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LETTER FROM THE EDITORS

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IMPACT OF GENDER AND POLITICAL IDEOLOGY ON CHINESE AND U.S. COLLEGE STUDENT'S RESPONSES TO CLIMATE CHANGE ADVOCACY ADVERTISEMENTS

Carrol R. Haggard, Fort Hays State University

Qingjiang (Q. J.) Yao, Lamar University

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ABSTRACT

As the name correctly implies, global warming is a significant issue affecting the entire world. The world's scientific community has largely reached a consensus that (1) global warming is occurring and (2) that human behavior is largely responsible. The most recent evidence is seen in an August 20, 2013, New York Times report of a leaked draft of an upcoming UN Report on climate change (Gillis, 2013). That report, prepared by an international panel of scientists unequivocally indicates that human activity caused more than half of observed increase in the average of global surface temperature in the last half of the 20th century.

While the international scientific community is largely united on the presence and causes of climate change, the political debate is far from resolved. Some political leaders deny the existence of global warming and any human culpability, claiming that we are just in a "weather cycle." With political leaders questioning both the existence and cause of climate change, it is not surprising that there are differing positions by the public on the issue as well.

Although scholars have examined a number of individual factors related to U. S. environmental attitudes, perhaps the two most reliable indicators are gender and political ideology. Since the U.S and China are the world's two largest economies, arguably, they are the two largest contributors to the problem. Therefore, the purpose of this study was to examine the impact of gender and political ideology on U.S and Chinese college student's responses to advertisements which advocate actions to reduce climate change.

The study employed a total sample of 318 college students, 162 from China and 156 from the U.S. The purpose of this study was to examine the differences in Chinese and U.S. college student responses to ads which advocated action on climate change based on their gender and political ideology. The results indicate that in the U.S, liberals are both more likely to agree with the existence of climate change and indicate a personal intention to do something about it than are conservatives. However, in contrast to previous research, in the U.S. this study failed to find a sex difference in environmental attitudes. In China, the results indicate that males are more likely to agree with the existence of climate change and indicate a personal intention to do something about it than are females. Ideological differences along the liberal-conservative

dimension were not evident in the Chinese sample. These findings have important potential implications in the area of “green” marketing and “green” advertising.

INTRODUCTION

As the name correctly implies, global warming, or now the more commonly used term, climate change, is a significant issue affecting the entire world. The world’s scientific community has largely reached a consensus that (1) global warming is occurring and (2) that human behavior is largely responsible. The most recent evidence is seen in an August 20, 2013, *New York Times* report of a leaked draft of an upcoming UN Report on climate change (Gillis, 2013). The report, prepared by the Intergovernmental Panel on Climate Change, an international panel of scientists who along with Al Gore won the Nobel Peace Prize in 2007, unequivocally indicates that human activity caused more than half of observed increase in the average of global surface temperature in the last half of the 20th century.

While the international scientific community is largely united on the presence and causes of climate change, in the United States, the political debate is far from resolved. Some political leaders deny the existence of global warming and any human culpability, offering the contrarian argument that we are just in a “weather cycle.” With political leaders questioning both the existence and cause of climate change, there should be no surprise that there are differing positions by the public on the issue as well (Zhao, Leiserowitz, Maibach and Roser-Renouf, 2011).

Since the U.S and China are the world’s two largest economies, arguably, they are the two largest contributors to the problem. As the world’s largest economy, the issue of climate change in the U.S. has certainly taken on a prominent role in discussion and political debate. However, as recognition of the international impact of environmental issues has become more evident, environmental attitudes are increasingly being studied in a global context. As the world’s second largest economy, more attention is being given to China in terms of environmental attitudes as a precursor to action which will help “save the planet.” While climate change as an issue was once rarely publicly discussed in China, He, Hong, Liu, & Tiefenbacher (2011) claim “Chinese citizens are growing more consciousness of the need for environmental protection due to increased perception and cognition of local and regional environmental degradation and the reach of global environmental problems” (p. 92). Moreover, this awareness is leading to behavioral change, as Cherian and Jolly (2012) note that an increasing awareness of environmental problems has led to a change in consumer attitudes toward a green lifestyle, as people are actively trying to reduce their impact on the environment. Further, there are a growing number of studies which have examined the environmental attitudes among segments of the Chinese population (e.g. Harris, 2006; Lee, 2008; Thomas, 2012).

A justification of a comparison of attitudes in the two countries from a cultural standpoint is provided by Lee (2008):

In a theoretical sense, by observing environmental patterns among non- Western societies, we might understand cultural views on human-environment relationships, thus allowing both comparison between Western and non-Western cultures and exploration of how culture influences individuals’ participation in environmental

protection. In a practical sense, environmental problems in Asia (China in particular) are becoming more and more serious (Harris, 2006). Because environmental degradation is a global problem that needs global efforts and collaboration, there is an urgent need to motivate environmental participation among members of Asian societies (p. 149).

Since in the United States climate change remains an unresolved issue and there is growing recognition of its importance in China, the topic provides a fertile area for research regarding attitudes on this issue. Therefore, this study uses the issue of global warming to examine differences in Chinese and U.S. college student's responses to climate change advocacy advertisements.

Although scholars have examined a number of individual factors related to U. S. environmental attitudes, perhaps the two most reliable indicators of environmental attitudes are gender and political ideology (Xiao and McCright, 2007). Therefore, the purpose of this study was to examine the impact of gender and political ideology on U.S and Chinese college student's responses to advertisements which advocate actions to reduce climate change.

LITERATURE REVIEW

Consistent with the purpose of this study, the literature on the influence of gender and political ideology on environmental attitudes are reviewed.

Gender and Environmental Attitudes

Attitudes and opinions change over time. As with any research on attitudes, changing views is certainly true regarding environmental issues. Thus, the research findings regarding gender and environmental attitudes have evolved over time. Zelezny, Chua, and Aldrich (2000) reviewed research conducted since the 1990s on gender differences in environmental variables and found that despite past inconsistencies, a clear picture regarding gender differences has emerged. Similarly, Diamantopoulos, Schlegelmilch, Sinkovics, and Bohlen (2003) argue that many of the previous studies on gender-related environmentalism were based on data collected in the 1970s and 1980s and that societies have undergone substantial changes in environmental consciousness during the past three decades. Hence, they call for a fresh analysis of the role of gender in environmentalism. Therefore, this literature review will focus on the more recent studies.

While gender differences regarding environmental attitudes have long been examined, at least within the U.S., in 2000, Agarwal advanced the claim that with regard to initiating and sustaining environmental collective action, there had been scant research from a gender perspective. He warned that the continued neglect of gender could conceal opportunities for successful environmental protection efforts. A decade later, however, Alston & Litt (2013) argue that in regard to gender and the global climate crisis, based on evidence from multiple countries, which include China and the U.S., on five continents, "there is emerging evidence that gender does matter" (p. 3). They argue that the experiences of women and men during the climate crisis are

different – a difference based on such elements as cultural norms and practices, work roles and access to resources, and safety and security, thus producing different responses.

There is a growing body of literature which examines the role of gender differences in relation to environmental attitudes. While early research focused on gender differences in the U.S., recent research has examined gender differences in China. Since U.S. based research is the oldest, it is reviewed first.

Gender and Environmental Attitudes – U.S.

A framework for reporting recent gender-based research in environmentalism is provided by Lee (2008). The research has consistently shown that females report stronger attitudes than do males on a variety of environmentally related issues, including: stronger environmental attitudes (e.g., Duan, & Fortner, 2010; Tikka, Kuitunen, & Tynys, 2000; Zelezny et al., 2000), environmental concern (e.g., Mostafa, 2007; Zelezny et al., 2000), perceived vulnerability to risks from environmental damage (Bord & O'Connor, 1997), perceived personal responsibility (Haytko & Matulich, 2008; Zelezny et al., 2000), intention to participate in pro-environmental behavior (Haytko & Matulich, 2008; Zelezny & Bailey, 2006), recycling behavior (Diamantopoulos et al., 2003), and green purchasing behavior (Diamantopoulos et al., 2003; Haytko & Matulich, 2008).

Xiao & McCright (2013) noted that “research on environmental concern has consistently found that women have modestly stronger pro-environmental values, beliefs, and attitudes than do men” (p.1). Using structural equation modeling on the General Social Survey data from 2000 and 2010, they confirmed these findings as they found that women report greater pro-environmental views and concern about environmental problems than do men.

Findings from Zelezny et al. (2000) provide further evidence that these gender differences are consistent across age and across 14 countries (Argentina, Canada, Columbia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Mexico, Panama, Paraguay, Peru, Spain, the United States, and Venezuela). Gender differences in environmental attitudes were found to occur as early as the fourth grade (Naquin, Cole, Bowers, & Walkwitz, 2011).

In examining attitudes toward green advertising, Haytko and Matulich (2008) found that generally females expressed significantly more positive attitudes toward green advertising and exhibited significantly more environmentally responsible behaviors than males. In their attempt to create a general model of green marketing, Cherian and Jolly (2012) offer an explanation of the gender differences by citing a study by Gough (1994) noting that “females tend to have a better ability to take control and take the responsibility for alleviating problems in the world and also they are the ones who have a stronger sense of ethics” (p. 121).

There are at least two other theoretical explanations for gender based differences in environmental attitudes: the socialization of gender roles (Zelezny and Bailey, 2006) and value orientation (Stern, Dietz, & Kalof, 2005). Gender socialization theory suggests that behavior is predicted by the process of socialization whereby individuals are shaped by gender expectations within the context of cultural norms (Zelezny et al., 2000). Specifically, socialization theory proposes that because women are socialized to be more interdependent, compassionate, nurturing, cooperative, and helpful in caregiving roles than men, women should have a stronger ethic of care for others, including the environment, when compared to men (Zelezny and Bailey, 2006). Other

scholars have tried to explain the gender difference in environmental concern by using value orientation, claiming that women have stronger biospheric orientations (focusing on values that emphasize the environment and the ecosystem) than men (Stern et al., 2005).

Gender and Environmental Attitudes – Asia

Since there are relatively few studies which examine the role of gender in environmental attitudes of the Chinese (Lee, 2009), and the environmental movement is relatively new to Asia (Harris, 2006; Lai, 2000), before moving to a review of gender and environmental attitudes among the Chinese, several studies which reflect attitudes among those in Asia are reviewed.

Noting that there are relatively few articles in sociology and psychology on gender, ethnicity, and the environment, Burn, Winter, Hori, and Silver (2012) surveyed Asian American and European American women and men. They found significant effects for ethnicity and gender as ethnic identification enhanced cultural influences on environmental concern.

A survey of knowledge and attitudes toward bioenergy of students age 14-19 in Finland, Slovakia, Taiwan, and Turkey was conducted by Halder, et al. (2012). While they found statistically significant differences in students' bioenergy knowledge between the various countries, they failed to find that gender and rural–urban differences played a significant role in determining students' level of bioenergy knowledge. However, they found statistically significant effects of gender and locality on students' perceptions of bioenergy. Thus, for these four countries, there does not appear a clear understanding of the role of gender in attitudes toward bioenergy.

Chen and Chai (2010) surveyed 184 undergraduate business students from a major private university in Malaysia, where the majority of the respondents were female (67.4%) and of Chinese ethnicity (59.2%). They found no significant differences between females and males in their environmental attitudes and attitudes on green products.

Gender and Environmental Attitudes – China

While studies in the U.S. have consistently shown that females have stronger environmental concerns than males (e.g. Agarwal, 2000), as with the results of studies from Asia in general, the results of studies conducted in China have not shown such consistent results. Of the relatively few studies which have examined the role of gender in environmental attitudes, there is almost an equal division between those which found sex differences in attitudes and those which did not.

There have also been a limited number of cross cultural studies related to environmental attitudes. In a study on environmental risk perceptions Duan and Fortner (2010) found that females in both the U.S. and Chinese groups perceived the risks to be higher to human health and to the environment than did males.

In surveying over 6,000 adolescents in Hong Kong, Lee (2008, 2009) found that females scored significantly higher in environmental attitude, environmental concern, perceived seriousness of environmental problems, perceived environmental responsibility, and green purchasing behavior than male adolescents. Lai and Tao (2003) conducted a study on Chinese in Hong Kong rating the levels of threat of 25 environmental hazards. They found that women

perceived the hazards to be more threatening to the environment than did men. Similarly, Zhang and Fan's (2013) survey of over 3,000 Chinese students at the University of Tsinghua, found that while global warming was 11 out of 15 health risks, with only 18.2% perceiving it as a high risk, female respondents' saw global warming as a higher concern than male respondents.

In contrast to Lee (2008, 2009), a decade earlier, Chan (1998) in a random sample of 1032 secondary school students in Hong Kong found that male students were more knowledgeable about the environment than were females. As in the U.S., attitudes seem to have changed over time.

In examining environmental risk perceptions, Duan and Fortner (2010) report that while Chinese females and males did not show a significant difference in their overall risk perceptions, females perceived the risks from global environmental change to be more harmful than did males. In an examination of green purchasing behavior, a sample of 500 Chinese residents ages 10 – 61+ failed to find a significant difference based on sex in green consumer behavior (Zhao, Gao, Wu, Wang, & Zhu, 2013). Perhaps more significantly, in their analysis of Chinese data from the 2007 World Values Survey, Kim and Kim (2010), found that in China males reported higher concern for the environment than did females. However, their analysis also revealed that strong feminism brings out environmental concern and action among those in Korea and environmental action in China. Finally, using data from the "2008 China Survey" of almost 4,000 randomly sampled interviews from across China, Shields & Zeng (2012) found a similar outcome, noting that our results indicate that there is indeed a "gender gap" in environmental attitudes in China, but the pattern is reversed from what has been generally found in previous work conducted in the United States and Europe. Chinese men, not women, show a greater concern about environmental problems and the seriousness of the environmental degradation in China (p. 1).

Given that different studies had very different results raises the obvious question of why. Li (2013) provides one rationale as he argues that the Chinese system limits the influence on climate change adaptation of residents and small businesses as there is little provision for participation in policy-making. While governmental policy may certainly affect both environmental attitudes and behavior, Shields and Zeng (2012) offer a compelling argument that "assessments of environmental risk not only vary across countries, but also across groups of citizens within countries" (p. 2). Both their study and that of Kim and Kim (2010) used data from across China, rather than being limited exclusively to metropolitan areas. Shields and Zeng note that in their sample, women had significantly lower levels of educational attainment and significantly lower economic class standing than did their male counterparts. They emphasize the mediating influence of socioeconomic variables in explaining gender attitudes toward the environment in China, suggesting that in different contexts, women may be faced with difficult decisions between immediate economic necessities and long-term environmental concerns. They argue that the environmental gender gap in China will likely persist unless further economic development results in improved access to education and economic conditions for Chinese women.

Ideology and Environmental Attitudes

At the individual level, sociopolitical orientation or political ideology is also one of the most studied variables in assessing its impact on environmental attitudes and concern (Corbett, 2006). In the U.S., this variable has been the focus of numerous studies, while it has been

somewhat less studied in China. Fransson and Garling (1999) note that political ideology has been studied as a predictor of environmentalism, with conservatives demonstrating higher support for business and industry and lower support for preservation of nature. In general, this position has been demonstrated in both the U.S. and China, as in the U.S. conservatives support business growth while in China economic development has taken precedence over environmental concerns. Environmental research which focuses on the ideological positions of the U.S. population has frequently combined the effects of ideology with those of gender, thus focusing on the interaction of these two variables. As with gender, the role of ideology in environmental research for U.S. citizens will be reviewed first, followed by the research on Chinese citizens.

