant at the 1% level, where as the $\times^2_{55}$ statistics for equity indices of Jordan, Taiwan and Turkey are significant at a minimum of 5% level. These results suggest that the Thai index returns is highly likely to be influenced by low-dimensional chaos, whereas the chaotic determinism driving the index returns of Jordan, Taiwan and Turkey is somewhat higher dimensional. These observations suggest that during the 1988-1992 subperiod, index returns of Thailand, Jordan, Taiwan and Turkey were driven by nonlinear deterministic processes. The low dimensionality of chaos in the Thai index indicates a greater degree of

predictability than the somewhat higher dimensionality of chaos driving the equity indexes of Jordan, Taiwan and Turkey.

Table 5: BDS Statistics for GARCH (1,1) Filtered Pre-whitened Returns for Emerging Stock Markets
Sample Subperiod 2: 1999-2003
Country Stock Market Index:

e/σ	m	Argentina	Chile	Jordan	Korea	Malaysia	Mexico	Philippines	Taiwan	Thailand	Turkey
0.5	2	5.4873	4.5526	4.8881	1.6232*	7.9725	3.2964	1.4214*	1.2346*	5.4103	3.3876
0.5	3	7.3535	5.5121	5.7232	0.6704*	10.0450	4.4227	2.2757	2.0039	6.4521	5.0166
0.5	4	8.4462	5.8139	6.4774	0.0130*	12.1150	5.5550	3.5001	2.1042	7.9051	5.6871
0.5	5	8.7854	6.6728	7.7772	0.0278*	15.0390	5.9784	4.3033	2.9906	8.8494	6.5063
0.5	6	9.7111	7.0278	8.8764	0.9911*	18.1720	5.9555	4.6487	3.8327	9.9776	8.3093
0.5	7	10.0130	7.3450	9.2982	1.7040*	21.8180	6.9185	4.8013	5.4745	11.2790	10.1100
0.5	8	10.6570	8.4620	10.3400	2.3771	28.5530	7.6243	5.7978	5.4373	13.2970	10.2590
0.5	9	10.6010	9.3180	11.9220	2.0723	37.3390	10.1830	6.0584	5.3962	12.5830	11.5260
0.5	10	9.0558	7.6709	13.8420	1.9233*	51.9260	16.8970	7.7050	4.5580	12.2380	13.0900
1	2	6.5390	5.4693	4.6651	1.1935*	8.3873	3.0932	2.3465	0.9724*	6.0330	4.6227
1	3	8.4950	6.5597	5.4619	0.1584*	10.5690	4.3880	3.5207	1.9065*	7.4017	6.1173
1	4	9.5277	7.0808	5.7928	1.1190*	11.8390	6.1040	4.7063	2.5194	8.5904	6.3315
1	5	10.2910	7.8601	6.1567	1.5905*	13.4130	6.8332	5.4678	3.2073	9.5521	6.9542
1	6	11.0560	8.7478	6.1725	2.1051	14.8290	7.6011	6.0919	3.5735	10.0990	7.9015
1	7	11.7740	9.4106	5.7990	2.4859	16.4390	8.5154	6.5544	3.9635	10.7300	8.7878
1	8	12.8190	10.3410	5.4682	2.5987	18.3240	9.3112	7.0837	4.2304	11.7140	9.6167
1	9	13.7170	11.2470	5.2868	2.9096	20.5240	10.2890	7.4910	4.4776	12.6130	10.1900
1	10	14.9340	12.2360	4.9457	3.3564	23.2210	11.3490	7.7451	4.9243	13.3770	10.9950

Note: m = embedding dimension. Except where noted with *, all BDS statistics are significant at the 5% level.

Table 6: Chi-Square statistics for the Influence of Three Moment Correlations for the Filtered Index Returns
Sample Subperiod 1: 1988 – 1992

Lags(i,j)	Statistic	Argentina	Chile	Jordan	Korea	Malaysia	Mexico	Philippines	Taiwan	Thailand	Turkey
$1 \le I \le j \le 5$	$x^2(15)$	4.09	19.14	22.72	1.74	16.22	17.61	21.52	6.81	71.50**	2.14
$1 \le I \le j \le 10$	$x^2(55)$	45.99	28.96	382.60**	25.21	15.25	34.53	15.96	83.79*	31.94	126.10**

** Significant at the 1% level for a right-tailed test.
* Significant at the 5% level.

Results of the three moments tests for the sample subperiod 1999-2003 presented in Table 7 indicate low dimensional chaos driving the index returns of Mexico and Philippines and a somewhat higher dimensional chaos in index returns of Chile. These results indicate that the hypothesized structural changes may have made the markets of Philippines, Mexico and Chile more

predictable. However, it remains unclear that this possible predictability is economically exploitable.

Table 7: Chi-Square statistics for the Influence of Three Moment Correlations for the Filtered Index Returns Sample Subperiod 2: 1999 – 2003

Lags(i,j)	Statistic	Argentina	Chile	Jordan	Korea	Malaysia	Mexico	Philippines	Taiwan	Thailand	Turkey
$1 \le I \le j \le 5$	$x^2(15)$	4.45	5.78	4.68	14.04	3.95	57.14**	84.10**	3.64	10.99	2.58
$1 \le I \le j \le 10$	$x^2(55)$	22.48	80.72*	29.12	16.40	12.86	27.06	24.89	15.02	13.99	26.39

** Significant at the 1% level for a right-tailed test.
* Significant at the 5% level

CONCLUSIONS AND IMPLICATIONS

Overall, the results of this study indicate that the period of structural instability during the mid 1990s has rendered the equity market of Korea driven more by a random process. The Korean equity market exhibits IID behavior during the second subperiod examined and hence it exhibits no signs of predictability. During this latter subperiod, post hypothesized structural change, the markets of Thailand, Jordan, Taiwan and Turkey have become less predictable, while the stock markets of Chile, Mexico and Philippines, somewhat more predictable. Overall, the results are mixed and do not lead us to a very conclusive determination of a structural shift in emerging equity markets caused by recent changes in the financial infrastructure in these markets. Any observed predictability is implied by the existence of low dimensional nonlinear determinism, or chaos, in these markets. From a practical standpoint, such observed predictability may be too costly to implement and may generate returns of insufficient magnitude to overcome transactions costs. Hence, even in these instances, one may not be able to confirm any instances of market inefficiency. Moreover, since one does not observe any consistent pattern of change in the nonlinear dynamics of examined markets before and after the hypothesized structural overhaul of financial markets in emerging countries, one is unable to discern any material impact on the efficiency of these financial markets.

The good news is that, for the most part, no compelling evidence was uncovered in this study to suggest that any of the examined markets have become less informationally efficient as a result of the overhaul of the financial infrastructure in these economies. Future studies should aim at examining the multivariate impact of key macroeconomic factors affected by the changing financial environment in these emerging markets, and their varying contribution to equity market efficiency.

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FACTORS INFLUENCING FACULTY RESEARCH PRODUCTIVITY: EVIDENCE FROM AACSB ACCREDITED SCHOOLS IN THE GCC COUNTRIES

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ABSTRACT

This research reports the results of a survey investigating faculty research productivity. The aim of the study was to document the influence of series of factors on faculty research productivity and the corresponding level of satisfaction with their availability in an environmentally specific context of the GCC countries. In addition, the study attempted to ascertain the presence of any significant differences that existed between the faculty's preference and those of university's expectations with respect to the time allocation among the faculty work related activities. The overall results show a significant disparity between the perceived importance of factors influencing research productivity and the level of satisfaction with their availability. The results also show faculty's preference for allocating more time to research and other scholarly activities than the university administrators expect or university environment permits. The findings of this study might be of interest to both the faculty and the university administrators in developing an environment more conducive to research and scholarship. Notwithstanding certain limitations, the results of this study may also be used by the university administrators in the region to coordinate activities aimed at improving faculty scholarly productivity.

INTRODUCTION

The multi-dimensional nature of faculty work (i.e., teaching, research, scholarship/professional growth, and service) is reflected in institutional mission statements and the reward systems of virtually all colleges and universities. While teaching remains a primary function, the particular importance of research and scholarship for most universities remain evident. It is a widely held belief that competing demands of teaching, advising, service, and other professional responsibilities are the biggest challenge to the pursuit of faculty research and scholarship.

Strong research profile adds to institutional reputation, visibility, and recognition. For that reason, and a host of others, faculty research output remains a dominant concern for academic institutions. Research and other forms of scholarly activities appear to be equally important to the

individual faculty as they bring personal and professional recognition and rewards. Despite the acclaimed recognition of the significance of research for both the institution and the faculty, a wide variation of its production is found among faculty and at different institutions.

To date virtually all of the published studies dealing with faculty research performance -- including factors influencing its productivity -- have focused on the North American and/or Western European academic settings. This study asserts that the findings of these studies do not necessarily hold true (or apply) to other regions of the world, especially to those of developing countries. The findings of a comprehensive study by Long et al**.**, (1998) provide the empirical support for the above assertion. According to that study, the quality and quantity of faculty research productivity had a significant relationship with the academic unit in which faculty were employed. This assertion is predicated on the notion that academic units in different parts of the world have unique environmental characteristics (in terms of their culture, organizational structure, governance, and alike); and accordingly, issues related to research productivity should be investigated in the relevant environmental context.