Ideology – U. S.

U.S. public opinion regarding climate change has become increasingly polarized in recent years (Hamilton, 2010). There are a number of studies which confirm this claim. Political polarization over climate change within the American public has been investigated by McCright and Dunlap (2011). In analyzing data from 10 nationally representative Gallup Polls between 2001 and 2010, they found that significant ideological and partisan polarization has occurred on the issue of climate change over the past decade. Specifically, they found that liberals and Democrats are more likely to report beliefs consistent with the scientific consensus and express personal concern about global warming than are conservatives and Republicans. In regard to beliefs about climate change, they found that political ideology and party identification were statistically significant. Further, they also found statistically significant differences based on gender, with females being more likely to support positions consistent with the scientific consensus on climate change, while males were more likely to hold contrarian views.

Extending their own research and building on the substantial body of research which demonstrates the “white male effect” on environmental attitudes, in 2013, McCright and Dunlap examined whether conservative white males are less worried about the risks of environmental problems than are other adults in the US general public. Using 10 years of Gallup poll data, they found that conservative white males have significantly lower worry about environmental problems than do other Americans. Their analysis indicates that the gender difference in environmental attitudes is largely due to conservative white males. McCright and Dunlap suggest that conservative white male’s low level of concern with environmental risks is likely driven by their social commitment to prevent new environmental regulations and repeal existing ones.

Hamilton (2010) examined political polarization by conducting surveys in New Hampshire and Michigan. He found that gender has a positive, significant effect: women more often thought that global warming posed a threat in their lifetime. Political party exerts a strong negative effect: as identification with the Republican party increases, respondents became less likely to believe that global warming posed a threat—consistent with other findings that individuals with conservative ideologies tend to discount anthropogenic climate change (Dietz, Dan, & Shwom, 2007; Dunlap & McCright, 2008; Pew, 2006, 2007).

Further, he found that perceived knowledge regarding the issue had a role in polarization, as Democrats who believe they have a good understanding of global warming are also *more* likely to believe that it poses a threat in their lifetimes. Conversely, Republicans who believe they have

a good understanding of global warming are *less* likely to believe that it poses a threat. Ideology thus affects perceptions of the science behind climate change.

That political ideology affects one's beliefs about climate change is also supported by Darmofal (2009) who concludes that science is often superseded by ideological considerations: "When political elites offered dubious policy cues, many citizens followed these cues rather than rejecting them in favor of more valid cues from opposition elites" (p. 392). Brulle, Carmichael, and Jenkins (2012) after analyzing 74 public opinion polls for the period of 2002-2010, came to a similar conclusion as they claim "the most important factor in influencing public opinion on climate change, however, is the elite partisan battle over the issue."

In addition to the direct evidence which demonstrates the role of political ideology in shaping individuals environmental beliefs, there are a number of indirect indicators which support this position. Using data from the World Values Survey, Running (2013) tested the effect of four social identities—world citizen, national citizen, local community member, and autonomous individual—on the likelihood an individual considers global warming a very serious problem. She found that "identification as a world citizen increases the odds an individual judges global warming to be very serious, but only for individuals who also identify as autonomous individuals" (p. 397). Her findings can be interpreted as being consistent along ideological lines. In general, more liberal individuals are likely to view themselves as citizens of the world, while more conservative individuals are more likely to see themselves as national citizens or local community members. Similarly, Kalamas, Cleveland, & Laroche (2013) examined how external attributions (i.e., those perceived to be beyond their direct control) affected consumers' pro-environmental behaviors. In testing a model of external environmental locus of control, they found that consumers ascribing environmental responsibility to powerful-others (corporate and government responsibility) engage in pro-environmental behaviors; whereas those attributing environmental change to chance/fate typically do not. These results can also be interpreted as consistent with ideology, as, more liberal individuals think that humans are responsible for the state of the environment; whereas conservatives view the situation is part of weather cycle.

In sum, there is a consistent body of literature which indicates that in the U.S., liberal / Democratic females are more supportive both of the existence of climate change and the need to do something about it compared to conservative / Republican white males who hold contrarian views.

Ideology – China

As noted above, the effect of political ideology on environmental attitudes have not been extensively studied in China and generally speaking, the few studies that do exist require inferring political attitudes rather than a direct measure of political ideology. Xie (2011) notes that China is facing mounting environmental pressure, so there is growing public awareness of the issue. Leiserowitz, Maibach, Roser-Renouf, & Smith (2010) claim that basically China's public accepts the viewpoint of the current international society, that is, climate change is mainly caused by human activities. As a result, there are considerably less contrarian views in China than in the U.S.

Lee (2008) notes that China has a collectivist culture. As a result, Chinese culture stresses collective efforts, concern for others, and a harmonious relationship with nature. Consequently, in regard to ecological wellbeing, as a collectivist culture, Chinese should be more concerned with the environment than those from individualist cultures, such as the U.S. However, as Xie (2011) notes the emphasis on rapid economic growth has resulted in a high price in the form of environmental degradation. Xie further notes that “Chinese involvement in the transnational environmental movement is limited, owing to China’s political conditions as well as the movement’s early stage of development” (p. 207).

In terms of individual environmentally related behavior, Lo and Fryxell (2003), examined how Chinese managers knowledge of environmental issues affected the environmentally related actions they took within their organization. Lo and Fryxell found that environmental knowledge and values were predictive of more personal managerial behaviors, such as keeping informed of relevant company issues and working within the system to minimize environmental impacts. They also found that both environmental values and knowledge had additive effects on managerial tendencies to initiate new programs within their domain of responsibility. Only environmental values was found to have a modest influence environmental advocacy.

China’s public perception of climate change was analyzed by a survey conducted by Yu, Wang, Zhang, Wang, & Wei (2013). The results were mixed, as they found that some Chinese agree that climate change does harm residents and society, have confidence in the government to deal with climate change, and were willing to take individual actions to address climate change. While other Chinese are unwilling to take actions and argue that climate change is due to natural consequences.

In one of the few studies which directly addresses political ideology, Kim and Kim (2010) found that strong conservatism decreases environmental concern, whereas it increases environmental action. Kim and Kim suggest the contrasting results may be caused by resource allocation. For example, progressive young people think seriously about environmental problems but they can’t actively express their political will by action because of a lack of resources. On the other hand, conservative older people, while they have the resources, are not concerned about environmental matters.

Using World Values Survey data, Kvaloy and Listhaug (2010) conducted a comparative study of public opinion on the seriousness of global warming in 48 countries, including China and the U.S. They found that 60% say that global warming is a very serious problem and 30% say that it somewhat serious. Thus, despite variations by demography and ideology, there is concern for the seriousness of global warming across ideological and social divides in societies. Their findings with regard to all 48 countries are “that women are more likely than men to say that global warming is a serious problem, ... and perception of the seriousness of the problem is positively correlated with high education, post-materialism, and left-right self-identification (with strongest concerns on the far left)” (p. 17-18). They note that their findings for ideology support theoretical expectations as left-right ideology shows that those on the right are less likely than persons in the center to note the problem and that those on the extreme left are more concerned than in the center.

Rationale and Hypotheses

While China and the U.S. are certainly very different countries and function very differently, the existing research regarding environmental attitudes suggest some potential commonalities. Over at least the last decade, in the U.S. the research seems to indicate a consistent pattern where females and liberals/Democrats are both more willing to accept the presence of climate change and its seriousness. In China, the picture is not as clear, as research on sex differences in environmental attitudes has not revealed a consistent pattern of responses and there has been very little research which focuses directly on the effect of the political ideology of the individual.

Lee (2009) notes that while early environmental studies focused on the predictive power of individual characteristics such as age, gender and political ideology, more recent studies have investigated the effects of environmental concern on behavioral intentions and behavior. Several studies have examined the effect of environmental attitudes on “green purchases” (Chen, & Chai, 2010; Cherian, & Jolly, 2012) and willingness to pay more for renewable energy (Bang, Ellinger, Hadjimarcou, & Traichal, 2000).

Therefore, the purpose of this study was to examine the impact of gender and political ideology on U.S and Chinese college student’s responses to advertisements which advocate actions to reduce climate change. Specifically, the following hypotheses are advanced:

H_{1a} U.S. females will perceive climate change as a more severe problem than will males.

H_{1b} U.S. females will indicate a stronger intention to take personal action to stop climate change than will males.

H_{2a} There will be a difference in the perception of Chinese females and Chinese males in the seriousness of climate change as a problem.

H_{2b} There will be a difference in the intention of Chinese females and Chinese males to take personal action to stop climate change.

H_{3a} U.S. liberals will perceive climate change as a more severe problem than will conservatives.

H_{3b} U.S. liberals will indicate a stronger intention to take personal action to stop climate change than will conservatives.

H_{4a} Chinese liberals will perceive climate change as a more severe problem than will conservatives.

H_{4b} Chinese liberals will indicate a stronger intention to take personal action to stop climate change than will conservatives.

METHOD

This study is part of a larger project which examined the effectiveness of one-sided versus two-sided and open versus closed ads. The ads, described below, were not the focus of this study; rather they served as a source of information regarding climate change.

Participants

This study employed a convenient total sample of 318 college students selected based on their availability. The sample reflects two different cultural groups, college students in China and the United States. Students in each country were randomly assigned to one of four groups, where each group viewed either a one-sided conclusive, two-sided conclusive, one-sided inconclusive or two-sided inconclusive ad.

The Chinese sample. The Chinese sample included 162 students (113 females and 49 males). The Chinese sample was collected from two Chinese universities in Guangzhou, China. Ages of the respondents ranged from 18 to 25 years, with 8 (4.9 %) in the 18-19 age group, 93 (57.4 %) in the 20-21 age group, and 61 (37.6 %) in the 22-25 age group. Among them, 19 (11.7%) are freshmen, 45 (27.8%) are sophomores, 41 (25.3%) are juniors, 53 (32.7%) are first-year master's students, and 4 (2.5%) are second-year master's students. On a scale ranging from very liberal (1) to very conservative (5), 2 (1.2%) described themselves as very liberal, 43 (26.5%) selected liberal, 101 (62.3%) chose neutral, 16 (9.9%) chose conservative, and none chose very conservative. *Chi-square* analyses shows that the four groups have no differences across gender, age, year in school, and ideology. The four groups are homogenous.

The United States sample. The sample of United States students consisted of 156 students (94 females and 62 males). The U.S. sample attended a medium sized Midwestern university located in a town of about 20,000. Ages of the respondents ranged from 18 to over 26 years, with 71 (45.5 %) in the 18-19 age group, 48 (30.8 %) in the 20 -21 age group, 31 (19.9 %) in the 22-25 age group and 6 (3.8%) over the age of 25. Among them, 53 (34%) are freshmen, 41 (26.3%) sophomores, 25 (16%) juniors, and 37 (23.7%) seniors. On a scale ranging from very liberal (1) to very conservative (5), 9 of them (5.8%) chose very liberal, 24 (15.4%) chose liberal, 78 (50%) chose neutral, 34 (21.8%) chose conservative, and 11 (7.1%) chose very conservative. *Chi-square* analyses shows that except for age, the four U. S. groups have no difference in gender, year in school, and ideology. Age shows significant differences because two cells were empty. Overall, the demographic factors in the four groups can be considered as homogenous.

When comparing the two cultural groups, *chi-square* analyses indicates no differences in gender, age, or year in school. Thus, the overall demographic analysis indicates that the two cultural groups are very similar to each other.

Instruments

The instrument contains two parts: the advertisement stimulus and the post-measuring questionnaire. The ad stimulus included an introduction, a consent waiver, a three-paragraph news story, and an ad. The news story was about the future of the former NBA player Yao Ming, which served to disguise the purpose of the study. The news story remained the same for the four groups in China and the US. The ads presented content selected from an article in the *National Geographic* magazine, discussing what climate change has brought and what it is going to bring. The ad was varied into four versions:

One-sided, closed-ended. This ad only presented information supporting the scientist and the *National Geographic* magazine's opinion of the existence of climate change and its severity.

The headline of the ad read: “Let’s Stop It!” the last paragraph of the ad says: “Let’s do something to stop more climate change from happening!” In the middle of the ad, two subtitles are “what’s happening” and “what is going to happen,” none of the statements left room for readers to draw their own conclusion.

One-sided, open-ended. In this version of ad, also only information supporting the existence of climate change was presented. However, the strong conclusions in the close-ended ad were removed. The headline was changed to “Should we do something?” and the last paragraph was changed to “Should we do something to stop more climate change from happening?” The two subtitles were also changed from statements into questions: “What’s happening?” and “What’s going to happen?”

Two-sided, closed-ended. This version of ad was similar to the one-sided close-ended ad except that at the beginning of the ad two clauses were added: “although hacked emails among climate change scientists reveal that some data supporting climate change (global warming) were manipulated,” and “although some people think of climate change (global warming) is a conspiracy.” The inclusion of this additional negative information made this ad two-sided.

Two-sided, open-ended. Two-sided open-ended ad is similar to the one-sided open-ended with the two clauses with negative information from the two-sided ad added to the beginning.

All students were given three minutes to read the news story and the ad. They then were asked to complete a 42-item survey. In addition to the demographic information, the questionnaire measured the following variables:

Post attitude. Post attitude refers to the respondents’ belief in the existence and severity of climate change. The index includes four questions ($\alpha = .88$), which were asking respondents if they think that climate change is a very urgent issue, a serious issue, and a very important issue facing the world and if they agree that climate change is simply a hoax (reverse coded).

Post behavioral intention. Post behavioral intention refers to the respondents’ intention to do things on her/his own in society to improve the situation of climate change. Post behavioral intention is measured with an index which consists of seven questions ($\alpha = .86$). Those questions ask respondents if they plan to participate in events, donate, join organizations or if they will talk to people, reduce personal energy usage, pay higher tax, or vote for an appropriate candidate to support solving the climate change issue.

The questions that measure the post attitude and the post behavioral intention were adapted from previous studies (Gastil & Xenos, 2010).

The final six questions of the survey were manipulation checks to insure that the experimental stimulus used for the broader study were perceived by the respondents as were intended. Since this study did not involve an experiment, these questions were not used in this study.

RESULTS

In regard to gender, H_{1a} predicted that U.S. females will perceive climate change as a more severe problem than will males. There were 94 female and 62 male respondents. The mean for females was 10.88 with a standard deviation of 3.80. The mean for males was 10.95 with a 4.11 standard deviation. Given the almost identical averages, results of the t -test ($t = .105$, $df = 123.44$)

were not significant. Thus, H_{1a} was not supported. H_{1b} predicted that U.S. females will indicate a stronger intention to take personal action to stop climate change than will males. The mean for the female respondents was 24.06 with a standard deviation of 5.23. The mean for the male respondents was 24.90, with a 5.52 standard deviation. Again, given the almost identical averages, results of the t -test ($t = .949$, $df = 125.72$) were not significant. Thus, H_{1b} was not supported.