It is believed research aimed at understanding environmentally specific factors that influence faculty research productivity would assist academic institutions to induce intellectual capital (i.e., creation of knowledge) and play a crucial role in the academic life of faculty in ways that would advance the interests of the institution itself, the faculty, and those of the society. Such seemingly important research in many parts of the world seems not to have received the attention it deserves. One region whose academic policy issues -- including faculty productivity -- have not yet been investigated is the Gulf region in the Arab world. In view of the geo-political considerations as well as the importance of the educational-social-political-economic welfare of this region which is highlighted and heightened by the recent world political events, such studies appear well justified.

Over the past decade or two, the six Gulf Corporation Council (GCC) countries, namely, Saudi Arabia, United Arab Emirates, Oman, Qatar, Kuwait, and Bahrain (also known as G6) have been enjoying a period of prosperity and robust economic growth, mainly brought about by increasing oil revenues. All of the G6 countries, though to different degrees, have seized the opportunities of the growing economies and have embarked on a systematic process of building first class infrastructures and systems with an eye towards economic diversification and modernization, a process that is still ongoing and will be for years or even decades to come.

In recognition of the need for providing the intellectual capital to respond to the challenges of the new socio-economic-political era, a considerable attention has been given to the role of the academic institutions of higher education in the G6 countries. Using American models, for the most part, these nations have undertaken the task of providing for quality education programs to prepare their nationals for taking the leading roles in the management of their societies and economies. By investing in quality education, the colleges and universities in the region are striving for the goal of self-sufficiency in some strategically important areas such as business/management, engineering, and information system.

LITERATURE REVIEW

The positive correlation between the quality of teaching and of research is a tenet of faith at most academic institutions. This is no less true in business education, despite the presence of some tensions between the research role and the training mandate of business schools (Liebowitz, 2000). Currently, academic research is one of the primary components of the mission statements and a measure of the faculty productivity in most business schools (Long et al., 1998). The notion that there is an ever-increasing emphasis on research in business/management schools in North America, Western Europe, and some other countries throughout the world is well-documented (Hexter, 1969; Henry and Burch, 1974; Cargile & Bublitz, 1986). The increasing emphasis on research is particularly applicable to the business schools that are either already accredited by the Association to Advance Collegiate Schools of Business (AACSB) or striving to attain such accreditation (Khojasteh and Herring, 2002).

Accreditation of business education by AACSB is a hallmark of highest quality and an evidence of achieving the most rigorous academic standards imposed by any external agency on business schools. Meeting these standards requires, among other things, a serious commitment to faculty research and other types of scholarly activities. To achieve accreditation by AACSB, many business schools outside US -- and for that matter many relatively small schools in US -- who traditionally had a teaching orientation must now place a much greater degree of emphasis on research and other types of scholarly activities (Khojasteh and Herring, 2002). To meet the AACSB standards and to remain consistent with institutional mission, faculty members would be required to conduct research in order to maintain "academically qualified" status. To that end, productivity in terms of research and other types of scholarly activities becomes a central element of faculty's work related activities.

The competing demands for teaching (and its related activities), research, scholarship/professional growth, and service have long been the subject of academic research. In one strand of research, several studies have focused on whether teaching and research overlap and reinforce each other or entail a tradeoff.[1] While some studies have found little evidence of relationship between research productivity and teaching effectiveness (e.g., Feldman, 1987; Hattie and Marsh, 1996), others have found that teaching and research can be mutually reinforcing (e.g., Colbeck, 1997; Fairweather, 2002). Regardless of the specific direction of the results, the conclusion that seems to be common among all of these studies is that systematic and deliberate efforts are required to channel spillover effects of research into instruction. Achieving integration between these two major components is a highly desirable outcome to enhance faculty effectiveness.

In another strand of research, studies have examined the relationship between research productivity and the factors that support faculty in their efforts to publish. Several variables in the extant literature have been identified that correlate with research productivity. Earlier studies primarily focused on analyzing association of productivity with variables such as institutional size,

academic rank, age, gender, etc. More recent studies incorporate psychological and other latent variables in analyzing productivity. Among these, the study by Blackburn and Lawrence (1995) finds that self-knowledge, self-efficacy, and career related variables account for most of the variation in faculty productivity and that faculty members' confidence in their research abilities is closely related to their research output.

THE STUDY

The factors that can promote or impede faculty research can be grouped into four broad categories of demographics, self-knowledge and individual competencies, work environment, and social contingencies. To date no environmentally specific study has empirically investigated the influence of the above mentioned factors on the research and publication productivity of business schools' faculty in the Gulf region. The primary objectives of this study are two: 1) to investigate the influence of selected factors that are perceived to contribute to the research productivity of business faculty in a cultural setting different from those of the most previous studies; and, 2) to ascertain the presence of any significant disparities that might exist between the perceived influence of those factors and the level of satisfaction with their availability. In addition to the above objectives, this study attempts to document any significant difference that might exist between the preference of the faculty and those of the university's expectations with respect to the allocation of time among the four work related activities of teaching, research, scholarship/professional growth, and service.

RESEARCH DESIGN

The study used a survey design. The theoretical framework developed by Blackburn and Lawrence (1995) provided the basis for developing the survey instrument. Following the review of the literature, a list of variables that could influence faculty research productivity was complied. To ensure the selected variables were environmentally specific, the advice of a panel of experts was sought.[2] An evaluation of the responses received resulted in some modifications to the initial selection of the factors. The final product was a list comprising 53 items which was the basis for constructing the questionnaire.

A validated questionnaire[3] was used to collect the data. The questionnaire consisted of four parts corresponding to the four broad categories of demographics, self-knowledge and individual competencies, work environment, and social contingencies. The questionnaires along with the cover letter were mailed to the subjects in two waves. In the questionnaire, working definitions for each of the four categories was provided followed by questions or statements for that section.

The Population of the Study

The population for this study comprised all full-time faculty members at the three AASCB accredited business schools in the GCC countries. The schools included in the survey were: College of Business and Economics (CBE) at the United Arab Emirates University (United Arab Emirates); College of Industrial Management (CIM) at King Fahd University of Petroleum & Minerals (Saudi Arabia); and the College of Business Administration (CBA) at the University of Kuwait (Kuwait). The CBE was the first business school in the region that was accredited by AACSB, followed by CIM. College of Business Administration at the University of Kuwait is the latest addition to the list of business schools accredited by the AACSB in the region. All of the three schools share an overwhelming similarities in terms of institutional, environmental, and cultural factors (e.g., mission, objectives, resources, degree programs of studies offered, faculty composition, student body, and alike).

Questionnaire Distribution

A total of 233 questionnaires were distributed among the faculty members at the three business schools in two waves. The annonymity of responses was assured in the cover letter. The information related to questionnaire distribution and the responses are presented in Table 1.

Table 1 - Questionnaires Distribution and Responses

No.	Description	Sent		Received	
		No.	%	No.	%
1.	First mailing			102	43.00
2.	Second mailing			31	13.00
3.	Non-usable responses			18	8.00
4.	Total usable responses	233	100	115	49.00
5.	Non-responses	233	100	100	43.00
6.	Unusable responses and non-responses pooled			118	51.00

As shown in Table 1, the survey achieved a 52 percent response rate. Out of the questionnaires received, for a variety of reasons, a total of 18 were unusable resulting in an overall usable response rate of just over 49 percent. The non-respondents were about 42 percent.[4]

DATA ANALYSIS

The first part of the questionnaire dealt with the demographics. In this part, two sections were covered: background information, and the faculty preference for placing relative emphasis on different work related activities. The related specific items were as follows:

I. Background Information

1. Academic rank
2. Years of full-time employment with current employer
3. Highest degree earned
4. Holding administrative position
5. National origin
6. Number of published articles in refereed journals
7. Number of presentations in refereed professional conferences

The results of analysis for the background information are provided in Tables 2 and 3 (questions 1 through 5 in Table 2; questions 6 and 7 in Table 3).

As for the academic rank of the respondents, Table 2 shows that assistant professors represented 57 percent of the respondents. Those with the rank of associate and full-professors accounted for about 26 and 16 percent, respectively. Table 2 further shows that all of the respondents held a doctorate degree and an overwhelming majority of them were expatriates.[5] While the average length of the respondents' tenure at the schools was about six and half years, their overall years of academic experience exceeded 12 years. The anecdotal evidence suggests the existence of a similar pattern of demographics for other similar regional schools, particularly with respect to the nationality of the faculty which is drastically skewed towards non-nationals.

Table 3 shows the finding of two questions dealing with research activities of the respondents. While the first of the two questions covered the number of publications in refereed journals, the second dealt with scholarly presentations in refereed professional conferences. The publication information was collected for the three time frames of the last two years, last five years, and the entire professional academic life.

Table 2 - Demographic Data		
Demographics	**Number (n)**	**Percentage (%)**
Academic rank		
Professor	18	16
Associate professor	30	26
Assistant professor	66	57
Instructor	1	1
Total	**115**	**100**
Academic degree	**Number (n)**	**Percentage (%)**
Doctorate	115	100
Non Doctorate	None	None
Total	**115**	**100**
Administrative positions holders	**Number (n)**	**Percentage (%)**
Yes	17	15
No	98	85
Total	**115**	**100**
Nationality	**Number (n)**	**Percentage (%)**
National	25	22
Expatriate	90	78
Total	**115**	**100**
Origin of expatriate Faculty	**Number (n)**	**Percentage (%)**
Arab origin	11	12
Non-Arab origin	79	88
Total	**90**	**100**
Length of academic professional experience	**Years**	
At the university	6.53	
Overall	12.14	

Table 3 - Publications Information						
Number of publications in refereed journals	**Past 2 Years**		**Past 5 Years**		**Life Time**	
	N	(%)	N	(%)	N	(%)
Zero	44	38	20	17	1	1
One	16	14	16	14	17	15
Two	15	13	15	13	18	16
Three	10	9	10	9	14	12
Four	6	5	8	7	9	8
Five	5	4	6	5	11	9
More than five	19	17	40	35	45	39
Total	115	100	115	100	115	100
Number of presentations in refereed conferences	**Past 2 Years**		**Past 5 Years**		**Life Time**	
	N	(%)	N	(%)	N	(%)
Zero	24	21	5	4	0	0
One	18	16	25	22	25	22
Two	20	17	25	22	25	22
Three	17	15	20	17	20	17
Four	13	11	15	13	17	15
Five	10	9	10	9	12	10
More than five	13	11	15	13	16	14
Total	115	100	115	100	115	100

As shown in Table 3, just about 38 percent of the respondents had no refereed journal publication in the most recent two years of their employment, though this rate had a gradual decrease over the longer time frame suggesting more research activity. The rate was lower (i.e., 21%) once the conference presentations was taken into account. According to Table 3, roughly 30 percent of the respondent reported at least one scholarly activity (refereed journal publication or conference presentation) over the two-year period and 36 percent over the five-year time frame. Similar percentages of respondents reported two scholarly activities. The above findings put together suggest that over 60 percent of the respondents had produced between none to two researches suitable for journal publications and/or conference presentations.

The results for faculty with more than two scholarly activities but less than five was mixed without any consistency in pattern. Those with five or more publications, however, accounted for the highest percentage of the respondents as compared to those below five, but more than two. An overall assessment of these findings is interesting in two areas: it suggests a situation of either relatively "active" (five or more publications) or relatively "inactive" (two or less publications) research profile; and, a marginal increment increase in research production after the five years. While the former supports the notion of dichotomy in research profile, the latter suggest a relatively little expectation of change in one's productivity after five-year time span.

The second part of demographics dealt with the relative emphasis (preference) that faculty placed on different work related activities. In addition, the compatibility of those preferences with the university's expectation and the actual work environment was ascertained.

II. Relative Emphasis on Different Activities

8. Teaching
9. Scholarship/Professional Growth
10. Research
11. Service

A significant difference between the faculty's preferences with those of the university's expectations on one hand, and the actual work environment on the other, was hypothesized. The hypotheses were formulated as follows:

Hypothesis 1: *There are no significant differences between the actual time allocations of the faculty to the work related activities and that of the university's expectations.*

Hypothesis 2: *There are no significant differences between the actual time allocations of the faculty to the work related activities and that of his/her preference.*

Hypothesis 3: *There are no significant differences between the university's expectations of the faculty time allocation to the work related activities and that of his/her preference.*

A quasi "open-ended" format was used to collect the data to test the hypotheses for each of the four components of faculty activity.[6] The two-way analysis of variance (ANOVA) was conducted at the 95 percent level on the pair-matched of appropriate responses. The results are

shown in Table 4 through 6. Each of the Tables shows the number of observations, values of paired mean differences, the standard deviations, t-values, and the 2-tailed probability significance.

Table 4 – Time Allocation: Actual Vs. University Expectation

Type of Activity	N	% Paired Mean Difference	Standard Deviation	t-Value	2-Tailed Probability Significance
Teaching	115	6.88	20.91	1.85	0.0751
Scholarship/professional growth	115	1.51	7.86	1.07	0.3004
Research	115	-8.71	21.76	-2.21	0.0263
Service	115	-2.41	18.56	-0.77	0.4600

N = Total number of observations

Table 4 depicts the results of testing of the first hypothesis. As shown in Table 4, the null hypotheses could not be rejected for all but one of the four activities. This finding supports the notion that the university expectations of time allocation to the activities of teaching, scholarships/professional growth, and service corresponds with the actual percentage of faculty's time allocated to these activities. However, the null hypothesis for the research was rejected. According to this result, the actual percentage of faculty time allocated to research is significantly less than university's expectation. Examination of the paired-mean difference for teaching activity (i.e., 6.88), may seem to suggest the shortfall of time allocation to research is explained by additional allocation of time to teaching.

Table 5 contains the results of testing the second hypothesis and shows all of the null hypotheses were rejected. These results suggest the presence of significant differences between the actual allocation of time among the four activities and that of the faculty's preference. As for teaching and service, the findings indicate that the actual times allocated to these activities were significantly more than the faculty's preference. However, for the scholarship/professional growth and research, the faculty preferences were not met.

According to the results shown in Table 6, the null hypotheses were rejected for all, but one of the activities covered in the third hypothesis. This finding supports the notion of significant differences between the university's expectations and that of the faculty's preference vis-à-vis time allocation to the activities of teaching, scholarships/professional growth, and service. Despite the observed mean difference between the university expectations and the faculty preference, the null hypothesis for the research component could not be rejected. The wide variations in the responses as evidenced by the standard deviation of over 24 units may explain the inability to reject this hypothesis.

Table 5 – Time Allocation: Actual Vs. Faculty's Preference					
Type of Activity	**N**	**% Paired Mean Difference**	**Standard Deviation**	**t-Value**	**2-Tailed Probability Significance**
Teaching	115	17.41	14.06	7.42	0.0000
Scholarship/professional growth	115	-5.92	9.04	-3.91	0.0007
Research	115	-16.19	10.86	-8.39	0.0000
Service	115	5.99	12.37	3.11	0.0079
N = Total number of observations					

Notwithstanding the inability to reject one of the four hypotheses, a close examination of Table 6 may lead to a summary conclusion that the university's expectations for time allocation for the two activities of scholarship/professional growth and research are significantly lower than those of the faculty's preference; and the opposite is true for teaching and service. For these last two activities, faculty's preference is to allocate less time than the university expects.

Table 6 – Time Allocation: University's Expectation vs. Faculty's Preference					
Type of Activity	**N**	**% Paired Mean Difference**	**Standard Deviation**	**t-Value**	**2-Tailed Probability Significance**
Teaching	115	11.80	21.85	2.60	0.0122
Scholarship/professional growth	115	-7.00	8.78	-4.32	0.0002
Research	115	-7.23	24.16	-1.79	0.0876
Service	115	8.94	17.93	2.71	0.0122
N = Total number of observations					

This last finding along with the findings of the previous two hypotheses may lead to the conclusion that both the university's expectations and the actual allocations of time among the four work related activities are incompatible with the faculty's preference. For obvious reasons[7], faculty's preference is for allocating more time to scholarship and research and less time to teaching and service.

The second part of the questionnaire dealt with two areas of self-knowledge and individual competencies. A list of the specific items in both areas is presented below. The first four items on the list are related to self-knowledge and the remaining statements deal with individual

competencies. The results of statistical analysis for the two areas are provided in Tables 7 and 8, respectively.

Self-knowledge and Individual Competencies

I. Self-Knowledge

1. Areas of academic interest
2. Satisfaction with research achievements
3. Perceived success in academic career
4. Satisfaction with compensation package

II. Individual Competencies

5. Ability to conduct research
6. Motivation and passion for research
7. Ability to generate research ideas
8. Keeping abreast of developments in the discipline
9. Ability to generate research grant proposals
10. Preference for research over teaching
11. Ability to turn research ideas into publications
12. Perseverance and ability to bring research ideas to fruition
13. Ability to work with others in collaborative research
14. Interaction with business and industry
15. Ability to prioritize and plan activities
16. Ability to effectively manage time
17. Research training and experience

Table 7 – Scores on Areas of Self-Knowledge

Description	Mean	Std. Deviation
Academic interest (1=primarily teaching; 4=primarily research)	2.16	0.61
Satisfaction with research achievement (1=very dissatisfied; 5=very satisfied)	2.51	1.15
Relative success in academic career (1=very unsuccessful; 5=very successful)	3.28	0.91
Satisfaction with compensation package (1=very dissatisfied; 5=very satisfied)	2.12	1.12

As shown in Table 7, the mean rating for the item dealing with the preference between teaching and research was 2.16. This value was slightly skewed towards preference for both, but leaning towards research. The standard deviation of just over 0.60 shows a relative close degree of agreements among the respondents. As for satisfaction with overall achievements in the area of research over the past five years, the result was not encouraging. The mean rating of 2.51 shows the respondents' overall attitude of dissatisfaction. This result may indicate an overall perception that the respondents' ability to research and publish was underutilized. The respondents' mean rating of relative success in the academe was almost 3.28 with a standard deviation of just over 0.90. This rating may suggest a relative degree of agreement among the respondents perception of "somewhat successful" academic career. The last item in the category of self-knowledge dealt with the satisfaction of the respondents with their compensation package. As shown in Table 7, the results indicate an overall attitude of dissatisfaction.