For the Chinese sample, H_{2a} predicted that there will be a difference in the perception of Chinese females and Chinese males in the seriousness of climate change as a problem. There were 112 female and 49 male respondents. The mean for females was 6.43 with a standard deviation of 2.51. The mean for males was 9.32 with a 3.36 standard deviation. Results of the t -test ($t = 5.333$, $df = 72.391$, $p = .001$) were significant. Thus, H_{2a} was supported. H_{2b} predicted that there will be a difference in the intention of Chinese females and Chinese males to take personal action to stop climate change. The mean for females was 16.84 with a standard deviation of 3.59. The mean for males was 18.02 with a 3.36 standard deviation. Results of the t -test ($t = 1.607$, $df = 75.615$, $p = .112$) were marginally significant.

In regard to political ideology, for both the Chinese and U.S. samples, the vast majority of respondents described themselves as “neutral” on the liberal-conservative item. That choice, coupled with the fact that so few described themselves as either “very liberal” or “very conservative,” lead to the categories being collapsed so that “very liberal” and “liberal” were treated as the category on one end of the spectrum while “very conservative” and “conservative” served as the other end of the political spectrum (Kim & Kim, 2010).

For the U.S. sample, H_{3a} predicted that U.S. liberals will perceive climate change as a more severe problem than will conservatives. There were 45 conservatives and 33 liberal respondents. The mean for liberals was 10.39 with a standard deviation of 3.45. The mean for conservatives was 12.77 with a 4.53 standard deviation. Results of the t -test ($t = -2.636$, $df = 75.863$, $p = .01$) were significant. Thus, H_{3a} was supported. H_{3b} predicted that U.S. liberals will indicate a stronger intention to take personal action to stop climate change than will conservatives. The mean for liberals was 23.96 with a 5.31 standard deviation. The mean for conservatives was 25.93, with a 5.43 standard deviation. Results of the t -test ($t = -1.597$, $df = 69.978$, $p = .115$) were marginally significant.

In the Chinese sample, H_{4a} predicted that Chinese liberals will perceive climate change as a more severe problem than will conservatives. There were 15 conservatives and 45 liberal respondents. The mean for liberals was 7.62 with a standard deviation of 3.14. The mean for conservatives was 6.33 with a 2.71 standard deviation. Results of the t -test ($t = 1.527$, $df = 27.595$, $p = .138$) were marginally significant. H_{4b} predicted that Chinese liberals will indicate a stronger intention to take personal action to stop climate change than will conservatives. The mean for liberals was 17.46 with a 3.82 standard deviation. The mean for conservatives was 15.87, with a 4.70 standard deviation. Results of the t -test ($t = 1.218$, $df = 22.456$) were not significant.

DISCUSSION

Contrary to expectations, neither H_{1a} nor H_{1b} was supported. In both cases, U.S. males reported very slightly, but not significantly, higher concern for the environment and intentions to take action than did U.S. females. These results are in stark contrast to the substantial body of

recent literature which has consistently shown that U.S. females are more concerned about the environment and are more likely to take actions to protect the environment than are U.S. males.

There are several possible explanations for these findings. First, these results may be a quirk of the sample, as most of the respondents were from a rural, agriculturally based area where climate is an important element. Most of the respondents live in an area which has been classified as being in exceptional drought (U.S. Drought Monitor, 2013) for the last several years. Since local weather patterns have been found to have a significant effect on people's beliefs about the evidence for global warming (Egan & Mullin, 2012), it is possible that these results may be an artifact of the local conditions. Second, these results may reflect an attitudinal shift, as males are "catching up" with females in their environmental views. There is some evidence that today's Millennials are splintering into a new generational cohort, as events since 2008 have shaped their lives differently than those who have preceded them (Debevec, Schewe, Madden, & Diamond (2013). Although they don't address climate change specifically, and note that "the Great Recession" is a major factor in such a splintering, Debevec, et al. do recognize that other recent events have had an impact on their views. Therefore it is plausible that changes in attitude may still be evolving.

In examining gender based views in China, a gender gap was found, as H_{2a} was supported while H_{2b} was marginally significant. Since the limited prior research had shown sex differences existed in China but was inconsistent as to which sex saw the problem as more serious and was more inclined to take action, the hypotheses were non-directional. The results of this study are consistent with those studies which found that males have both a greater awareness of the seriousness of the problem and hold a greater intention to take personal action to address the issue. The previous research which found that females had greater awareness and personal intentions was conducted in Hong Kong, while the studies which found males had a greater awareness and personal intention used data from across China. In this study, data was collected in Guangzhou, the 3rd largest city in China, thus the effect of a "metropolitan" sample is not an issue. These results support Shields & Zeng (2012) claim of a reverse gender gap, as Chinese men, not women, show a greater concern about environmental problems and the seriousness of the environmental degradation in China.

Regarding political ideology, the results of this study, despite the small sample size, are largely consistent with previous research as H_{3a} was supported, while H_{3b} was marginally significant. U.S. liberals did perceive climate change as a more severe problem than did conservatives, and U.S. liberals tended to indicate a stronger intention to take personal action to stop climate change than did conservatives. For the U.S. sample, these results add to the growing body of literature which indicates that political ideology is a major determinate of one's attitude toward climate change.

With the vast majority of Chinese sample indicating that they were neither liberal nor conservative, labels not frequently used in China, the sample size was very small. Therefore it is not surprising that stronger results were not found. While the results did indicate that (H_{4a}) Chinese liberals did perceive climate change as a more severe problem than did conservatives, the results were only marginally significant. For H_{4b} , Chinese liberals did indicate a stronger intention to take personal action to stop climate change than did conservatives, however those results were

not significant. Since there is so little research regarding political ideology in China, this study serves as one of the early examinations of the effect of this issue on climate change attitudes.

Implications for International Business

This study has implications for a number of areas, including education, however, perhaps the most significant implications are in regard to international business, specifically in the areas of “green marketing” and “green advertising.” Kvaloy and Listhaug (2010) note that “public opinion plays an important role for how societies manage the consequences of global warming and attempt to eradicate its root causes. Public awareness is a first step toward support for public policies that will make an effort to solve the problem” (p.1). While one source of public awareness is a country’s educational system (Chan, 1998; Hamilton, 2010), perhaps a more important source is via “green advertising.”

Several studies have demonstrated that environmental attitudes are the most significant predictor of green purchasing behavior (e.g. Chen, & Chai, 2010; Cherian, & Jolly, 2012); Haytko, & Matulich, 2008; Zhao, et al., 2013). Therefore, marketers should be aware of the importance of attitudes and environmental concern of consumers, as individuals with positive attitudes and a high level of environmental concern are more likely to engage in green purchasing behavior. In terms of product promotion, as with any advertising effort, ads which target the consumer will be more effective (Belch & Belch, 2009). In extrapolating the results of this study, in the U.S., liberals are more likely to be influenced by “green” advertising than are conservatives. So, for example, “green” ads which appear in more liberal oriented media (e.g. *Mother Jones* magazine) will be more likely to reach the target audience than ads in more conservative media (e.g. *The Wall Street Journal*). In China, currently, the liberal-conservative dimension appears to be largely irrelevant, as so few individuals think of themselves in these terms. Thus, until more research on this dimension is conducted in China, “green” advertising which focuses on this dimension is likely to meet with uncertain (or unproductive) results.

The results of this study indicate that, in the U.S., product promotion which focuses on appeals to male audiences (e.g. a “green ad” in *Sports Illustrated*) will be no more effective than a “green ad” which appeals to a female audience (e.g. *Vogue*). Given the “no difference” finding of this study, marketers, therefore, might be well advised to promote “green” products in more gender neutral media (e.g. *Time*, or *USA Today*). Product promoters in China, however, would be well advised to advertise in media which appeal to males (e.g. *Caijing*, the leading Chinese magazine covering Chinese politics, finance and economics), since they are more concerned with environmental issues than are Chinese females.

This study, like all studies, has its limitations. An obvious limitation is the sample size. While the sample size is respectable, it is certainly not adequate for generalizing to all of the U.S., much less China. Second, rather than trying to apply the Western concept of “liberal” and “conservative” to China, using a concept (or terminology) more compatible to their political system might have produced additional data rather than the overwhelming “neutral” response. Future studies should take these elements into consideration.

In sum, this study has examined two of the important individual variables in regard to the public’s attitude toward climate change: gender and political ideology. The results, consistent

with previous research, indicate that in the U.S, liberals are both more likely to agree with the existence of climate change and indicate a personal intention to do something about it than are conservatives. However, in contrast to previous research, this study failed to find a sex difference in environmental attitudes. In China, the results indicate that, in contrast to research in other countries, males are more likely to agree with the existence of climate change and indicate a personal intention to do something about it than are females. Ideological differences along the liberal-conservative dimension were not evident in the Chinese sample. These findings have important potential implications in the area of “green” marketing and “green” advertising.

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IFRS COMPLIANCE AND AUDIT QUALITY IN DEVELOPING COUNTRIES: THE CASE OF INCOME TAX ACCOUNTING IN EGYPT

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ABSTRACT

This paper examines compliance and enforcement of the International Financial Reporting Standards (IFRS) in developing countries and the effect of independent audit quality as a monitoring mechanism for compliance with IFRS recognition and disclosure requirements. Using a sample of listed companies in the Egyptian Stock Exchange in 2007, we examine their compliance with recognition and disclosure requirements for income tax accounting after Egypt's full adoption of IFRS in 2006. Results show evidence of noncompliance with the IFRS requirements for income tax accounting, and that compliance with recognition and disclosure requirements is significantly related to being audited by an audit firm with international affiliation. These results validate concerns regarding the reliability and comparability of accounting information produced in different jurisdictions that proclaim to adopt IFRS. Enforcement and compliance with IFRS requirements is a function of cross-country regulatory, economic, and cultural differences.

INTRODUCTION

The conventional wisdom in accounting literature is that the adoption and application of IFRS in developing countries will improve the quality of financial statement information in these countries, including its reliability and comparability (Ballas et al, 2010). However, it is also argued that no matter how high the quality of the accounting standards adopted, comparable and high quality accounting information will not be achieved without strict enforcement of these standards (Whitehouse, 2012). Although some countries may claim that they officially adopted IFRS and required companies to prepare financial statements accordingly, some companies may selectively implement IFRS recognition and disclosure requirements. Even with increasing IFRS adoption around the world, significant differences in financial reporting systems will remain due to regulatory, political, and institutional differences across countries, leading to imbalance in IFRS compliance between different jurisdictions (Soderstorm and Sun, 2007). Such imbalance hampers the main goal of developing a global set of accounting standards such that accounting information is comparable across countries.

The concern about compliance with IFRS requirements is especially emphasized with regard to its application in developing markets that might have inadequate financial reporting environment and inefficient monitoring and enforcement mechanisms. The adoption of IFRS in developing markets always has its own shortfalls, application difficulties, and enforcement issues (Alp and Ustundag, 2009) that might cast doubts on the expected benefits of global harmonization of accounting standards. For example, Chen and Zhang (2010) provided empirical evidence from the Chinese market that the mere adoption of IFRS does not necessarily lead to the intended high-

quality and comparable financial accounting information due to enforcement issues and lack of full compliance. As indicated by Nobes and Zeff (2008), many countries that proclaim to adopt IFRS are in reality following some national version of IFRS instead of the standards as enacted by IASB. Such inconsistency in the application and compliance with IFRS across different countries is always cited among the reasons why the SEC in the United States is reluctant to adopt IFRS for its registrants (SEC, 2012). As it was recently pointed out by the FASB Chairman “I would seriously question the cost-benefit of switching our country to a standard that we know is not applied consistently around the world” (Whitehouse, 2012). Therefore, it is necessary for accounting research to examine both the level of compliance with IFRS disclosure requirements and the different determinants of such compliance in different countries that proclaim to adopt and apply IFRS, especially in major emerging economies such as Egypt.

This study focuses on Egypt as a major developing economy in the Middle East and North Africa (MENA) region that adopted IFRS. In addition to the significance of the Egyptian economy and population in its part of the world, Egypt has been used as a good representative of the developing countries in studies conducted on different parts of the world including the Arab world (Harabi, 2007), African countries (Nganga et al 2003), and the MENA region (Saidi, 2004). Egypt also represents an area of the world that is traditionally less examined in the international accounting literature. The study focuses on the effect of the independent audit process on compliance with recognition and disclosure requirements of IAS 12 by Egyptian public companies. Income tax accounting may offer the best context in which to examine how local professional development, regulatory, and financial reporting environments in developing countries can affect compliance with the requirements of IFRS. In addition to the complications and personal judgments involved in the income tax accounting topic, the application of income tax accounting is naturally influenced by the local tax code and the regulatory environment that enforces it.

Section 2 discusses prior literature on IFRS enforcement and compliance and provides some regulatory background and prior research on the Egyptian market, Section 3 presents the study sample and methodology, Section 4 shows the results, and Section 5 concludes the paper.

IFRS ENFORCEMENT AND COMPLIANCE AND THE REGULATORY BACKGROUND IN EGYPT

The influence of local characteristics of different countries on their financial reporting is well recognized in the accounting literature. Based on the original Hofstede (1980) study about formation and stabilization of different cultural norms, Gray (1988) argued that shared cultural norms within a country will influence the structure and application of that country’s accounting and reporting system. Gray (1988) defined four main values that influence the country’s accounting subculture: Professionalism, Uniformity, Conservatism, and Secrecy. Douppnik and Tsakumis (2004) argue that, even with the worldwide convergence of accounting standards, culture and local country-specific variables will remain as critical factors in determining how accountants in different countries interpret and apply those accounting rules.

Because of significant differences across countries, the current trend towards convergence into a global set of financial reporting standards will face some taunting challenges. As Pownall and Schipper (1999) argued, a major question of concern when a country considers adopting IFRS

will be how the application of the same international standards in different countries with different regimes of taxation, enforcement, auditing, financing, and ownership will affect the comparability, full disclosure, and transparency of accounting information reported by their companies. They cited the results of Frost and Pownall (1994) of noncompliance with accounting rules in both the U.S and the U.K to argue that similar rules may not necessarily produce the same accounting results, even in similar environments such as the U.S and the U.K, if the rules are not strictly enforced. Obviously, this will be even more pronounced in the case of materially dissimilar environments.

Both Cairns (1999) and Street and Gray (2001) have reported evidence that many of the companies that claim to adopt IFRS are not in full compliance with the recognition and disclosure requirements of these standards. In a theoretical framework, Bushman and Smith (2001) showed that the legal system of a country, especially the enforcement aspect of it, affects its financial reporting and accounting information. In their discussion of the effect of the current accounting convergence efforts worldwide, Meek and Thomas (2004) raised important questions such as how the taxation system in different countries will affect their accounting, what role culture plays in influencing the disclosure of financial accounting information, and how some specific nations – such as Islamic nations including Egypt- will fit in this new paradigm. Critics of the global harmonization effort of accounting standards argue that it may actually result in less comparable accounting information across countries (Sunder 1997; Ball 2001).

Results of prior empirical research support the notion that different countries may have different interpretation and application of the same set of accounting rules. For example, Jaggi and Low (2000) examined the effect of both the legal system and the cultural values as depicted in Hofstede (1980) on firms' disclosure policies. They show that the legal system has more significant influence on firms' disclosure policies than the cultural values. Using a larger sample that includes more countries than that used in Jaggi and Low (2000), Hope (2003) found evidence that both the legal system and the cultural values variables have a significant influence on firms' disclosure policies. Ball et al (2000) found evidence that the level of conservatism in measuring accounting earnings is a function of the prevailing legal system (common law vs. code law systems) in different countries.