In the second area of part two of the questionnaire, the respondents were asked to rate their individual competencies in 13 domains (items 5 though 17 above). A five-point Likert type scale covering the range of "very low" to "very high" was used to collect the perceptions of the respondents. The results are shown in Table 8.

Table 8 – Scores on Areas of Competencies

Description	Mean*	Std. Deviation
Ability to conduct research	4.35	0.92
Motivation and passion for research	3.78	0.82
Ability to generate research ideas	3.71	0.88
Keeping abreast of developments in the discipline	3.82	0.92
Ability to generate research grant proposals	2.99	1.46
Preference for research over teaching	3.31	1.56
Ability to turn research ideas into publications	3.51	1.15
Perseverance and ability to bring ideas to fruition	3.23	1.65
Ability to work with others in collaborative research	3.61	1.39
Interaction with business and industry	2.98	1.41
Ability to prioritize and plan activities	3.63	0.99
Ability to effectively manage time	3.60	0.95
Research training and experience	3.66	0.88

* 1= Very low; 5 = Very high

As shown in Table 8, the mean values for all the items are all above 3, showing at the least a "moderate" rating for the competency areas. Virtually all competencies related to conducting research were rated close to "high." Both the ability to conduct research and ability to generate research ideas with the score of 4.35 and 3.71 were ranked the first and third, respectively. The item dealing with motivation for research and being abreast of developments in one's field also received high mean values and topped the list as the second and fourth, respectively. On the opposite end of the ranking were the two competencies dealing with the ability to generate research grant proposals and interacting with the business community. These items had mean values of less than three and in view of environmental considerations (e.g., culture issues, lack of trainings in writing research grant proposals, the transient nature of the majority of faculty and alike), their low rankings appear internally consistent. The low competencies in the two areas mentioned above, though seemingly justified, do not appear to be in harmony with both the tightening of the higher education budgets in the region and the need for closer interaction with external constituencies.

In the face of the ever-increasing and competing demands for financial resources, the need to improve faculty's skills to generate research ideas suitable for external funding and the ability to write research grant proposals appear all but inevitable. In the same vein and due to repositioning of the market forces (e.g., a continuous movement away from government dominated economies towards private or semi-private economies driven by large corporations), universities now recognize that a cooperative relationship with the business community is a crucial factor for their sustained growth, and equally crucial, for maintaining a continued eminence in the society. This recognition has prompted the universities to expect their faculty to be competent in maintaining an active interaction with the business community.

The next section of the study dealt with the work environmental factors related to research productivity. For this study, a total of 21 factors deemed to have an influence on the research productivity of the faculty were examined. The listing of these factors is provided below.

Work Environment Related Factors

1. Clarity of institution's research expectations
2. Availability of student research assistance
3. Availability of secretarial support for research
4. Financial incentives for conducting research
5. Other research incentives such as reduced teaching load
6. Favorable research culture
7. Time spent on teaching related commitments
8. Time consumed by non-teaching responsibilities such as committee work
9. Research support provided by the university
10. Availability of information technology support services

11. Access to internal research grants
12. Access to external research grants
13. Procedural simplicity and speed for receiving research grants
14. Access to databases and relevant academic journals
15. Travel support for participating in professional conferences
16. Availability of course release time for research
17. Collegial relationship among faculty for collaborative research
18. Establishing a dedicated research support office to assist faculty
19. Support by unit's chair/dean for an individual's research efforts
20. Annual performance evaluation and feedback process
21. Existence of formal mentorship programs

Using a five-point Likert type scale, the respondents were asked to rank the influence that each factor might have on faculty's research productivity. At the same time, the respondents were asked to rate their level of satisfaction with the current institutional arrangements in providing for these factors. For this section, a significant difference between the perceived level of influence of any of the factors and the corresponding level of satisfaction with institutional arrangements providing for it was hypothesized.

Hypothesis 4: *There are no significant differences between the perceived level of influence of work environment related factors on research productivity and the level of faculty satisfaction with institutional arrangements providing for those factors.*

The above hypothesis was tested separately for each of the 21 factors and the tests were conducted at the confidence level of 95 percent. Table 9 shows the mean values for each of the two sets of variables (i.e., level of influence and level of satisfaction), paired-mean differences, t-values, and the 2-tailed probability significance. As shown in Table 9, all of the hypotheses were rejected. These results support the presence of significant differences between the perceived influence of the entire set of work environment related factors and the level of satisfaction with their availability.

An overall evaluation of the results presented in Table 9 reveal a total of ten factors that were perceived to have a "very significant" influence on faculty's research productivity (those with mean values of 4 or more). As for the level of satisfaction with their availability, however, eight out of the 10 factors received a low perceived level of satisfaction (mean ratings of around two). These factors were favorable research culture; research incentives such as reduced teaching load; teaching related commitments; availability of research support office; availability of secretarial support, and the availability of student research assistants. The respondents' satisfactions with the availability of the remaining two items (i.e., availability of relevant academic journals and data bases as well

travel support for attending professional conferences) were more favorable (mean ratings of over three).

Table 9 – Comparative Analysis of Perceived Significance Vs. Satisfaction

Description of Factors	Number of Observations	Mean Vales		Paired Mean Difference	t-Value	2-Tailed Probability
		Perceived Significance*	Perceived Satisfaction**			
Clarity of institution's research expectations	115	3.60	2.49	1.21	4.49	0.0001
Availability of research assistance	115	3.99	1.58	2.40	9.25	0.0000
Availability of secretarial support	112	3.55	1.59	1.92	7.13	0.0000
Financial incentives for doing research	112	4.10	1.87	1.96	6.23	0.0000
Other research incentives such as reduced teaching	115	4.45	1.99	2.12	9.60	0.0000
Favorable research culture	115	4.15	1.91	2.49	10.86	0.0000
Time spent on teaching related commitments	115	4.22	1.91	2.39	10.99	0.0000
Time consumed by non-teaching responsibilities	115	3.91	2.23	1.91	6.49	0.0000
Other research support	115	4.19	2.16	1.88	7.99	0.0000
Availability of information technology support	112	4.11	3.29	0.89	5.90	0.0000
Access to internal research grants	115	3.78	2.69	1.10	4.79	0.0000
Access to external research grants	115	2.49	1.91	0.99	4.41	0.0000
Procedural simplicity for receiving research grants	115	3.80	2.22	1.64	6.91	0.0000
Access to databases and academic journals	115	4.23	3.13	1.10	5.23	0.0000
Travel support for participating in conferences	114	4.11	3.18	0.99	4.00	0.0004
Availability of course release time	114	4.18	2.17	2.11	9.19	0.0000
Collegial relationship among faculty	115	3.73	2.09	1.45	7.99	0.0000
Establishing a research support office	115	4.13	1.78	2.41	9.99	0.0000
Support by unit's Chair/Dean for research efforts	115	3.67	2.14	1.99	8.89	0.0000
Annual performance evaluation	115	3.62	2.92	0.99	3.88	0.0000
Existence of formal mentorship programs	115	3.61	2.11	1.69	6.91	0.0000

* 1=Slightly insignificant; 5=Most significant
** 1=Very dissatisfied; 5= Very satisfied

One of the noteworthy observations of the above results is the low perceived significance associated with the external research grants on research productivity (mean rating of 2.49). One reason that may explain the relatively low significance of this item is a complex set of internally generated rules governing the externally generated research funds. Many of the existing rules limit the financial benefits of the grant that could go to faculty, the department, and the college. Cognizant of this limitation, faculty members would not be inclined to vigorously pursue external funding, and understandably, may attach a lower degree of importance to it. In view of the current fiscal constraints and the shrinking research budgets, it may be logical to modify the existing rules by allowing a more equitable distribution of the financial rewards to the intended beneficiaries. Hence, provide the faculty, departments, and the college with the motivation to more actively purse this seemingly invaluable resource.

As for all the other factors, Table 9 shows the mean values for their influence ranging from 3.50 to 3.91. The degree of satisfaction with their availability was represented by mean values ranging mostly from 1.50 to 2.50. An overall conclusion from these observations may be that these factors are considered "significant" with respect to their influence on research productivity. However, the level of satisfaction with their availability remains low.

The last section of this study deals with the influence of social contingency factors on research productivity. These are the factors that for the most part are personal and/or social (i.e., unrelated to the work environment). For the purposes of this study, five such factors were selected. They are listed below.

Social Contingencies

1. Family responsibilities
2. Health related considerations
3. Financial pressures and constraints
4. Social demands and expectations
5. External professional commitments

Using a five-point Likert type scale, respondents were asked to rate how each of the social contingency factors actually affected their research productivity. (These questions solicited the actual experience rather than the perception).

The results of statistical analysis are presented in Table 10. According to the results, two of the factors of financial needs and family responsibilities have the most negative impact on the research productivity. Table 10 also shows the negative impact of the remaining items on faculty's research productivity, though to a lesser degree. These findings are consistent with prior studies (e.g. Hughes, 1999) supporting the assertion that social contingencies variables have a negative affect on research productivity.

Table 10 – Scores on Areas of Social Contingencies		
Description	**Mean***	**Std. Deviation**
Family responsibilities	3.59	1.00
Health related considerations	2.11	0.98
Financial pressures and constraints	3.99	0.94
Social demands and expectations	2.68	0.95
External professional commitments	1.89	0.79
* 1= Significantly negative; 5 = Significantly positive		

FURTHER DISCUSSION OF SOME RESULTS

As noted previously, the results show that about half of the respondents reported a scholarly activity (in the areas of refereed publication and/or scholarly presentation in professional conferences) which could be best described as inactive or relatively inactive over the immediate past two or five years. This observed result do not seem compatible with the respondents' rating of research related competencies being close to "high." In addition, this finding is also inconsistent with the results of previous studies examining the determinants of research productivity which found personal beliefs and self-assessment of abilities and competencies being significantly related to research productivity (e.g., Blackburn and Lawrence, 1995). The apparent inconsistency may be explained by the fact that historically the schools of business in this region had a primarily teaching orientation; and accordingly, no significant amounts of research were either expected, encouraged, or supported (Khojasteh and Herring, 2002).

The results of another area of the study, with minor exceptions, confirm the significant influence of all the listed factors on research productivity and dissatisfaction with the availability of resources. Generally speaking, while the control over most of the sources of dissatisfaction rest with the university administration (e.g., availability of different types of research supports, including student research assistants); discretion over of a few appears to be within the control of the faculty (e.g., the perceived lack of collegial relationship among faculty for collaborative research). There are also some areas that appear to be within the joint control of faculty and the university (e.g., favorable research culture at the institution).

For the items within the control of the university, as pointed out earlier, these universities -- and for that matter virtually all others in the Gulf region -- historically have had a teaching orientation. As the universities' mission statements give more recognition to research and other forms of scholarly activities (especially for those that are either AACSB accredited or actively pursuing such accreditation), it seems a serious and sustained attempt should be undertaken to provide for, or upgrade, the needed facilities to support faculty research. What may hinder the

efforts and slow the progress, however, is the more receptive attitudes of university's administrations towards providing for the "hard" (tangible) research support infrastructure (e.g., computer hardware, up-to-date library, and alike) at the expense of those elements that are not as tangible (e.g. research assistants, secretarial support, and alike). While the significance of the physical resources to facilitate research is acknowledged, the importance of the "soft" research support cannot be ignored. Investment in these types of support could well be instrumental in an effective utilization of physical research infrastructure.

With respect to the items that can be safely attributed to the faculty himself, the perceived lack of collegial relationship among faculty for collaborative research, tops the list. The perceived significance of this factor on research productivity was perceived to be relatively high, and yet, the degree of satisfaction with its existence was low. It can be safely argued, for this item and others of similar nature, the faculty by the virtue of own action can significantly influence their availability without much of either interference or support from the university administration. What seems to be needed the most is the willingness for providing for one's self what others either cannot, or may not.

Last but not least, the work environment related factors that fall under the joint influence of the university's administration and the faculty (i.e., "institutional" policy or procedural issues) seem to be most amenable to collective efforts on the part of both. For these factors (e.g., favorable research culture, existence of formal mentorship programs, and alike), a forgone conclusion may be that a realistic and practical cooperation between the parties seem to provide for the most effective and mutually acceptable arrangements.

SUMMARY AND CONCLUSIONS

The aim of this study was twofold: to ascertain the influence of selected environmentally specific factors on the research productivity of the faculty in the Gulf region, and to ascertain the presence of any significant differences that might exist between the perceptions of the faculty and the prevailing status of the work environment. The study used a survey design and validated questionnaires were used to collect the data. The questionnaire consisted of four parts corresponding to the four broad categories of demographics, self-knowledge and individual competencies, work environment, and social contingencies. The population for this study comprised of all full-time faculty members at the three AASCB accredited business schools in the GCC countries.

The analysis of the demographics showed that all the respondents had a doctorate degree and an overwhelming majority of them were non-nationals. The average length of tenure of the faculty at the respective institution was over 6 years. The results further showed that the respondents'

perception of research related competencies was "high," although about half of the respondents indicated limited research activity over the past five years.

As for the degree of influence of various factors on research productivity, with one exception, the influence of all factors was perceived as either "significant" or "very significant." With respect to the level of satisfaction with the availability of those factors, the results indicated a perception of "dissatisfaction." Overall results indicate a significant disparity between the level of perceived significance of the factor and the corresponding level of satisfaction with their availability.

In the area of faculty's preference for allocating time among the different types of work related activities (i.e., research, scholarship/professional development, teaching, and service), the results show the presence of significant gaps between the faculty's preference and those of both the actual time spent on these tasks and the university's expected time allocation. Simply put, faculty's preference is for allocating more time to scholarly activities and research.

These findings might be of interest to both the faculty and the universities' administrators. The faculty might use these results in a more effective management of the factors within his/her control to enhance intellectual contributions. The universities' administrators might be assisted by the results in a better understanding of the faculty's perspectives. In all, these results should lead to a more concerted efforts on the parts of all concerned for enhancing the institutional research environment, and thereby, providing the necessary support to promote faculty research.

Finally, the schools studied in this research share fundamental similarities with other business schools in the GCC countries. Accordingly, the obtained results may hold true for those other schools. In addition, an overwhelming majority of the expatriate faculty at the school studied were drawn from non-GCC Arab countries in the Middle East. In the light of the perceptions of faculty members being typically shaped by their frame of reference and training in their countries of origin, the findings of this study may also apply to a wider range of business schools the Arab world.

ENDNOTES

1. The notion of overlap is based on the premise that there is a spillover effect from research (i.e., a faculty researcher is likely to use materials derived from research in classroom instruction). The findings of these studies are mixed.

2. Each member of the panel was asked, on the basis of the knowledge of the environment, the institution, and the faculty in the region to evaluate the relevance of the variables and make comments and suggestion.

   Reliability and Validity of the Instrument -- The external validity of any research is a function of, among other things, the reliability as well as validity of its measurement instrument. In this study, two aspects of reliability of the instrument were addressed: the consistency of measurement results for all items or group of items, and the consistency of subjects' responses to similar items. The former consistency was tested using

split-half technique and the latter was tested by a test–retest approach. The tests were conducted at 95 percent confidence level. The results showed a relatively high degree of instrument reliability (a correlation of 85 and 82 percent, respectively).

A related issue to reliability is that of validity. Two aspects of validity were addressed in this study: content and construct. The content validity of the measurement instrument was evaluated in the pilot phase of the questionnaire development by asking the subjects to evaluate and comment on the potential irrelevance of any components of the study to the area of research. No comments were received. Absent any comments concerning the irrelevance of any of the items; and furthermore, due to the close relationship of the most components of interest with research productivity of faculty, a relatively high content validity was assumed.

The approach used to test the construct validity was the group difference approach. Under this approach, on a priori, it was assumed that on the average, the national faculty would perceive the significance of many of the factors dealing with faculty research productively differently than non-national (expatriate) faculty members. The reasoning for this assumption lies first and foremost in the fact that in all of the GCC countries the national faculty is offered a permanent and life-long tenured employment contract at the outset. Non-national faculty members are offered two or three-year contracts that are typically renewable upon satisfactory performance in the areas of teaching and research.

In light of this type of contracting arrangement, it can be reasonably argued that national faculty would not have as much incentive to engage in scholarly activities. Accordingly, they do not perceive the items related to the faculty research productivity of much relevance and/or importance as compared to the non-national faculty. A t-statistic was used to compare the responses of the two groups on some randomly selected items. The results showed the presence of statistically significant differences between the perceptions of the two groups on virtually all the selected items. The ability of the instrument to reveal such differences provided some indications of the construct validity of the measure (Scott, 1961).

4. One of the major concerns in any mailed questionnaire is that of missing data due to non-respondents, which may lead to a bias in the results. To account for any non-response bias, a comparative analysis of the responses to each of the questions (with the exception of the background) over the two waves of mailings was conducted. The results of the analysis, with few exceptions, did not show any significant differences among the answers. Notwithstanding the few exceptions, the absence of any significant differences among the responses to the two waves might be interpreted as the lack of non-response bias in the study (Azad, 2004).

5. An overwhelmingly majority of the expatriate faculty were drawn for other Arab countries in the Middle East.

6. It was believed that giving the respondents the opportunity to fill-in their perceived percentage of time allocation, rather than asking them to choose a pre-selected percentages (or a range of percentages), would provide for a more objective measure. The only natural constraint in these questions was that the sum of the percentage allocations to the four activities had to be hundred percent.