The independent audit process is a critical monitoring and enforcement mechanism for the enacted financial reporting standards in any jurisdiction. For example, Wallace (1980) argued that the independent audit process adds reasonable assurance that the financial reporting process is consistent with enacted professional standards and that the financial information provided is free from significant misstatements. The monitoring mechanism exercised through the independent audit process is expected to be more efficient with the increase in the perceived quality of the audit services provided by independent auditors with recognized "brand names" in the audit industry (DeAngelo, 1981). Recent research that reemphasized the effect of audit quality on financial reporting and enforcement of accounting regulations include Francis and Yu (2009) and Lennox and Pittman (2010).

For the audit industry in emerging markets, it is feasible to argue that local auditing firms affiliated with big international auditing firms can perform high-quality audits, even in less developed professional environments, due to the international nature of these firms and the fact

that local offices and affiliates can draw on the expertise of their international networks (Francis and Wang 2008; Carson 2009). Therefore, Michas (2011) found evidence that audit quality and audit profession development in emerging markets are related to the affiliation of local auditors with international auditing firms, especially the Big 4.

In a theoretical framework, Choi et al (2004) show that independent audit quality serves as an enforcement mechanism that ensures the availability and credibility of accounting information in those countries where the legal environment is considered to be weak. Choi and Wong (2007) discussed two possible effects of a country's legal environment on the quality of the independent audit process. One possibility is that auditors play a stronger governance role in a weak legal environment by providing higher quality audits to substitute for the lack of governance resulting from weak legal environment. The other possibility is that weak legal environment may be associated with low quality audits as a result of unreliable disciplinary mechanisms to monitor auditors' behavior. In their empirical results, Choi and Wong (2007) found some support for the first argument. The empirical results of Fan and Wong (2005) suggest that the independent audit process plays a significant corporate governance role in a concentrated or family ownership environment.

Therefore, it seems as if the international affiliation of local audit firms in emerging economies is the proxy for the quality of the audit service provided by these firms. Since the external audit is the first and major monitoring and enforcement mechanism for different financial reporting requirements, it is crucial for international accounting research to examine its effectiveness in enforcing the reporting and disclosure requirements of IFRS as adopted by different countries, especially those in the developing world. Results of such research help to highlight the effectiveness of adopting one global set of accounting standards around the world in actually achieving the goal of worldwide financial reporting harmonization and comparative financial reports.

Prior Research on the Egyptian Market

Few studies have tested the level of compliance with accounting standards and its determinants in Egypt. One explanation for the lack of empirical research using data about Egyptian public companies is the difficulty of obtaining necessary data, since financial statement information for Egyptian public companies is not usually available in a format that is easily retrievable. Therefore, it needs to be manually collected and coded from companies' original annual reports. Dahawy et al (2002) proposed that secrecy is an integrated part of the Egyptian culture that limits financial statement disclosure. Dahawy et al (2002) argue that the low level of tax compliance and the negotiable (bargaining) nature of the Egyptian taxation system may be additional obstacles for compliance with recognition and disclosure requirements. Therefore, it is not surprising that two out of the three companies Dahawy et al (2002) used in their case analysis did not comply with recognition and disclosure requirements in their income tax accounting policy without providing any plausible explanation for their noncompliance.

One of the exceptions in this regard is Abd-Elsalam and Weetman (2003), who used a sample of 72 nonfinancial Egyptian listed companies to examine the effect of different factors, including independent audit quality, on different levels of disclosures in 1996; long before the

official translation of IAS into Arabic and its adoption in Egypt in 2006. Their study tested the determinants of compliance with three different levels of disclosure requirements: (a) those required by the Egyptian Companies Act effective at the time, (b) those required by the Egyptian Capital Market Law effective at the time, which included some of the IAS that were translated earlier into Arabic in 1992, and (c) those required by the IAS that might be applicable to the Egyptian environment at the time but were not translated into Arabic or adopted by any Egyptian authority. As expected, Abd-Elsalam and Weetman (2003) reported a low level of compliance with the unfamiliar IAS that were just translated into Arabic and even lower compliance with the more unfamiliar standards not translated or adopted in Egypt at that time. They also reported relatively higher levels of compliance when the company is audited by one of the big international auditing firms who are more acquainted with IAS and can cross the language barrier. Companies in Egypt, especially during this initial introduction of IAS, were unlikely to have adequate technical support in understanding and implementing IAS in its original English language unless they have independent auditors with some international affiliation.

In a related study, Elbannan (2011) tested the effect of the adoption of IAS-related accounting standards in Egypt in 2002 and 2006 on both earnings quality and firm performance and valuation. Elbannan (2011) attributed the insignificant results he reported to the lack of compliance by financial statement preparers and the inadequate regulatory enforcement mechanisms. Non-archival research on the Egyptian financial reporting environment reveals evidence of an expectation gap concerning the reliability and usefulness of the independent audit process and, therefore, the audited financial statements (Dixon et al, 2006). The audit profession in Egypt is not perceived by different constituents of the profession to have attained a sufficiently high professional status (Awadallah, 2006).

To date, no study has examined compliance with IFRS requirements in the Egyptian market since the official adoption of IFRS in Egypt in 2006. Compared with prior empirical research on the Egyptian market that examined companies' general disclosure level, this study focuses on the income tax accounting requirements as an example of accounting practice area that is more likely to be affected by unique regulations and other characteristics of local jurisdictions. As in the developed countries, developing countries such as Egypt will also have significant permanent and temporary differences between their taxation rules and regulations on one side and their adopted financial reporting system on the other side. Such differences are naturally expected to result in and require recognition of deferred tax assets and/or liabilities.

The IAS 12 and the Egyptian Accounting Standard (EAS)

Egyptian companies listed in the Egyptian Stock Exchange are required to submit audited annual financial statements to the Egyptian Financial Supervisory Authority (EFSA) within 90 days from the end of their fiscal year. The regulations also require listed companies to submit a quarterly report accompanied by limited review performed by independent auditor. Annual and quarterly financial statements should be prepared according to the Egyptian Accounting Standards (EAS) which are a translation of IFRS into Arabic. Egyptian stock market regulations require the EFSA to maintain a record of the auditors and auditing firms who are eligible to audit financial statements of public companies.

Although Egypt's early steps to adopt IAS go back to the 1990s, the official adoption did not actually happen until 2006. In 1997, an Executive Ministerial Order enacted 8 accounting standards to be used by some public companies, and later in 2002 another Executive Ministerial Order replaced those 8 standards by 23 selected IAS that were translated into Arabic. According to a recent UN report about international accounting and reporting issues (UNCTAD, 2010), the efforts of both 1997 and 2002 in Egypt were considered a harmonization effort between the EAS and the IAS more than an adoption and enforcement of the IAS. The translation and official adoption of IAS by the Egyptian government occurred in 2006 by enacting the translated 35 IAS as the official EAS and stating that the IAS should be referred to for any remaining issues not explicitly covered in the translated EAS. The translated and enacted EAS also include some of the IAS requirements that were waived from application in Egypt. These exceptions include some EPS requirements, revaluation of plant assets, capital lease accounting, and some of the requirements of bad debt provisions in banks and financial institutions.

The current IAS 12 requires an entity to recognize a deferred tax liability or asset for temporary differences, with some exceptions apply. Deferred tax assets arising from temporary differences are recognized when a reasonable expectation of realization exists. Deferred tax assets arising from tax losses are recognized when it is probable that taxable income will be available against which the deferred tax asset can be utilized. The standard requires companies to disclose a numerical reconciliation between tax expense (income) and the product of accounting income multiplied by the applicable tax rate(s), or a numerical reconciliation between the average effective tax rate and the applicable tax rate. In addition, the standard requires disclosure of the detailed amounts of deferred tax assets and liabilities and the amounts of deferred tax income or expense recognized in income with respect to each type of temporary difference. In Egypt, IAS 12 was fully translated into Arabic and became Egyptian Accounting Standard No. 24 (EAS 24).

The Egyptian Tax Code

Tax regulations in Egypt provide corporations with different types of income tax incentives, including tax holidays for corporations working in certain industrial zones, accelerated deductions for some items such as depreciation, and other tax deductions or treatments that create differences between the accounting basis and the tax basis for certain assets and liabilities. The current Egyptian income tax law (Law No. 91 issued in 2005) requires that net income be determined based on the income statement prepared in accordance with EAS, with the taxable income determined after applying the rules of the tax law to that net income. Table (1) provides examples of some articles in the Egyptian income tax code that should result in either permanent or temporary differences.

Although corporations file their tax returns annually, many years elapse before final assessments of the actual tax liability is determined. Corporations tend to appeal tax authorities' assessment of their tax liability resulting in an even longer waiting period. Therefore, a significant portion of Egyptian corporations may not necessarily recognize deferred tax expenses or benefits in their income statements or recognize deferred tax assets or liabilities in their balance sheets. Some corporations may justify such noncompliance by stating in their financial statement notes their belief that, due to the Egyptian tax regulations and the general economic and regulatory

environment, the requirements of the income tax accounting standard are simply not applicable to their situation.

Table (1)	
Egyptian Tax Code Articles that may Create Permanent or Temporary Differences	
Tax Code Requirement	Article No.
Permanent differences:	
Business contributions to qualified employees pension plans are deductible only to the maximum of 20% of total wages	23-5
Charitable contributions to qualified organizations are deductible up to 10% of taxable income	23-8
The following items are not deductible: <ul style="list-style-type: none"> - Fees or penalties for violation of the law - The income tax incurred - Interest expense exceeding double of the discount rate announced by the Central Bank - Interest paid to individuals exempted from tax 	24
Capital gains from investments in financial securities listed in the Egyptian Stock Exchange are exempted from tax (capital losses are not deductible with no carry forward or backward available)	50-8
Earnings and gains from investments in financial securities and certificates of deposit issued by the Central Bank are exempted	50-9
Dividends received by corporations in their investments in other corporations are exempted	50-10
Income of some farming, livestock, and fishing activities is exempted for the first 10 years of operations	50-12
The following are not deductible for tax purposes: <ul style="list-style-type: none"> - Interest on loans over 4 times of the average equity - All different provisions and reserves except those in banks and insurance companies - All compensation paid to board chairman and members for their membership in the board - Earnings-based bonuses distributed to employees 	52
Reevaluation gains/losses resulting from reorganization are not included in taxable income. Carried forward basis continue to be used for asset depreciation	53
Temporary differences:	
Taxable income of long term contracts are calculated based on the cost-basis percentage of completion method. Actual losses in the final contract year are used to amend earnings recognized in prior years and the taxpayer is entitled to receive a refund of taxes paid in prior years. Any remaining losses are carried forward.	21
Accelerated depreciation is allowed for tax purposes using rates up to 50% annually for computers and software assets.	25
Taxpayers are allowed 30% bonus depreciation in the first acquisition year for some assets	27
Tax deduction is allowed only for actual write off of bad debts (instead of allowances or provisions) only after taking all necessary measures to collect the debt and not before 18 months of its initial date	28
Net Operating Losses (NOLs) can be carried forward for up to 5 years.	29

RESEARCH SAMPLE AND METHODOLOGY

The study sample includes Egyptian companies listed in the Egyptian Exchange with financial statements that were available for the year 2007 either through the Egypt for Information

Dissemination (EGID) database or by directly contacting the Egyptian Financial Supervisory Authority (EFSA) to obtain copies of the financial statements. The year 2007 was chosen because it is the first fiscal year after the official adoption of IAS 12. The financial statements of sample companies were obtained as PDF files mostly in the Arabic language and their data had to be extracted and coded manually. Although the number of companies traded in the Egyptian Stock Exchange during 2007 was 337, financial statements for only 171 companies were available, including 30 banks and other financial institutions which were excluded from the sample due to their special financial reporting requirements. Out of the remaining 141 financial statements obtained, 23 of them did not have the necessary information to estimate some of the study variables. Therefore, the number of companies with data available to construct study variables was 118 companies from 14 different industry sectors used by the Egyptian Exchange. Because of the culture of secrecy that overshadows the circulation of business information in Egypt (see Dahawy et al, 2002), all prior empirical research based on Egyptian data used relatively small samples. For example, Elbannan (2011) used a sample of 141 firms, Ragab and Omran (2006) used a sample of 59 most active firms, and Abd-Elsalam and Weetman (2003) used a sample of 72 nonfinancial firms. Table (2) shows the sample companies' distribution between different industrial sectors along with the number and percentage of companies reporting deferred income tax in their income statements for the year 2007.

Industry Sector	Companies	Companies with Deferred Taxes in I/S	Percent
Basic Resources	13	5	38%
Chemicals	8	5	63%
Construction	17	8	47%
Food	13	8	62%
Healthcare	8	6	75%
Industrial	16	10	63%
Oil and Gas	1	0	0%
Personal Services	6	5	83%
Real Estate	17	11	65%
Retail	4	3	75%
Technology	1	1	100%
Telecommunications	3	3	100%
Travel	8	3	38%
Utilities	3	3	100%
Total	118	71	60%

Financial statements of the sample companies were investigated to analyze their recognition and disclosure of deferred income tax according to both the IAS 12 and its equivalent EAS 24. In addition to the general analysis of deferred income tax recognition and disclosure, the study also tests the effect of independent audit quality on both recognition of deferred tax and required disclosures in their financial statement notes. The income statement of each company was examined to see if the company has recognized deferred income tax expense (benefit) in addition

to the current income tax expense (benefit). The notes to financial statements were also examined to design a deferred income tax disclosure index for those sample companies that have already recognized deferred tax in their income statements. For companies that did not recognize any deferred tax in their income statements, their notes were also examined for any disclosed explanations or justifications for their non-recognition. Based on disclosure requirements of IAS 12, its equivalent EAS 24 in Egypt, and the general disclosure practice of public Egyptian companies, the disclosure notes of all the sample companies were screened for all disclosure items they reported pertaining to income tax accounting. The following disclosure items represent all the possible disclosure items reported by the sample companies and are, therefore, used to construct the disclosure index (DISC) used in the study which ranges between 0 and 5:

- Disclosure of the general policy of deferred income tax accounting as part of the accounting policies footnote. This disclosure note is usually the standard language mentioned in IAS 12. For a typical Egyptian corporation, it is usually the Arabic translation of this paragraph.

“Deferred tax is recognized for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax recognized is based on the expected manner of realization or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the balance sheet date. A deferred tax asset is recognized only to the extent that it is probable that future taxable profits will be available against which the asset can be utilized. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realized.”

- Disclosure of different types of temporary differences between accounting income and taxable income that result in deferred income tax as required by IAS 12,
- Disclosure of detailed amounts of deferred income tax from different types of temporary differences including changes from the beginning to the end of the fiscal year as required by IAS 12,
- Disclosure of the reconciliation between the average effective tax rate and the applicable tax rate as required by IAS 12,
- Disclosure of the tax position of the company as of the end of the fiscal year in terms of the company’s standing with tax authorities with regard to income and other different taxes including sales tax. This is a common disclosure practice by Egyptian companies in which the company discloses the years that are completely settled with tax authorities and the years that are still open because tax authorities did not process the tax return yet or because there is an ongoing procedural disagreement or court challenge between the company and authorities with regard to some particular year(s).