7. The faculty's preference for research is not surprising, given the impact of research and publication has on both promotion and retention decisions at most institutions.

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HOW FDI FACILITATES THE GLOBALIZATION PROCESS AND STIMULATES ECONOMIC GROWTH IN CEE

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ABSTRACT

The collapse of communism and the advanced Economic Integration of Europe shaped the global development in the twenty-first century. This study reviews the experience of Central and Eastern European (CEE) countries in integrating into the global market and suggests a link between foreign direct investment (FDI) stock and economic growth.

The first section defines the globalization process and discusses World FDI inflows. The second section analyzes FDI inflow in to CEE countries, the third examines FDI stock as a percentage of the gross domestic product (GDP). The fourth section provides an overview of the basic economic growth trends in CEE and shows the association between FDI stock and economic growth in CEE using correlation coefficient. The fifth one includes propositions for the future research and concludes that this study can be extended to verify the association between FDI stock and the economic growth of CEE economies using the growth model based on the production function.

This paper examines the role of the FDI in facilitating advancing globalization process in the CEE economies and explores the relationship between increasing FDI stock and economic growth.

INTRODUCTION

There is no doubt that the world is moving toward a single global economy, where national economies are becoming more globally integrated and interconnected. Globalization process includes social, cultural, political and economic aspects. Economic globalization is based on specialization and international exchange, which lead to increasing interdependence among countries. These two practices increase the international trade of goods and services, the movement of labor and capital and foster the growth of travel and communications.

Proponents of globalization believe that it boosts productivity and living standards around the world. In current literature, researchers evaluate the impact of a few components of globalization including exports, FDI inflows, international financial flows and economic integration.

This paper focuses on FDI as an important factor facilitating the globalization process of CEE economies and stimulating economic growth in this region. High shares of FDI stocks as a percentage of the GDP in the analyzed countries indicate that foreign capital plays a vital role in CEE economies and acts as an indicator of advancing globalization processes in CEE countries.

Foreign capital has fulfilled a very important role in the process of privatization and restructuring of the Central and Easter European (CEE) economies. The FDI has become today an essential factor stimulating sustained economic growth, expansion of capital stock, increase in productivity, employment, innovation and technology transfer.

DEFINING GLOBALIZATION

Globalization is a dynamic process of liberalization, openness, and international integration across a wide range of markets, from labor to goods and from services to capital and technology. Globalization is based upon the freedom to trade with the rest of the world and to capitalize on each country's comparative advantage, the freedom to invest where returns on capital are greatest (Dehesa, 2006). The concept of globalization includes the movement of goods and services in the world economy, movement of resources, FDI, multinational corporation and international movements of financial capital. (Sawyer, 2006). Globalization signifies a process of intensification of economic, political, and cultural interconnectedness among the various actors in the global system. In the economic arena it represents a process of integration of national economies with the global economy (Mengisteab, 2005).

Globalization is the historic process of economic integration and cultural homogenization across national borders fostered by significant advances in transportation and communication technologies after World War II. One of the most important paths driving global development into the twenty-first century is the advanced Economic Integration of Europe. Europe has formed a common integrated market with a single currency – the European Union (Vietor, 2005).

The global economy is in a state of transition from a set of strong national economies to a set of interlinked trading groups. This transition has accelerated over the past few years with the collapse of communism and the coalescing of the European trading nations into a single market (Gillespie, Jennet, Hennessey, 2004). Never before have so many economies been open to global trade and finance flow then now, after the liberalization of the former communist economies (Dehesa, 2006).

The Globalization Index developed by A.T.Kearney is the most comprehensive measure of globalization available today. The factors of this index include international travel, international phone calls, cross-border remittances and other transfers, number of internet hosts, economic integration and share of international trade (Kearney, 2005).

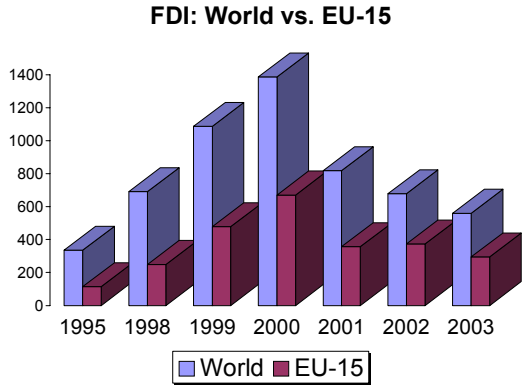
Maler (2004) empirically examined globalization and considered three different modes of globalization: foreign trade, FDI and international financial flows (Kahai & Simmons, 2005). Lukas

(2000) sets forth three fundamental reasons why developing countries embrace globalization. The first one relates to the removal of trade barriers, as it expands the market opportunities for consumers, places downward pressure on prices, and raises the real value of worker's income. The second reason indicates foreign direct investment, as it provides more jobs, new technologies, infrastructure improvements, and variety of capital and entrepreneurial development and the third one underlines domestic businesses access to both lower cost inputs and larger markets for their products (Kahai & Simmons, 2005).

On 1 May 2004, the Czech Republic, Hungary, Poland, Slovakia and Slovenia have been reclassified from Central and Eastern Europe (CEE) category to the EU category and are now included among the developed countries (along with Latvia, Estonia, Lithuania, Cyprus and Malta). All the republics that were part of the former USSR (except the Baltic States) are now classified as part of South-East Europe.

Major changes in the classification of groups of economies have been introduced in the World Investment Report (WIR05) following the reclassification by the United Nations Statistical Office (UNSO). The EU now has 25 members, including the 10 countries that became new members on 1 May 2004 (new EU members) and EU-15 (old members) refers to the group of countries that were members of the EU before 2004 (www.unctad.org./fdistatistics). Full membership of the analyzed CEE countries in the EU means that they needed to adopt the EU law. Furthermore, it means that they have access to the EU Structural Funds, which are supposed to enhance FDI attractiveness and improve the investment climate of these former CEE countries. These funds are intended mainly for such purposes as building basic infrastructure, human resource development, competitiveness and enterprise development, rural development and environmental improvement.

Figure 1: FDI inflows into EU-15 compared with the World FDI 1995-2003 (billions of dollars)

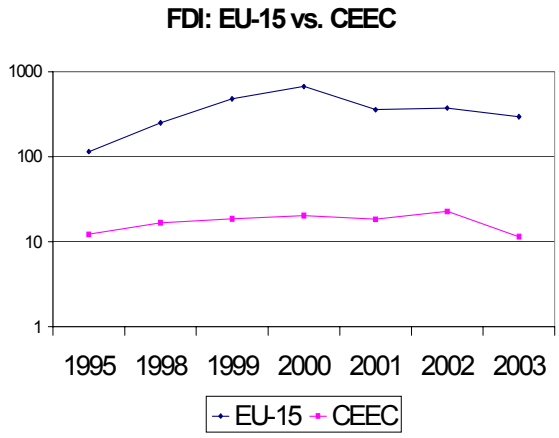


Source: UNCTAD, FDI/TNC database (www.unctad.org./fdistatistics)

Figure 1 analyzes the percentage share of EU countries in the world FDI inflow. The FDI inflow into EU-15 constitutes a significant portion of the total world FDI inflow. In 1995, the FDI inflow into EU countries constituted 32.17% of the world FDI, reaching 48.3% in 2000 and 52.75% in 2003.

FDI inflow into analyzed CEE countries constitutes a relatively large portion of the total EU-15 inflow. Percentage share of analyzed CEE countries in the total EU-15 inflow (on average yearly) was as follows: 1995 -10.6%, 1998-6.7%, 2001-5.1%, 2002-6.0% and 2003- 3.9% (Figure 2).

Figure 2: FDI inflows into CEE countries acceding to the EU in 2004 compared with the EU-15, 1995-2003 (billions of dollars)



Source: UNCTAD, FDI/TNC database (www.unctad.org./fdistatistics)

THE FDI INFLOW INTO CEE COUNTRIES

FDI refers to an investment made to acquire lasting interest in the enterprises operating outside of the economy of the investor. The investor's purpose is to gain an effective voice in the management of the enterprise. Some degree of equity ownership is almost always considered to be associated with an effective voice in the management of an enterprise and a threshold of 10% equity ownership qualifies an investor as a foreign direct investor (the Balance of Payments Manual BPM5: Fifth Edition, International Monetary Fund, 1993) (www.unctad.org/Templates/Page.asp?intItemID=3146&lang=1).

Following the collapse of the communist regime, CEE countries began the transformation toward a market economy and identified the positive effect of FDI on the transition process (Kornecki, 2005).

FDI inflow to CEE countries has been developing in parallel with improvements in political stability and progress in transformation. Recent inflows can be attributed to the positive impact of the last EU enlargement (1 May 2004). New EU countries have improved the business environment and introduced policy measures aimed at liberalizing, promoting and protecting FDI. Attracting foreign investment and liberalizing economy to ensure free movement of capital have become key components in the national strategies of CEE countries. The governments of those countries have officially encouraged FDI and have provided substantial incentives for foreign companies, such as 5-10 years tax abatements, infrastructure improvements, tariff exemptions, outright subsidies and other favorable treatment (Gabor, 2000)

Corporate tax rates in analyzed countries decreased between 2003 and 2004 as follow; in Hungary from 18% to 16%, in Poland from 27% to 19%, in Slovakia from 25% to 19%. On January 2004 the Czech Republic and Slovenia applied respective corporate tax rates of 28% and 25%. For comparison, the highest tax rates in the world (2004) were in: Japan (42%), United States (40%), Germany (38.3%), Italy (37.3%), Canada (36.1%), Israel (36%), India(35.9%) and (35%) in Malta, Pakistan, Spain, Sri Lanka (www.unctad.org).

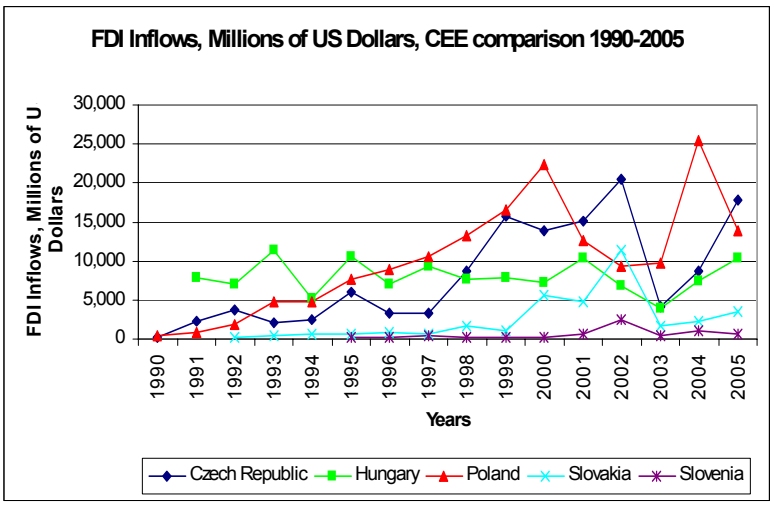
Old EU members fear a relocation of manufacturing and service activities to the new EU members, as they offer relatively low wages, low corporate taxes and the use of subsidies. Poland and the Czech Republic were identified as the top FDI destinations in CEE countries. Germany and the United States are expected to be the principal investors in CEE region (www.UNCTAD/WIR/2003).

The size and increasing FDI inflows to transitioning CEE countries were impressive. Poland, Hungary and the Czech Republic have become the most attractive destination for foreign investments. Between 1990 and 2000, and in 2004 Poland was the leader in FDI in comparison with other CEE countries (Figure 3). FDI in Poland increased from 3 million (USD) in 1990 to 10 000 million (USD) in the year 2000. The decline in FDI inflows into CEE countries between 2002 and 2003, was due to the end of privatization, as Greenfield projects generally smaller in size and spread over a longer period of time could not compensate for the fall in privatization oriented FDI.

All the accessing to the European Union CEE countries, between 2003 and 2004, increased FDI inflows dramatically; the Czech Republic by 186.3%, Hungary by 176.3%, Poland by 133.7%.

According to the matrix of the United Nations Conference on Trade and Development (UNCTAD, 2004) all CEE countries (Poland, the Czech Republic, Hungary, Slovakia and Slovenia) were classified as having high FDI performance and high FDI potential. FDI inflows in analyzed countries constitute a relatively high percentage of the GDP. In 2004, FDI in Poland accounted for 4.5% of GDP in comparison with the Czech Republic, Slovakia and Hungary where respective shares were: 8.7%, 6.9% and 4.7% (Kornecki, 2005)

Figure 3

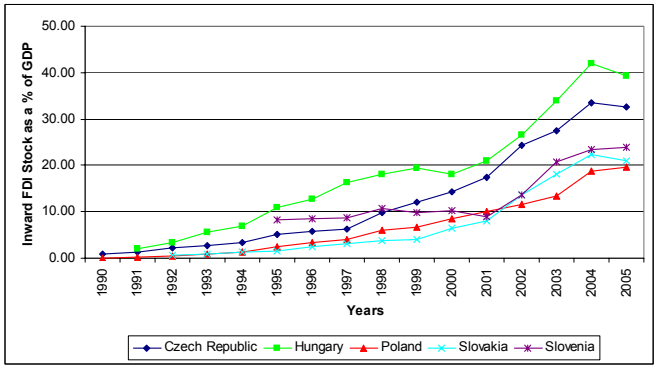


Source: UNCTAD World Investment Report 2006
http://www.unctad.org/Templates/Page.asp?intItemID=3277&lang=1

THE FDI STOCK AS A PERCENTAGE OF GDP IN CEEC

FDI inflow measures the amount of FDI entering a country during a one year period. The FDI stock represents the total amount of productive capacity owned by foreigners in the host country. It grows over time and includes all retained earnings of foreign-owned firms held in cash and investments.

Figure 5: Inward FDI stock as a % of GDP, CEE Comparison, 1990-2005



Source: UNECE Statistical Database & UNCTAD World Investment Report 2006

Statistical analyses of FDI as a percentage of the GDP between 1990 and 2001 in CEE economies indicate an increasing growth rate in foreign stock. The continuously growing percentage of foreign stock in the GDP indicates that foreign capital plays a fundamental role in CEE economies – it is one of the most important factors stimulating economic growth and an essential indicator of progressing globalization process in CEE countries.

The share of foreign stock as a percentage of GDP (2005) has been very high in the Czech Republic, Hungary, Slovakia and Poland, and constitutes respectively: 48%, 56%, 33% and 31% of each countries' GDP. In Slovenia, the share of foreign stock as a percentage of GDP was much lower and amounted to 24% of the GDP.

The EU countries hold the highest share of the productive capacity owned by the foreigners in CEE countries, while the USA and its many international corporations contribute a great deal of foreign stock to this region (Kornecki, 2005). FDI stock per capita in CEE economies shows increasing tendency and between 2001 and 2004 increased in Hungary from USD 2 311 to USD 5 213, in the Czech Republic from USD 2600 to USD 4822, in Slovenia from USD 1 709 to USD 3218, in Slovakia from USD 1 115 to USD 2 431 and in Poland from USD 1 010 to USD 1 559. The lowest FDI stock per capita in Poland relates to relatively high population numbers in Poland, as compared with other analyzed CEE countries. The accession of examined countries to the EU (1 May 2004) stimulated FDI inflow and resulted in sharp increase in FDI stock per capita (www.wiiw.ac.at , WIIW Annual Database Eastern Europe. Table 3. Page 11).

THE FDI INFLOW AND ECONOMIC GROWTH IN CEEC: CORRELATION COEFFICIENT

FDI in CEE has increased in the past twenty years to become the most common type of capital flow. The most important economic reason for attracting FDI at the beginning of the transformation process was to facilitate the privatization and restructuring of the CEE economies (Heimann, 2003).

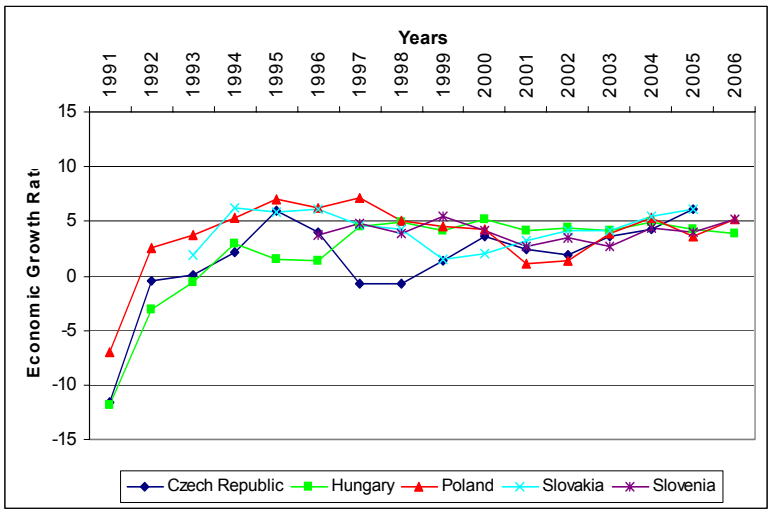
At present, as the privatization and reconstruction process comes to an end, the main reason to pursue FDI is to enhance productivity, encourage employment, stimulate innovation and technology transfer as well as enhance sustained economic growth.

There are different patterns of economic growth and differences in output performance during the transitioning of various CEE countries. However, all of the transitioning CEE countries have been building the new macroeconomic structure via deregulation of prices, liberalization of trade (trade barriers had to be removed to import goods, services, capital and technology), privatization (replacement of state property with private property), external assistance (outside support and outside financing via foreign aids and foreign direct investment) and capital market development (banking system, venture capital funds, stock market, bond market, investment banks).

There are a variety of indicators assessing the level of economic development and transition outcomes in the CEE economies. One of the most important indicators of macroeconomic performance is the gross domestic product (GDP) and its rate of growth.