To construct the disclosure index variable (DISC), each one of the above disclosure items is assigned an equal weight resulting in a disclosure index that ranges from zero (none of the five items disclosed) to five (all five items disclosed). Therefore, the constructed disclosure index not only reflects the applicable disclosure requirements of both the IAS 12 and EAS 24, but also includes one local disclosure practice followed by many public Egyptian corporations.

This un-weighted scoring method is employed in the study as used by Abd-Elsalam and Weetman (2003), especially since Dunn and Mayhew (2004) report similar results using both weighted and un-weighted disclosure scores. Table (3) provides the number and percent of sample companies that included each of the five disclosure items in their notes.

Disclosure Type	Number	%
Standard language in the accounting policies note	57	80%
Types of temporary differences	43	61%
Detailed amount of deferred taxes and their changes	47	66%
Reconciliation between tax rates	18	25%
Disclosed the company's income tax position	66	93%

For companies that did not recognize any deferred income tax expense (benefit) in their income statements, their financial statement notes were also examined for any reported explanations of their noncompliance. Out of 47 companies that did not disclose any deferred tax in their income statements, only 14 of them provided some explanation of their noncompliance, with 33 companies providing no explanation in their notes. However, out of the 33 companies not complying with the IAS 12 requirements, 19 of them still provide the general statement about deferred taxes mentioned above as part of their accounting policies note without providing any explanation for their noncompliance with these requirements. Finally, 40 out of the 47 non-recognition companies still follow the common practice of disclosing their position with tax authorities. Table (4) provides the details of the non-recognition sample including the six different explanations provided by companies in their notes.

Disclosure Type	No.	%
Provided Standard language in the accounting policies note	19	40%
Provided the company's income tax position	40	85%
Provided no explanation for non-recognition	33	70%
Provided some explanation for non-recognition:	14	30%
Exempted from income tax	5*	
No deferred taxes this year	2	
Because of the nature of the taxation system in Egypt, deferred taxes are not significant or material	4*	
Because of the nature of the taxation system in Egypt, deferred taxes cannot be estimated	2	
Although the company is not exempted, it has no income tax liability	1	
Because of uncertainty regarding realization in the future	1	

*One company provided both explanations.

Because this study examines companies' compliance with income tax accounting requirements, a dichotomous variable (DTR) was used and coded 1 if the company recognized deferred income tax expense (benefit) in its income statement, and 0 otherwise. The main independent variable being tested is the audit quality. Prior research has used different proxies for audit quality including the size of the audit firm (DeAngelo 1981). Studies that empirically tested the effect of independent audit quality on accounting compliance in developing countries have either used the big (6, 5, or 4 depending on the time of the study) international audit firms as a proxy for audit quality (i.e., Abd-Elsalam and Weetman 2003, Glaum and Street 2003) or the big 4 plus two method that includes BDO and Grant Thornton (i.e., Dunn and Mayhew 2004, Hodgdon et al 2009). This study follows the brand-name approach for audit quality by using a dichotomous variable (AUDQ) that is coded 1 if the sample company is audited by a local Egyptian auditing firm (or at least one of the auditing firms when the company is audited by more than one) associated with an international foreign accounting firm (including the big four), and 0 otherwise. Brand name local accounting firms and their international affiliations are listed in table (5) (None of the audit reports of the study companies' financial statements indicated either Grant Thornton or BDO).

Local Firm	International Affiliation
Mansour & Co.	PWC
Hazem Hassan	KPMG
Hafez Ragheb Allied	E&Y
<u>Saleh, Barsoum, Abdel Aziz & Co</u>	Deloitte
Shawky & Co.	Mazars
Hegazey & Co.	Crowe Horwath International

To test the effect of audit quality on income tax accounting compliance, the study also controls for the potential effect of company's profitability, size, and industry effects. Since Singhvi and Desai (1971), accounting literature has reported evidence that a company's compliance with recognition and disclosure requirements is a function of size, profitability, and audit quality. For example, Glaum and Street (2003) controlled for size, profitability, and industry effects. Similarly, prior empirical research on determinants of accounting recognition and disclosure practices by Egyptian corporations has also controlled for the company's profitability, size, and industry effects (i.e. Hassan et al, 2009). To control for profitability effect, the study uses the variable (PROFIT) measured by net income divided by net sales. To control for the size effect, the study uses the variable (SIZE) measured by the natural logarithm of the company's net sales. Using net sales may be a better proxy for a company's size than using total assets since many of the Egyptian companies have slow and non-operating assets in their balance sheets including receivables, inventory, and fixed assets. All regression analysis in the study is estimated using a fixed effect model that includes dummy variables for each company's industry, which allows the constant term to change with each industry.

In addition to the Univariate analysis including non-parametric correlation coefficients and ANOVA, the study uses regression analysis to test the effects of audit quality on compliance with both deferred income tax recognition and disclosure requirements. The following two regression models were estimated for the study sample:

$$DTR = \alpha + \beta_1 AUDQ + \beta_2 PROFIT + \beta_3 SIZE + \varepsilon \quad (1)$$

$$DISC = \alpha + \beta_1 AUDQ + \beta_2 PROFIT + \beta_3 SIZE + \varepsilon \quad (2)$$

The model in equation (1) is estimated as a Logistic regression model to estimate and analyze the probability that a company will recognize deferred income taxes when it is audited by an audit firm with perceived high quality. Logistic regression is used to predict a categorical dependent variable on the basis of continuous and/or categorical independent variables.

As illustrated above, prior literature suggested that a high quality audit process is an effective monitoring mechanism that improves the general quality of financial reporting and compliance with accounting recognition and disclosure regulations (For a recent example, see Brian et al. 2012). In addition, prior empirical research on emerging markets has used the local auditor's international affiliation as a proxy for audit quality (Abd-Elsalam and Weetman 2003), and recent research provided evidence that the affiliation of a local accounting firm in an emerging market with one of the international accounting firms results in significant improvement in the quality of financial reporting for clients of the local firm (Wang et al. 2011). In light of these arguments, this study expects that companies audited by a local auditor with an international affiliation will be more likely to comply with recognition and disclosure requirements of income tax accounting. In equation (1), β_1 is the estimate of the probability that a company will recognize deferred taxes in its financial statements and, therefore, is expected to be positive and significantly different from zero.

The model in equation (2) tests the effect of audit quality on compliance with deferred income tax disclosure requirements. The study also expects that an international affiliation of the local auditor will increase company's compliance with disclosure requirements of income tax accounting. Therefore, β_1 in equation (2) is expected to be positive and significantly different from zero. The model in equation (2) is estimated using only the subsample of companies that have recognized deferred income tax in their income statements for the study year. Because the dependent variable DISC in equation (2) is an ordinal variable, the model in equation (2) is estimated using an Ordinal Logistic regression. Data sets with an ordinal dependent variable may not satisfy the strict statistical assumptions of traditional OLS regression, including normality of variables and linearity of relationships (Neter et. al. 1996 and Hair et. al. 1998) and, therefore, an Ordinal Logistic regression model may better reflect the statistical relationships between test variables. As mentioned above, the two models are estimated using dummy variables for different industries to control for any industry effect.

RESULTS

Table (6) shows the main descriptive statistics of the study variables. About 60% of the sample companies recognized deferred income tax in their income statements for 2007. Almost half of companies were audited by a firm with an international affiliation. The SIZE variable indicates that companies at different sizes are represented in the sample.

	Mean	Median	SD	Minimum	Maximum
DTR	.60	1	.492	0	1
AUDQ	.50	.50	.50	0	1
DISC	3	4	1	1	5
PROFIT	-.0573	.1038	2.208	-23.14	1.13
SIZE	19	19.07	2.087	10.31	24.02

DTR: A dummy variable that takes 1 if the company recognized deferred tax in its income statement and 0 otherwise,
 AUDQ: A dummy variable that takes 1 if the company is audited by an audit firm with international affiliation and 0 otherwise,

DISC: Equally-weighted score for income tax disclosure requirements,

PROFIT: A profitability variable measured by net income divided by net sales,

SIZE: The natural logarithm of net sales.

The non-parametric correlation coefficients between the two dependent variables (DTR and DISC) and the audit quality proxy variable are shown in Table (7). The two correlation coefficients are both positive and significantly different from zero at less than the 1% level. The correlation coefficient between the variables DTR and AUDQ is .26 and is significant at less than the 1% level. This result confirms our expectation that a high-quality independent audit is an effective enforcement and monitoring mechanism for IFRS compliance in Egypt. In addition to compliance with deferred income tax recognition requirements, the correlation coefficients show that recognition companies are more likely to comply with the main disclosure requirements for income tax accounting when they are audited by a firm with an international affiliation. The correlation coefficient between the variables DISC and AUDQ is .395 and it is also significant at less than the 1% level. The correlation coefficients reported in Table (7) indicate no multicollinearity problem between the independent variables AUDQ and PROFIT or the variables PROFIT and SIZE, since their correlation coefficients are not significantly different from zero. However, table (7) indicates a significant positive correlation coefficient between AUDQ and SIZE, which is consistent with the well-established result in prior literature that big companies tend to engage big audit firms as independent auditors. Although such multicollinearity between AUDQ and SIZE may affect the reliability of the statistical significance tests of the coefficients of these two variables in the following regression analysis, any bias in the significance tests of the regression coefficients will be against the study expectations rather than falsely supporting them. As multicollinearity inflates the standard error of the coefficient, it will tend to reduce the test statistic and increase the probability of not rejecting the null hypothesis of no relationship between AUDQ and DTR or DISC. (Results of one-way ANOVA for the variables DTR and DISC based on the factor AUDQ also confirms the study expectations. For DTR variable, the F-value was

8.387 and was significant at less than the 1% level, and for DISC variable the F-value was 17.180 and was also significant at less than 1%.)

	Number	AUDQ		PROFIT		SIZE	
		Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
DTR	118	.260**	.002	.109	.120	.276**	.001
DISC	71	.395**	.000	.141	.056	-.0125	.081
AUDQ	118			-.021	.393	.271**	.000
PROFIT	118					.055	.187

** Significant at < 1% level

* Significant at < 5% level

Variable definitions in Table (6)

Results of the Logistic regression estimate of equation (1) are shown in Table (8). After controlling for company size, profitability, and any specific industry effects, the results show that the model in equation (1) is a reasonable representation of a company's decision to recognize deferred income tax. The Logistic Regression model correctly predicts the company's decision about 83% of the time. The regression coefficient of the AUDQ variable is positive and significantly different from zero at a 2% level. The AUDQ variable coefficient indicates a very strong 99 percent probability that companies audited by a local firm with an international affiliation will recognize deferred income taxes in their income statements. Although the coefficients of both the profitability and the size variables are positive, neither is statistically significant at the normal levels.

Variable	Coefficient	Wald Statistic	P-value
Constant	-3.444	2.502	.114
AUDQ	.993*	5.403	.020
PROFIT	.971	1.982	.159
SIZE	.172	2.173	.140
N	118		
Chi-Square	15.743**		.001
R-Square	.17		
Percentage Correct	.83		

** Significant at < 1% level

* Significant at < 5% level

Variable definitions in Table (6)

Table (9) presents the results of the Ordinal Logistic Regression estimation of equation (2) for only the companies that recognized deferred income tax in their income statements. The Chi-Square value (20.597) of the model indicates that it is a good fit of the relation between

independent audit quality and compliance with deferred income tax requirements. The coefficient of the AUDQ variable is positive and significant at less than the 1% level, confirming our expectation that compliance with disclosure requirements of deferred income tax accounting is greater for companies audited by local firms with an international affiliation. The table also shows a negative relationship between the level of disclosure index (DISC) and company size that is not significant at the 5% level.

Table (9)			
Ordinal Logistic Regression Estimates for Equation (2)			
$DISC = \alpha + \beta_1 AUDQ + \beta_2 PROFIT + \beta_3 SIZE + \varepsilon$			
Variable	Coefficient	T (or Wald) value	P-value
Panel B: Ordinal Logistic Regression:			
AUDQ	2.155**	17.022	.000
PROFIT	1.437	2.007	.157
SIZE	-.219	3.541	.060
N	71		
Chi-Square	20.597**		.000
Pseudo R-Square	.27		

** Significant at < 1% level

* Significant at < 5% level

Variable definitions in Table (6)

The study's results for the effect of independent audit quality on Egyptian companies' compliance with IFRS are not consistent with the results of Chen and Zhang (2010) from the Chinese market. They did not find any significant difference between international audit firms and their Chinese local counterparts in terms of Chinese companies' compliance with IFRS. However, our results confirm the results of most of the empirical research that used data from both developed and developing countries and reported evidence that compliance with IFRS recognition and disclosure requirements is a function of the quality of company's auditor and is positively and significantly related to being audited by one of the big auditing firms or by a local audit firm with an international affiliation (i.e., Abd-Elsalam and Weetman 2003, Glaum and Street 2003, and Hodgdon et al 2009).

CONCLUSION AND DISCUSSION

The study examined the effect of perceived audit quality on compliance with the requirements of adopted international accounting standards in Egypt as an example of a major emerging economy. Using the accounting for deferred income taxes standard, the study found evidence that companies audited by independent auditors with international affiliations are more likely to comply with the recognition and disclosure requirements of the adopted international accounting standards. The results of this study may be limited by using data from only the one year that followed the official adoption of IFRS in Egypt. However, by using Egypt as an example of a developing economy that adopted IFRS, the results of this study should be beneficial to highlight how different regulatory and financial reporting environment factors determine how

IFRS are applied in different countries. By examining those factors in general, and how they determine the application of one of the complicated accounting standards such as IAS 12 in particular, accounting regulators may be in a better position to analyze the effect of rules and requirements put forth in accounting standards on their applicability and enforcement in other developing countries.

Results of the first year of adoption in Egypt showed a low level of compliance with requirements of income tax accounting under IAS 12, especially for companies audited by a local auditing firm with no international affiliation. One explanation of this result is that the degree of regulation and development of the local auditing profession in Egypt is relatively inadequate to offer an effective enforcement mechanism of the enacted financial reporting system. This highlights the significance of developing and enforcing some international auditing standards that go along with the international standards as they are being adopted worldwide. Another explanation of the low compliance in Egypt could be the structure and enforcement mechanism of the taxation system, especially with the material time lag and delays in assessing companies' final tax liabilities. Such procedural delays in enforcing the taxation system may hinder companies' ability to comply with income tax accounting regulations.

Using Egypt as a case study in this paper may help international regulators to gain a better understanding of enforcement and compliance issues and the applicability of international accounting standards in this area of the world, which is traditionally less examined in international accounting research. Furthermore, the results of the study help to highlight the significance of applicable local professional regulations, enforcement mechanisms, and the educational and training requirements of local accountants and auditors for the successful adoption and application of IFRS in local economic environments. For example, local professional regulations pertinent to the certification process and qualifications of local public accountants and auditing firms will affect the quality of the audit process and the monitoring function provided by those auditors to their clients, including the assurance they provide that their clients have actually complied with recognition and disclosure requirements of the accounting standards enacted in the local market. In addition to the enforcement mechanism provided by the independent auditor, compliance with any enacted set of accounting standards is also a function of the effectiveness of the monitoring and review process conducted by capital market supervisory agencies equivalent to the EFSA in Egypt, which is charged with enforcing different capital market regulations including compliance with enacted accounting standards.