The economic growth rate is a major indicator for judging transition. The characteristic aspects of transition economies include an initial collapse of output followed by a slow recovery. During the early years of transition (1991-1993), the downslide of economic activity was significant (Figure 7). Between 1993 and 1995, all analyzed CEE economies started to show an increasing trend in economic growth with declining growth between 1996-1997 in Hungary, 1998-1999 in Czech Republic, 1999 – 2000 in Slovakia and 2001- 2002 in Slovenia and Poland (Figure 7).

Figure 7: Economic Growth Rate (%), CEE Comparison, 1991-2006



Source: UNECE Statistical Database, Economic Statistics: http://w3.unece.org/pxweb/Dialog/statfile1_new.asp

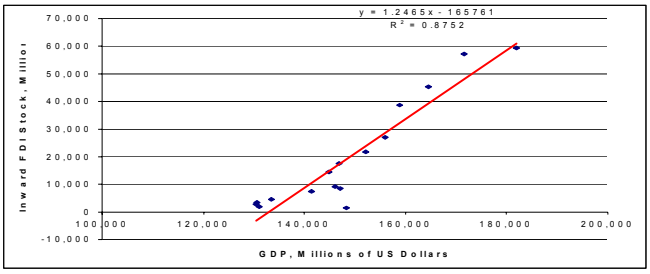
After their accession to the EU, the economic growth rate in Poland and the Czech Republic increased significantly. Between 2003 and 2004, economic growth in Poland increased from 1.4% to 3.8% and in Czech Republic from 1.5% to 3.2%. Between 2004 and 2005, all examined economies showed an increase in economic growth rates: in the Czech Republic - 3.2% to 4.4%, in Hungary - 2.9% to 4.2%, in Poland - 3.8% to 5.4%, in Slovakia - 4.5% to 5.5%, and in Slovenia - 2.7% to 4.2%. This suggests a very strong link between increased FDI inflows and economic growth in the CEE countries after the EU accession.

The table 1 indicates positive association between the real GDP and the FDI stock between 1990 and 2005, as the correlation coefficient is positive in all analyzed CEE countries: in Hungary(0.940), then Czech Republic (0.936), Poland (0.931), Slovakia (0.909) and Slovenia (0.888). This study indicates the strong link between FDI stock and economic growth. The Figures

8-12 illustrate the regression lines of the analyzed CEE countries presenting real GDP and inward FDI stock correlation.

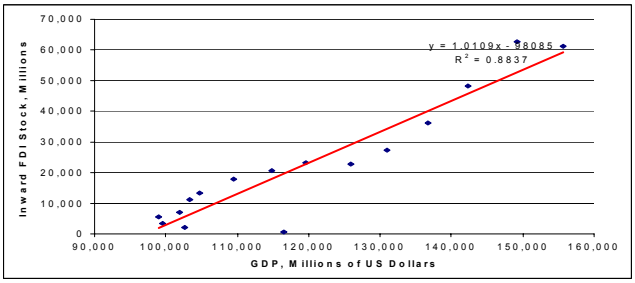
Table 1: Real GDP & Inward FDI Stock Correlation, CEE Comparison, 1990-2005					
	Czech Republic	Hungary	Poland	Slovakia	Slovenia
Correlation	0.936	0.940	0.931	0.909	0.888
R^2	0.875	0.884	0.866	0.827	0.789
Source: UNECE &UNCTAD 2006 (calculated)					

Figure 8: Real GDP & Inward FDI Stock Correlation, Czech Republic, 1990-2005



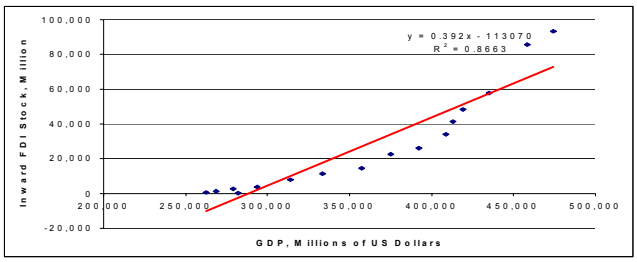
Source: UNECE Statistical Database & UNCTAD World Investment Report 2006

Figure 9: Real GDP & Inward FDI Stock Correlation, Hungary, 1990-2005



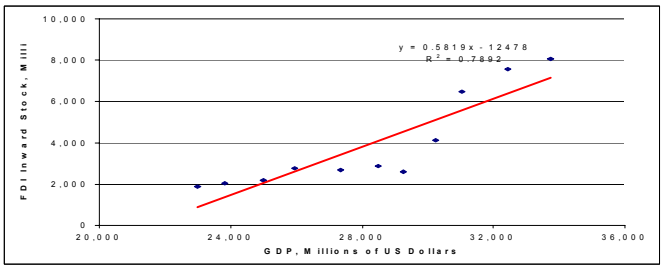
Source: UNECE Statistical Database & UNCTAD World Investment Report 2006

Figure 10: Real GDP & Inward FDI Stock Correlation, Poland, 1990-2005



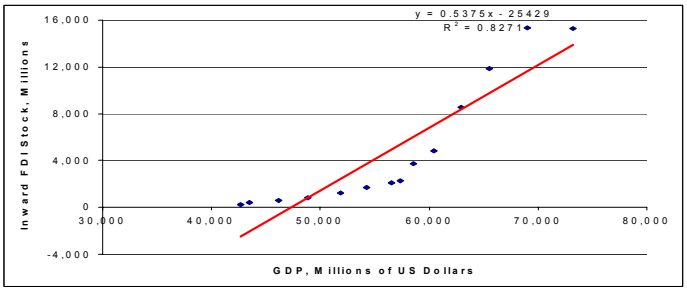
Source: UNECE Statistical Database & UNCTAD World Investment Report 2006

Figure 11: Real GDP & Inward FDI Stock Correlation, Slovenia, 1990-2005



Source: UNECE Statistical Database & UNCTAD World Investment Report 2006

Figure 12: Real GDP & Inward FDI Stock Correlation, Slovakia, 1990-2005



Source: UNECE Statistical Database & UNCTAD World Investment Report 2006

IMPLICATION FOR THE FUTURE RESEARCH

The results of this study constitute strong base for the further research on positive correlation between growing FDI stock and the economic growth rate in the CEEC. A large number of empirical studies on the role of FDI in host countries suggest that FDI is an important source of capital, complements domestic private investment, and is usually associated with new job opportunities and enhancement of technology transfer, and boosts overall economic growth in host countries (Chowdhury & Mavrotas, 2006).

Based on references from current research studies, the consensus seems to be that there is a positive association between FDI inflows and economic growth, provided that receiving countries have reached a minimum level of educational, technological and/or infrastructure development (Hansen & Rand*,* 2006*).* The inflow of FDI increased rapidly during the late 1980s and the 1990s in almost every region of the world. The relationship between FDI and economic growth has motivated a voluminous empirical literature in developed and developing countries.

Research methodology related to FDI and economic growth relationship in the literature has been based mostly on VAR (Gholam, Sang-Yong, Lee & Heshmati, 2006), production function and regression models (Brock, 2005). The author will submit in the near future empirical and scientific evidence that FDI has made a positive contribution to the economic growth of the CEE developing countries.

This study has showed the positive correlation between FDI and economic growth in CEE countries. The authors are planning to conduct research on the relationship between FDI and economic growth in CEE countries using growth theory model, based on the production function. GDP is shown as a function of labor (L) and capital (C). The increase in capital stock shifts the production function upwards producing a higher level of real GDP. The economy can produce more goods and services and the average capital to labor ratio rises. Larger capital stock and higher technology increase economic growth. FDI obviously helps developing CEE countries increase capital stock – this movement of capital tends to increase the rate of economic growth in the examined countries.

SUMMARY

The collapse of communism and the advanced Economic Integration of Europe shaped the global development in the twenty-first century. Analyzed CEE economies have been integrating in to the global market and this process has accelerated over the past few years. High foreign capital inflows and very high percentage share of FDI stock in the GDP indicate that foreign capital plays a vital role in CEE economies and has become an important indicator of the advancing globalization processes in CEE countries.

Foreign stock, which represents the total amount of productive capacity owned by foreigners in the host country, has become a very important to CEE transitioning economies. The share of foreign stock as a percentage of GDP (2005) has been very high in the Czech Republic, Hungary, Slovakia and Poland, and constitutes respectively: 48%, 56%, 33% and 31% of each countries' GDP. In Slovenia, the share of foreign stock as a percentage of GDP was much lower and amounted to 24% of the GDP.

The economic growth rate is a major indicator for judging transition. The most characteristic aspect of transition economies was the initial collapse of output. During the early years of transition, the downslide of economic activity was significant (e.g. 1991 to 1993). Between 1993 and 1995 all analyzed CEE economies started to grow, showing an increasing trend in economic growth. Over the past few years, all examined CEE economies have shown an increase in FDI inflows and economic growth rate – what can be attributed to the EU accession.

This study indicates the strong link between FDI stock and economic growth as the correlation coefficient is positive and relatively high in all analyzed CEE countries. This research can be extended to verify positive association between FDI stock and economic growth in CEE countries using the production function model.

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