The goal of global harmonization of financial reporting cannot be achieved by only setting one global set of accounting standards that is simply adopted by different countries. Comparability of financial information resulting from the adoption and application of such unified set of standards will be severely undermined by the lack of adequate enforcement mechanisms, the ineffective regulations of the local public accounting and audit industries, financial reporting environments, and any insufficient educational and training requirements for local accountants and auditors. Further research could examine the effect of different corporate governance factors as additional monitoring mechanisms for managerial financial reporting decisions, including the level of compliance with enacted accounting standards. These corporate governance factors might include traditional ones like board and audit committee composition and independence, in addition to

ownership structure. It can also include any other factors that might be unique to the Egyptian market such as family or foreign ownership or representation in the board of directors.

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EXPLORING THE BENEFITS OF MNC INVESTMENT IN FOREIGN COUNTRIES DURING SIGNIFICANT POLITICAL ELECTIONS

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ABSTRACT

As foreign direct investment (FDI) by multinational corporations (MNC) has dispersed to desolate regions of the globe, the significance of acquiring idiosyncratic host-country information has increased. Embedding within and learning from the host-country institutional landscape has been shown to promote favorable outcomes related to FDI strategy. However, this process is generally viewed as slow and incremental. This discussion presents a novel and practical, process-based narrative strategy for acquiring information pertaining to host-country investment climates. Pre-entry (prior to formal project proposal) to foreign countries via short-duration immersion and data gathering in contexts mired with political contestation such as significant political elections is presented as the alternative.

KEYWORDS: Political Aspects of MNE entry; foreign entry; institutional theory; liabilities of foreignness; political risk; MNE host-country relation

INTRODUCTION

Political elections, and shifts in regimes they bring, call many images to mind, such as historic change, unrest, and promising a future. In the 2011-2012 year, local and national leadership within over 80 countries across the world will engage in political elections (IFES, 2011). As many of these countries are developing, and or hold significant fiscal as well as natural resource power, the potential economic impact from election outcomes will account for a significant portion of global GDP. While at times elections may seem very predictable, the image of a sure-shot candidate may quickly become unclear. Election outcomes are not purely the result of long-term or short-term political or economic factors, but a combination of them (Holbrook, 1991). On the one hand, long-standing divisions and belief systems are important, but equally so are short-term economic conditions, both of which may be determinative.

These elements not only paint a complex story germane to foreign direct investment (FDI) by multinational corporations (MNC) and entrepreneurs, but raise the significance of acquiring idiosyncratic host-country information, as their operations are dispersed among desolate regions of the globe (Javernick-Will & Scott, 2010). At times, MNCs and entrepreneurs operate in countries where in many instances they are distant from the nuances of institutions such as languages, customs, behaviors, beliefs, and politics (Zaheer, 2002). Unfamiliarity with a foreign institutional landscape during investment can manifest as significant uncertainties and liabilities

(Hymer, 1960; Zaheer, 1995, 2002) and or an advantages (Brannen, 2004; Edman, 2009) by giving rise to alienation, acceptance, and or ambivalence on behalf of the local milieu. For example, firm foreignness may be the reason for nationalistic driven violence and the lack or denial of opportunities such as constraints on travel, business practices, and trade relations. The effects of foreignness may present itself in the form of advantages such as favorable treatment and special privileges i.e. being offered gifts, tax breaks, and market access stemming from being perceived as unique, exotic, and or high status. Additionally, foreignness may produce an attitude and behavior of indifference resulting in confusion and or seemingly contradictory types of treatment from the interest group and political environment. All of which inextricably link the firm or entrepreneurial venture to the political environment in time and space (Abramowitz, 1988).

Considering the paradoxical effects of firm foreignness, institutional learning is crucial. As the landscape for FDI is defined by human constructed cognitive-cultural, normative, and regulative pillars that guide, constrain, and support social behavior (Scott, 2008). Regulative elements refer to formal rules and their enforcement including legal, political & economic arrangements—for example those formal laws, rules, and rights (North, 1990). Normative elements pertain to values and norms, the former being conceptions of what is preferred or desirable, the latter suggesting the correct manner of activity i.e. mores and protocols (Scott, 2008). Cognitive-cultural elements are shared beliefs and mutually developed mental models (Scott, 2008). Conditions of the institutional landscape that influence learning are important (Pfeffer & Salancik, 1978), equally so is the systematic series of actions directed at information gathering and consolidation. The latter makes possible increasing the ease of collection, distinction, potential utility, and efficacy of information.

Yet essentially, prescriptions for managers seeking to reduce or capitalize on firm foreignness usually revolve around surviving in host country environments, staying the course, or slowly acquiring human resources, divisions, as well as companies to internalize knowledge related to practices and skills (Barkema & Vermeulen, 2001). To the contrary, presented here is a process-based argument that will facilitate data gathering efforts related to unique host-country institutional characteristics that are important to MNCs and entrepreneurs—such as issue, practice, custom, and actor as well as power salience. In effort to address the call by many scholars for research that unpacks the relationship between politics and the firm (Dekkar & Hansen, 2004; Henisz & Zelner, 2003, 2005; Kobrin, 1976; Vaaler, 2008) as well as the relationship between embeddedness, learning, and entry strategy (Jones 1993; Luo & Mezias 2002; Melin, 1992;), highlighted in this document is the novel argument regarding election periods and institutional learning. Argued below is that institutional learning via pre-entry (prior to formal project proposal) immersion and data gathering in contexts mired with political contestation such as significant political elections will afford valuable idiosyncratic—direct and indirect— information otherwise more difficult to acquire during stable institutional environments.

This preliminary discussion is intended to contribute to extant literature on MNC entry strategy, entrepreneurial venture, investment in politically risky environments, as well as embeddedness and international knowledge-learning-capability based inquiries. Specifically addressed below, and called for other scholar to explore is as follows. First, what is the nature of the relationship between political contestation as well as political electoral periods to positively

informing an MNC intending to propose a project in a host country? What is special about an election year? What sort of tensions, cleavages and information surfaces? Second, how might information gathered during a significant political election period as opposed to a more stable institutional environment positively contribute to internal capabilities of an MNC? Third, in what ways does pre-entry information exposure and gathering affect MNC success (i.e. measured by decreased backlash, increased cooperation and acceptance of MNC entry and sustained strategy)?

THEORY

Dynamics of foreignness

Foreignness may manifest itself as a liability and or an advantage when venturing abroad. Host country political and or interest groups, in conjunction with the institutional context, MNC and shareholder interests', as well as the global political-economic system are a sample of the difficult to capture moving parts that influence MNC operations in foreign countries. These elements may give rise to alienation, acceptance, and or ambivalence on behalf of the local milieu. One reason why substantial difficulties may exist for foreign MNCs is because they can be distinctly different institutional environments (Meyer & Rowan, 1977; Rosenzweig & Singh, 1991; Westney, 1993). Conversely, as MNCs may positively and or negatively experience their foreign environments much differently than their local counterparts, foreignness should be conceived more so as a paradox (Edman, 2009). For example, a lack of local knowledge and distance from social, economic, and political institutions juxtapose a local company (Johanson & Vahlne 1977) may create hindrances in the flow of information related to language, culture, and or political institutions (Benito & Gripsrud, 1992; Johanson & Wiedersheim-Paul, 1975) or advantages in operations (Brannen, 2004; Edman, 2009). Hence, our understanding of the nature, form, as well as firm ability to learn and respond to the effects of foreignness have not abated (Zaheer & Mosakowski, 1997) and remain very much a black box (Eden & Miller, 2001; Luo & Mezias, 2002).

More so than their local counterparts, foreign MNCs must actively seek to learn about the political and interest group environment of countries in which they invest on individual, organizational, and institutional levels. The threat of governmental intervention as well as pent up social tension and nationalism may decrease asset value, rents, and interrupt operations in other manners (Henisz, 2003; Holburn, 2001). Whether these costs arise because the host country is instable, its residents and institutions demand particular needs (Zhao, 1994) such as those involving economic development and or political stability (Beamish, 1987; Meleka, 1985; Stover, 1985), those firms that have learned and internalized the static and dynamic ability to effectively scan their external environment will achieve competitive advantage (Aguilar, 1967; Costa, 1995; Prebel et al., 1989) and mitigate political uncertainty when integrated with decision making processes (Kobrin, 1979; Root, 1968) and put into action accordingly (Hofer, 1973; Porter, 1980). However, most MNCs do not adequately indulge in the above practices (Keegan, 1974).

Learning

Learning about a particular investment landscape is a necessary step in MNC foreign operations (Barkema & Vermeulen 1998; Bartlett & Ghoshal, 1989; Johanson & Vahlne, 1977; Inkpen & Beamish 1997; Uzzi, 1997). Learning in general may be segmented into different analytical themes (Kolb, 1984). However, each is completely dependent on the other in that micro and macro levels (including area in-between) are interconnected (Crossan et al., 1999; Kim, 1993). For example, macro-structural inclinations in organizational research suggest external learning proceeds incrementally by acquiring and creating organizational knowledge (Barkema et al., 1996; Chang & Rosenzweig, 2001; Guillen, 2003; Kogut, 1983) and generally stem from the learner being embedded in the particular context of inquiry (Dierkes et al., 2003). Accesses to knowledge and the capabilities for making use of it were argued to drive organizational learning (Powell, Koput, & Smith-Doerr, 1996) and new knowledge that fosters positive performance increases (Dibella, Nevis & Gould, 1996; Eriksson et al., 1997; Fiol & Lyles, 1985; Johanson & Vahlne, 1977). Accordingly, the nexus of actors in the firm environment have a significant role with regard to their positions in social, political, and economic trade (i.e. Ghoshal & Bartlett, 1990; Granovetter, 1985; Hafner-Burton, Kahler, & Montgomery, 2009; Knoke, 1990; Useem, 1982).

Similarly, micro-learning research focusing on learning more generally, has posited the process of learning through experience forms the foundation for effective forms of internalization, reflection, cognitive processes and implementation of lessons learned (Kolb, 1984). Learning experiences may occur at different levels i.e. direct and purposeful, on through to more symbolic types (Dale, 1946). The time frame may range from a brief moment of sagacity, to structural and or orchestrated experiential learning that may take years to complete (Joplin, 1981). This implies in order for MNCs intending investment in foreign countries to create robust prescriptions, adequate descriptions are necessary, and vice-versa. Furthermore, as proven by international business research, that the type of strategy is a function of host country institutions and firm experience.

In this vein, although existing research in international business has examined aspects of learning and FDI such as the investment mode chosen (Kogut & Singh, 1988), politics, power, place (Contu & Wilmott, 2003), and process facilitation (Delios, 2011; Sinkula, 1994). The systematic series of actions directed at host-country institution information gathering and consolidation have been relatively ignored. Only in passing was the benefit of short-term experiential learning discussed in international business literature. Rather, foreign direct investment (FDI) in relation to experiential learning is viewed as a slow incremental process, sped-up only by acquisition of human resources, divisions and or companies by affording internalization of knowledge related to practices and skills (Barkema & Vermeulen, 2001). Generally, the utility in short-term learning experiences has only been mentioned with regard to temporary transplant of employees to subsidiaries to promote knowledge spillovers (i.e. Branstetter, 2006).

Political elections

Political debate is ongoing, and commonly highly competitive, especially during election cycles. Some scholars have argued political election periods represent “exceptional events” researchers may capitalize on because they elucidate social, political, and economic structures that are of great importance and much more difficult, if not impossible to conceive during other periods (Cortell & Peterson, 1999; Keeler, 1993; Peltonen, 2001, p. 350, cited in Blee & Currier, 2006). Campaigns are usually characterized by heightened intensity related to greater salience manifested in information circulating in the environment (Bartels, 1996; Brady, Johnston, & Sides, 2006; Henderson, 2010; Holbrook, 1996, 2002; Popkin, 1994). Campaigning that occurs during election periods have been argued to “encompass not only the formal activities of candidates and parties, but also all of the news and personal discussions that happen over the course of the election year...forcing exposure to political information in a greater degree than in intervening years between elections (Henderson, 2010).”

Political election periods have been conceived as institutionalized drama, and as such afford insight to unique rituals, rules of values, and perceptions via election activity such as debates (Chaffee, 1978; Dekkar & Hansen, 2004; Drew & Weaver, 1991; Etheredge, 1981; Holbrook, 1999; Lemert, 1993); inequality and knowledge gaps (Holbrook, 2002; Rosenau, 1973; Combs, 1980; Edelman, 1964); as well as underlying emotions by way of political appeals (Lazarsfeld, Berelson, & Gaudet 1944; Kaid & Johnston 2001; Nelson & Boynton 1997). Conceived as crises, which are also ongoing events that can shock institutional structures (Boin & t’ Hart, 2003; Rosenthal, 1998) political election periods expose deep-rooted conflicts (Combs, 1980); present a time for stakeholders within, but also outside, governmental circles to exploit the situation by developing ‘discourse coalitions’ with like-minded groups and push agendas (Hajer, 1989; Kingdon, 1984; Rosenthal, ’t Hart & Kouzmin, 1991; Sieber, 1981) present opportunity for existing social movements to engage in the political process (Boudreau, 2002; Gamson & Meyer, 1996; Imig, 1998; Van Dyke, 2003); compel new movement formation (Meyer & Minkoff, 2004); and or shine light on the strength and presence of social movements (McAddam & Tarrow, 2010). Vicarious learning through experiences in international relations (Hermann, 1990; Khong, 1992) as well as political efforts during and after crises (Comfort, 1994) have been shown to aid understanding nuances pertaining to positive and negative outcomes.

This brings to light on how political discourse may facilitate learning via increasing consciousness, elucidating conflicting and complimentary positions, as well as tacit assumptions (Sabatier, 1987). Outside of election periods and campaigns, cues about the institutional landscape from political parties and interest groups pertaining to the disposition of particular actors (individual, group, organization) that have served as adequate sources of information are difficult to acquire (Campbell, et al., 1960; Berelson, Kuklinski, Metlay, & Kay, 1982; Lazarsfeld, & McPhee, 1954; McKelvey & Ordeshook, 1985). Heightened political attention often initiates an upsurge of information in the form of commission reports, judicial reviews, and investigative journalism (Van Duin, 1992). Explicit and implicit information such as tacit assumptions, values, and variegated opinions as well as explanations become public (Etheredge, 1981). Information that is untrue, imprecise, miscommunicated, and or misinterpreted, will generally be contested by

another actor—i.e. via presidential debates, newspaper publications, and outright protests (Deutsch, 1966; Dekkar & Hansen, 2004). This suggests a reduction in subsequent acquisition costs of FDI for MNCs, and affords the permeation of information into lower sophisticated information gathering strata juxtapose years between elections (Henderson, 2010). These lower data strata typically would be where foreign MNCs are likely to be during first contact for FDI due to being less embedded, attentive, and or resourced to sort and process local information.

PROPOSITIONS

Learning from elections

The following set of propositions concerns the affordability of political elections to inform MNCs of salient aspects pertaining to home country institutions landscapes. Positions from institutional theory, experiential learning theory, as well as findings in international business and political science ground the propositions below. First, embeddedness in a host-country can promote Pareto improvements (Barkema & Vermeulen 1998; Bartlett & Ghoshal, 1989; Uzzi, 1997; Inkpen & Beamish 1997; Johanson and Vahlne 1977); has been classified as structural, cognitive, political, and cultural (Zukin & DiMaggio, 1990); and is based upon trust, fine-grained information transfer (tacit, holistic, detailed), as well as joint problem-solving arrangements (Uzzi, 1997), hence difficult to obtain. MNC foreignness can manifest as hindrances (Hymer, 1960; Zaheer, 1995) and or advantages (Brannen, 2004; Edman, 2009) in becoming embedded (Mezias, 2002; Schmidt & Sofka, 2009). Second, experiential learning experiences may occur at different levels i.e. direct and purposeful, on through to more symbolic types (Dale, 1946) and generally stem from the learner being embedded in the particular context of inquiry (Keeton & Tate, 1978). Third, that a contentious political environment stemming from an election period provides grounds for information gathering and data collection that is otherwise more difficult to acquire outside of election periods (Henderson, 2010) via intense cultural, political, and economic activity as a consequence of the campaign process—i.e. via debates (Chaffee, 1978; Dekkar & Hansen, 2004; Drew & Weaver, 1991; Holbrook, 1999; Lemert, 1993); heightened intensity related to greater salience for parties of interest manifested in information circulating in the environment (Bartels, 1996; Brady et al. 2006; Etheredge, 1981; Henderson, 2010; Holbrook, 1996); and opportunities in the political process capitalized upon by social movements (Gamson & Meyer, 1996; Imig, 1998; McAddam & Tarrow, 2010; Meyer & Minkoff, 2004; Van Dyke, 2003).

MNC FDIs with long time horizons such as those related to infrastructure and economic development are in general extremely public and highly visible. Considering the intended and ideal length of investment and potential risks associated with such projects, MNCs with experience would be familiar with long term planning in a myriad of ways. In the absence of prior experience, suffice it to say a significant portion of planning for a venture occurs prior to formal proposal in a host country. However, risk analysis, war-room planning, financial modeling and other forms of mitigation reasoning fall short in plan efficacy, accuracy, and practical instruction. This is due to data utilized in pre-proposal planning being dependent on idiosyncratic information, which suggests the following:

Propositions—*An MNC that commences immersion and data gathering in a host-country during a significant political election prior to formally presenting interest in foreign direct investment will garner an increased level and quality of information pertaining to:*

a. the nexus of actors in the host-country institutional landscape, i.e. key/powerful actors, potential enemies, partners, and or coalitions (including their methods, practices, beliefs and customs).

b. salient institutional actors' relationships, problems, issues, and concerns.

DISCUSSION

The overarching position of this discussion is that a pre-entry data gathering immersion strategy via experiential learning in short-durations mired with political contestation such as significant political elections will afford MNCs with idiosyncratic direct and indirect information necessary for FDI projects. Information gathered by learning from, tapping into and or embedding within the host-country fabric during political election periods is essential for the formulation of plans, conceiving and mitigating political and interest group risks, as well as identifying opportunities. Such information is of prime value to MNCs because they are simultaneously domestic and international, and operate in different countries with different institutional landscapes i.e. cultures, competitive dynamics, economies, and politics. However, scholarly and or corporate inclinations regarding MNC roles in relation to political and interest group risks are more passive than active.

A common theme of literature expounded in international business and management more generally regarding political and interest group risks and FDI advocates survival i.e. lasting the long haul, and or creating conditions that minimize the need for learning local nuances, i.e. via outsourcing. Alternatively, locals may be hired, generic reports and public information sources may be employed to inform firm decision-making i.e. stock and trend reports. These methods are at time effective in aiding the production of favorable firm conditions. However, such strategies in global economy are not sustainable because cooperation with host-country stakeholders of MNC investment are directly related to the economics of FDI.

In effort to address these issues, managers and researchers should entertain the efficacy of intense short-duration data gathering and immersion periods created by politically contentious environments resulting from events such as significant political elections. This would afford MNCs benefits from heightened information intensity related to greater salience for parties of interest manifested in information circulating in the environment (Bartels, 1996; Etheredge, 1981; Henderson, 2010; Holbrook, 1996) and cues about the social and political environment from political parties and interest groups that would usually be difficult to acquire outside of an election (Berelson, Lazarsfeld, & McPhee, 1954; Campbell, et al., 1960; Kuklinski, Metlay, & Kay, 1982; McKelvey & Ordeshook, 1985).

Drawing on research in political science, tracking and securing relevant information during political elections is operational. For example, an individual and or team of managers may be ideal for the pre-investment strategy proposed here to prevent a potential project from becoming public.

This is due to the nature of contact with groups in the host-country, and the significant role timing plays in influencing positive benefits of reaching out (Pettigrew, 1990). Similarly related to discerning just what is learned from the experience proposed in this discussion is the notion that increased understanding and sophistication of thought may identify learning pertaining to a particular political aspects host country's institutional landscape (Etheredge 1981). Additionally, 'learning how' to operate in the complexities of geo-political discourse (Breslauer & Tetlock, 1991) in a foreign country may be evident in the forms of rules, tools and resources garnered to increase the probability of positive outcomes (Onuf, 1989). Lastly, outcomes from data gathered during election periods may be juxtaposed stable and or traditional information gathering to elucidate aspects such as those related to acquiring favorable FDI conditions. Even in a trial and error fashion where one may negate mistakes on behalf of the firm from misinterpreting information during a host country political election, insight of host-country dynamics and subsequently facilitation of framing abilities as well as conceiving preferences may be afforded.

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EXPLORING SOCCER FANS' CONSUMER MOTIVES IN FOUR EASTERN EUROPEAN COUNTRIES

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ABSTRACT

The current research took place in four countries representing Eastern Europe where the economics of these societies are characterized as in transition to market-driven economies after the fall of communism. The purposes of the present study were to: 1) investigate sport consumer motives to attend, or watch soccer games across the cultures in four Eastern European countries—Hungary, Moldova, Poland and Romania and, 2) add to the existing sport fans' motivations literature. This study is in response to suggestions by earlier researchers that future research should explore sport fans' motives across different cultures. Study findings suggest entertainment and socializing appeared to be important motives guiding sport fans in this study. Also, that among spectators in Eastern Europe younger fans tended to be more socially interactive while watching or attending soccer matches. However, weaker than expected reliability results suggest that the spectator motivation scale used in the present study, derived from the SII and MSSC that were developed among Western-oriented societies, failed to adequately identify sport fans' motives in Eastern Europe.

Keywords: sport consumption, spectator motives, football in Eastern Europe

INTRODUCTION

From the earliest civilizations to the present day, the candle-flame of sport has drawn spectators to watch players skilled at competitive contests (Sloan, 1989). Over the past 25 years, researchers and sport marketers have investigated and shown increasing interest in the factors that motivate spectators to watch or attend sporting events. During this same period, the marketing emphasis on sporting events has shifted from national levels to a global perspective. An estimated 2.2 billion fans attended or watched as clubs from 32 countries, representing 6 football confederations, participated in the 2010 FIFA World Cup Tournament hosted by South Africa (Federation de Internationale Football Association, 2012). Acknowledging this trend, more than

10 years ago researchers began investigating spectator sport in different countries (e.g. Kwon & Trail, 2001; Fink, Trail & Anderson, 2002; Funk, Mahony & Ridinger, 2002; James & Ross, 2004; Hall & O'Mahony, 2006; Won & Kitamura, 2007; Correia & Estevez, 2007; Wann, Grieve, Zapalac & Pease, 2008; Funk, Filo, Beaton & Pritchard, 2009; et al.). From this research perspective, and those of other researchers, it is known that sport markets vary in different countries due to economic conditions, cultures, and customs. Further, Won and Kitamura (2007, p. 95) suggest "More inter-cultural or cross-national research examining the differences in spectator motives is needed to identify how spectator motives differ by culture or location and to refine existing motivation theories." In order to address the need for continuing research on spectators' consumer motives in different countries and cultures, the authors conducted the current study in four Eastern European countries.

Like many countries of Eastern Europe, the economies of Hungary, Poland, Romania and Moldavia are characterized as in various stages of *transition*, as each country continues to progress from former state-run to present day market-driven economies. At the same time, admission into the European Union has introduced another transformation for the countries of Hungary, Poland, and Romania as each seeks to create economic partners with Eastern Europe countries, and others further abroad. In the field of sport, soccer dominates the competitive landscape in Eastern Europe, from intramural sport activities to semi-pro sport clubs up to professional leagues. As the economies of Hungary, Poland, Romania and Moldova progress, it is important for sport clubs and sporting event marketers to understand the motivations of spectators in these countries.

The main objective of this study was to contribute to the spectator motivation literature by examining sport consumer motives of soccer spectators in Eastern Europe. To meet the primary objective, items from existing sports consumer motivation scales were evaluated, and adapted to a survey instrument for use in each of the four countries.

SOCCER IN HUNGARY, MOLDOVA, POLAND, AND ROMANIA

Development of the sport

For most of Eastern Europe, soccer has been historically the dominant sport in terms of number of events, media presence, and attendance (Golaszewski, 2003; IRES, 2009; Kennedy, 2011). In Hungary and Poland, soccer has a very rich and diverse history as the first football divisions for sporting clubs were organized more than a hundred years ago. This happened in the 1890s and culminated in the formation of the Hungarian and Polish Football Associations in 1901 and 1906, respectively. Hungary became a member of Federation Internationale de Football Associations (FIFA) 1907, and Poland and Romania respectively in 1923 and 1930. In 1990, national soccer teams were established in the Republic of Moldova, one year before the country separated from the Union of Soviet Socialist Republics (USSR) (Football Federation of Moldova, 2011). The Football Association of Moldova became a FIFA member in 1994 (Federation de Internationale Football Association, 2012). The structure of national teams, the professional and semi-professional leagues soccer in Hungary, Poland, Romania, and Moldova follows a similar development format with slight variations in inter-league management. Using Romania as an

example, there are generally two main levels of competition: 1) Romanian (country) Championship, and 2) Romanian (country) Cup. These two competitive soccer levels are typical in almost all European countries. Both levels of competition begin in mid-August (the end of the International Cup championships) and end in mid-May, with a two-month (mid-December through mid-February) winter break. Within the national championship, teams vie for rank in a group-type of competition (each team plays two matches with all other teams). Romanian (country) Cup teams meet in a play-off type of competition. Besides internal competition, there are two levels of competition at the European (international) level that involve the best teams from each country. These two levels of competition are UEFA (Union of European Football Associations) Champions League and UEFA Europa League. Both of these competitions are held between mid-May and mid-August, thus completing the year-long cycle of play. The champions league (NB-1) teams plus the regional leagues are organized and controlled by each country's football association which is fully affiliated by UEFA standards. UEFA currently ranks the Romania NB I league as the 18th best in Europe (based on their coefficient ranking system), Poland is ranked 21st and, Hungary and Moldavia are ranked 28th and 35th, respectively of 53 nations ranking (Union of European Football Associations, 2013).

In addition to national play, there are two larger international quadrennial competitions held two years apart, and played during the interval mid-May to mid-July—the UEFA Europe Cup and the Federation Internationale de Football Association (FIFA) World Cup competitions between best national teams—24 European teams and 32 Worldwide national teams, respectively. These final tournaments are preceded by an 18-month qualifications stage, with all the national (country) teams. Finally, the gap between mid-July and mid-August is filled with the UEFA Intertoto Cup, where club teams that ranked lower compete in an international competition. As a result, within yearly intervals, soccer spectators have a wide variety of matches to watch. The motivations for soccer spectators in Eastern Europe make it incumbent upon researchers and marketers to understand this type of consumer behavior.

Economic considerations

Since the Socialist era ended for many Eastern-bloc countries beginning in 1989, many of the football leagues in Eastern Europe have become more business-oriented, and some soccer clubs have begun to embrace corporate sponsorship to generate additional revenues. However, in much of Eastern Europe including Hungary, Poland, Romania and Moldova, the attendance at soccer matches is significantly lower and facilities are far less developed in comparison to Western European markets like England, Italy, Germany and Spain (Kassay, 2006). Also, within Eastern Europe the financing of sport, including football, has enjoyed strong historical links within the allocations of government budgeting. As a result, while the private commercial environment of soccer in much of Eastern Europe is developing, soccer has historically been characterized by a high political influence. Further, where commercialization of soccer has developed, the degrees of development vary widely even among Hungary, Poland, Romania, and Moldova because sponsorship markets are relatively new, unexplored areas. According to a recent study (Berkes, 2008), the main challenge of sport sponsorship rests between the conflict of profitable operations and social expectations. In the broader economic sense, and because there is a large interest in

football, the study of this field can contribute to the development of more competitive spectator motivation and sponsorship models. A testament to the progress of soccer in Eastern Europe is that Poland and Ukraine hosted the 2012 European Cup Football Championship (UEFA) tournament.

LITERATURE REVIEW

Cultural differences and sport consumer motives

Researchers in a number of earlier studies have investigated the factors that motivate spectators to consume sports events (e.g. Tokuyama & Greenwell, 2011; Funk et al., 2009; Woo, Trail, Kwon & Anderson, 2009; Wann et al., 2008; Kim, Greenwell, Andrew, Lee & Mahony, 2008; Won & Kitamura, 2007; Correia & Esteves, 2007; Trail, Fink & Anderson, 2003; Mahony, Nakazawa, Funk, James & Gladden, 2002; Kahle, Kambara & Rose, 1996; Sloan, 1989; et al). In 2001, Trail and James, and Funk, Mahony, Nakazawa, and Hirakawa developed the Motivation Scale for Sport Consumption (MSSC) and Sport Interest Inventory (SII), respectively. Since then, the MSSC and SII scales have gained consensus among other researchers measuring spectators' motives, (e.g. Robinson & Trail, 2005; Ridinger & Funk, 2006; Funk, Ridinger & Moorman, 2004; Trail et al., 2003). Most of the research findings that have been published have come from researchers analyzing sport consumer motivations in Australia, Japan, Korea, Portugal, and the U.S., all countries with long-time, Westernized free-market economies.

Suggesting that sport fans' motives vary across different social contexts and cultures, Kwon and Trail (2001) compared international and American students' consumer motivations using a market segmentation approach. They found only minor differences in sport consumption motives where *drama* ranked highest for both groups, concluding there was little, if any, support for two separate marketing plans. In a 2002 Japanese league study, Mahony and co-authors found that *vicarious achievement* and *team attachment* were positively related to the length of time as a fan. In 2004, Armstrong and Paretto Stratta found that black spectators were more influenced than white spectators on seven of eight motives including *entertainment*, *social atmosphere*, *special promotions*, and *food & beverage ticket specials*. Further, Hong, McDonald, Yoon, and Fujimoto (2005) examined the motives of Japanese baseball fan's interest in Major League Baseball finding three significant spectator motives: *overall interest in baseball*, *player interest* and *game quality*. In a 2004 study researching the Women's Korean Basketball League (WKBL), Lough and Kim found *entertainment* the most salient socio-cultural motivation affecting Korean basketball spectators.

A 2007 study by Correia and Estevez of spectators in Portugal found that *team affiliation*, *pre-match atmosphere*, *entertainment*, and *socialization* were strong spectator motivations. While conducting a study of Japanese and Korean (football) leagues, Won and Kitamura (2007) determined that spectators from both countries were motivated mainly by three factors: *drama*, *vicarious achievement*, and *entertainment*. Among cultural differences, Won and Kitamura noted that in terms of *socialization*, Japanese fans were more likely to attend games alone or with family members, while Korean fans were more likely to socialize with a friend or date. Also, Won and Kitamura (2007) cited that of Kotler and Armstrong (2004) who stated that, "... international

researchers deal with differing markets in many different countries. These [sic] markets often vary greatly in their levels of economic development, cultures and customs, and buying patterns" (p. 166). This suggests that, since sport markets vary in different countries, more inter-cultural studies are needed to identify how sport fans' motives differ by culture or region to refine existing motivation theories. In the present study, the authors investigated sport motives of adult soccer fans in four Eastern European countries, furthering the research on spectator motives of different cultures. Moreover, the statement—"Understanding different spectator motivations can be of significant benefit to sport marketers looking to boost team revenues and gate receipts" is easily interpreted by sport marketers of any culture (Wann et al., 2008, p. 7).

METHODS

Instrument

The study was launched in Romania for convenience because one of the authors was there teaching Marketing on a Fulbright Fellowship at a large, urban university. Additionally, several of the authors had recently completed a study of Romanian college students' spectator motivations (Izzo, Munteanu, Langford, Ceobanu, Dumitru & Nichifor, 2011), where they observed general support for a 6-factor model. Based on the findings of this study, the authors decided to collect data from adult soccer fans, a group for which there would be greater interest by marketers. However, the authors were not able to locate any other studies on spectator motivations research in the four economies in Eastern Europe. Given the paucity of this type of research, the authors decided to use existing measures from two well-researched sport consumer motivation scales—Motivation Scale for Sports Consumption (MSSC; Trail & James, 2001); and Sport Interest Inventory (SII; Funk et al., 2001). The MSSC has shown good internal consistency in samples in earlier studies ($\beta = .72$ to $.93$; Robinson & Trail, 2005; Trail et al., 2003; Trail, Anderson & Fink, 2002; James & Ridinger, 2002). The Average Variance Extracted (AVE) values have also been good, ranging from $.51$ to $.82$ (Robinson & Trail, 2005; Trail et al., 2003; James & Ridinger, 2002).

Although the Sport Interest Inventory (SII) was developed and initially tested on consumers of women's sport, 14 of the 18 factors used in subsequent research have examined consumers of men's sports, or sports in general. In these studies, the SII has also shown good internal consistency ($\beta = .73$ to $.94$ and good AVE values ranging between $.67$ and $.72$; Ridinger & Funk, 2006; Funk et al., 2004; Funk et al., 2002; Mahony et al., 2002).

To benefit from earlier research on scale development of sport consumer motivations, the authors reviewed two recent studies on spectator motives that used similar procedures (Won & Kitamura, 2007; Kim et al., 2008). The scales used in these studies were derived from the MSSC and SII. The authors identified five sport consumer motives that have shown applicability over different sports in a wide range of settings: *aesthetics* (physical skill/ability), *drama* (the excitement of a close match), *escape* (from day-to-day routine/boredom), *social interaction*, and *vicarious achievement* (self-esteem) (James, Trail, Wann, Zhang & Funk, 2006). The motive *entertainment* was included because this factor was represented in approximately 50% of all studies reviewed, and showed significantly in the two recent studies of adult sport fans.

During the process of retrieving subscale items from the MSSC and SII scales, the *socialization* motive was altered slightly to include socialization while ‘watching’ the live telecast of a soccer match as well as socialization while ‘attending’ a live match, creating seven motives. This made the *socialization* motive seem more applicable to Eastern Europe, where many spectators prefer the quality of televised international and/or club matches, rather than travel long distances to live events. Because the scale items were taken from subscales that had demonstrated good internal consistency and convergent validity, and adequately represented the theorized constructs, the authors were confident in using them in the current study. Once the seven spectator motives (subscales) were derived, the scales were translated into the languages of the four countries comprising the study—Romania, Hungary, Poland and Moldova. The translation process was completed in three stages. In Stage 1, four groups of four people each were formed consisting of English-speaking Romanian college students, 12 from the School of Economics and Business, and 4 from the School of Physical Education and Sport Science. In Stage 2, after the four teams submitted their translations, faculty from both schools reviewed the work and made recommendations. In Stage 3, two discussion panels were conducted among members from the teams with faculty from both schools participating as discussants until a single translation of the scales was completed.

In Romania, Hungary, Poland, and Moldova, as probably in many other parts of the world, college students’ vocabularies are greater and filled with more new-use words than their parent’s generation. However, consistent with the goals of the research, the scales needed to be interpretable outside of academic settings where the population is older and uses more traditional language. In Stage 3, after the two panel discussions were completed, an English/Romanian language specialist from the School of Foreign Languages “word-smithed” the final translation to better assure historical word content and correct for language ambiguity. Finally, the language specialist re-translated the scale to English. The same procedures for developing scale items were followed in Hungary and Poland. The spoken language of Moldova, once a part of Romania, is Romanian and dialectically very similar.

The fully translated scale (see Appendix) consisted of 23 items (six subscales of three items and one subscale of five items) with a 5-point Likert-type response format ranging from strongly disagree (1) to strongly agree (5). After adding four demographic items: age, gender, education level, and job/work classification, the questionnaire was administered.

Sample and procedure

Survey questionnaires were collected from 982 adult soccer fans in four Eastern European countries: Romania, Hungary, Poland, and Moldova. Surveys were distributed during the pre-match event to attendees assembled at football clubs and sport bars to watch televised national and inter-league soccer games. After eliminating 187 responses for missing data, the sample size was reduced to 793 (response rate: 81%). Included in this sample were 669 male spectators (86.5%) and 123 female spectators (15.5%; see Table 1). All respondents were given adequate time to complete the questionnaires, were assured of anonymity, and later were debriefed on the nature of the study.

	n	Percentage of sample
Gender		
Male	669	84.4%
Female	123	15.5%
Missing	1	0.1%
Age		
15-24	233	29.4%
25-34	334	42.1%
35-44	155	19.5%
45-54	53	6.7%
55-64	18	2.3%
Country		
Romania	367	46.3%
Moldavia	133	16.8%
Hungary	151	19.0%
Poland	142	17.9%
Education		
Jr. high school	33	4.2%
High school	229	28.9%
Graduate	354	44.6%
Master's	170	21.4%
Missing	7	0.9%
Work		
Student	15	1.9%
Unemployed	10	1.3%
Worker	135	17.0%
Administrator	127	16.0%
Engineer	145	18.3%
Economist	101	12.7%
Management	183	23.1%
Other	77	9.7%

Descriptive statistics

Twenty-three items adapted from the Motivation Scale for Sport Consumption (MSSC; Trail & James, 2001) and Sport Interest Inventory (SII; Funk et al., 2001) were included in this study. The items represent seven subscales: *vicarious achievement* (VA), *escape* (ESC), *socialization while watching national team games* (SOC), *drama* (DRA), *physical skill* (PHS), *socialization while attending games* (SOA), and *entertainment* (ENT). The subscales have a history of acceptable internal consistency (e.g. Robinson & Trail, 2005; Trail et al., 2003; Trail & James, 2001; Ridinger & Funk, 2006; Funk et al., 2004; Funk et al., 2002). In the present study, however, the data concerning internal consistency was mixed. Using the full data set, Cronbach's alpha indicators of reliability were marginal overall (see Table 2). Only two scales, *escape* and *vicarious achievement*, had alphas greater than or equal to .70. The remaining scales had alphas of

.62 to .69. Given previous research showing acceptable reliability levels for these subscales, this may be an initial indication that Eastern Europeans approached the items in this scale differently than respondents in more Western-oriented and Asian samples.

	N	Reliability	Minimum	Maximum	Mean	Std. Deviation
Drama (DRA)	793	.66	1.00	5.00	4.10	0.75
Entertainment (ENT)	793	.63	1.00	5.00	3.92	0.68
Escape (ESC)	793	.70	1.00	5.00	3.86	0.86
Physical Skill (PHS)	793	.69	1.00	5.00	4.25	0.76
Socialization while Attending Games (SOA)	793	.63	1.00	5.00	3.69	0.76
Socialization while Watching Games (SOC)	793	.62	1.00	5.00	4.18	0.73
Vicarious Achievement (VA)	793	.85	1.00	5.00	4.36	0.84

Table 3 shows that the subscales were highly intercorrelated. Given that the subscales are part of a larger scale, correlations are expected. The high degree of correlation may explain why some items loaded with items from other subscales, or were cross-loaded on multiple factors. For example, in both factor analyses the first factor contains items from four different scales: *socializing while attending games*, *entertainment*, *drama*, and *escape*. Also, in both analyses some *socializing while attending games* and *socializing while watching games* items loaded together.

	DRA	ENT	ESC	PHS	SOA	SOC	VA
DRA	1						
ENT	.62**	1					
ESC	.56**	.64**	1				
PHS	.60**	.57**	.60**	1			
SOA	.51**	.59**	.53**	.42**	1		
SOC	.52**	.60**	.46**	.43**	.56**	1	
VA	.70**	.73**	.64**	.63**	.53**	.58**	1

**Correlation is significant at the .01 level

The authors regressed each of the subscales on the demographic variables: gender, age, education (see Table 4). There was one consistent result: gender was a significant predictor in the negative direction. The average ratings of men were higher than the average ratings of women on each subscale, indicating that men resonated more than women with the sport motives identified in the subscales. Education predicted only *socializing while attending games*. Soccer fans with less education seemed more motivated to socialize at sporting events than did sport fans with more education. As might be expected, age and education are significantly positively correlated ($r = .16$,

$p < .001$). Age was a significant predictor of *socializing while attending games* and *socializing while watching games*, such that younger fans rated socializing as being a more important aspect of their motivation than older fans. This may be an indicator of general interests that change as a function of family status or life stage. Individuals who are married or have families may be less interested in socializing at sporting events than unmarried individuals, as suggested by the family life cycle theory (Landon & Locander, 1979; Du & Kamakura, 2006). The implications here may indicate that marketers should focus on more socially attractive venues to attract younger, more socially interactive spectators.

Table 4
Regressions of Subscales on Demographics

	Drama	Entertainment	Escape	Physical Skill	Socializing while Attending Games	Socializing while Watching Games	Vicarious Achievement
Gender	-.18***	-.20***	-.20***	-.22***	-.09**	-.10**	-.18***
Age	.02	-.06	.01	.05	-.11**	-.16***	-.01
Education	.03	-.01	-.01	.01	-.12***	.00	.02
R	.18***	.20***	.20***	.23***	.19***	.18***	.18***
R ²	.03***	.04***	.04***	.05***	.04***	.03***	.03***
F ratio	9.10***	10.98***	11.02***	15.24***	9.92***	8.42***	8.96***

Note. $N = 793$. † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

^a Standardized regression weights.

ANALYSIS AND RESULTS

For the purposes of data analysis, the authors have chosen to perform factor analyses to better understand the properties of the scales and items in this particular study.

First factor analysis

In order to further understand how Eastern European subjects responded to the subscales adapted from MSSC and SII, an exploratory factor analysis was performed using the Principal Components technique with Varimax rotation. The analysis results reveal a factor structure that is similar, but not identical, to the structures proffered by the scale's authors. As shown in Table 5, the factor analysis had an eight-factor solution.

Factor 1 accounts for 20% of the total variance. Seven items loaded on this factor. These items were SOA18, ENT110, ESC213, DRA215, ENT220, SOA328, and ENT330, which are from a variety of different subscales. The subscales represented include two of the *socialization while attending games* items, three of the *entertainment* items (which is all of the *entertainment* items that aren't reverse-coded or awkwardly worded), one of the *escape* items, and one of the *drama* items. This factor suggests a link between the motives of entertainment and socializing.

Factor 2 is primarily composed of *vicarious achievement* items. One *drama* item, concerning being disappointed when one's team loses, also loaded on this factor. That *drama* subscale item has a particularly vicarious component, in that it involves fans' feelings being influenced by the outcome of games.

All of the *socialization while watching games* items loaded on Factor 3, along with one of the *socialization while attending games* items. These subscales are very similar, in that they both concern fans' enjoyment of the game being a result of opportunities to socialize with other fans. It is also possible that fans from Eastern Europe may not have noted the subtle difference in wording between while *watching* and while *attending* games and that is the reason these items loaded on the same factor.

The *escape* items loaded on Factor 4, as did one of the *physical skill* items concerning the gracefulness of players on the field. In this case, subjects may have associated the word "gracefulness" with fantasy or *escape* from the everyday.

The other two *physical skill* items loaded on Factor 5. The remaining two *drama* items loaded on Factor 6.

Items SOA433 (*socialization while attending games*) and ENT536 (*entertainment*) loaded on Factor 7. Given that these items from separate subscales loaded on the same factor, and that they loaded on a lower level factor which explains only 4.2% of the variance, more investigation was warranted. Researchers had *a priori* concerns about the wording of these items. Item SOA433 is worded as follows: "soccer games give me the opportunity to see players mixing with fans, such as when signing autographs." This item may represent Western values, in terms of a preference for professional athletes willing to talk with and give fans autographs, and other fan/player interactivity. In Eastern Europe, there is very little personal interaction between fans and players, except seeing players at events or press conferences, albeit distantly.

Item ENT 536 states, "I am more interested in watching individual players than the soccer team as a whole." It is not uncommon for Eastern European soccer fans to keep track of individual players as they play for different teams in a particular season, or over the course of their careers. However, it is difficult to ascertain what a high or low value on this item indicates in terms of the subscale *entertainment*. These insights might explain how these two factors emerged.

Only Item ENT434, the reverse-coded *entertainment* item, loaded on Factor 8. Since this is the only item in the analysis that is negatively worded, and this is the only factor with a single item loading on it, it may be that the negative wording is the cause for this item loading alone.

	1	2	3	4	5	6	7	8
SOA18	.66							
SOA328	.65							
ENT110	.57							
ENT330	.57							
ENT220	.49							
DRA215	.45							
ESC213	.43							
VA11		.73						

VA211			.66					
VA321			.59					
DRA325			.53					
SOC335				.71				
SOA218				.57				
SOC14				.55				
SOC224				.54				
PHS327					.69			
ESC13					.63			
ESC323					.54			
PHS217						.67		
PHS114						.49		
DRA15							.82	
DRA431							.67	
ENT536								.79
SOA433								.57
ENT434*								.69
Eigenvalues	4.99	1.70	1.40	1.36	1.17	1.13	1.05	1.01
Cumulative %	19.97	26.77	32.36	37.81	42.48	47.01	51.21	55.24

* Indicates that the item was reverse-coded.

Second factor analysis

Given the exploratory nature of this research, the fact that there were *a priori* concerns with the three items that loaded on Factors 7 and 8, and the fact that these concerns were borne out in the research, it is appropriate to re-analyze the data with three items excluded. These results are shown in Table 6. This analysis is an improvement over the first analysis because it does not force these items to fit with the others.

The results of the second factor analysis were similar to those of the first factor analysis, with a few key differences. First, the first factor contained the same items that it did in the previous analysis, except that item ENT220 did not load on the first factor. This time, ENT220 loaded on Factor 4. A second difference is that Factors 2 and 3 were reversed. In this analysis, the factor containing the *socialization while watching games* items and one of the *socialization while attending games* items accounted for more variance than did the items for *vicarious achievement*. This finding of a link between entertainment and socializing is consistent with the results of the first factor analysis as well, suggesting that these motives may combine to have a notable effect on the behavior of Eastern European sport fans.

Another difference compared to the previous factor analysis is that all of the *physical skill* items loaded on Factor 5, whereas in the previous analysis one of the items, PHS327 loaded on another factor. The final difference concerns item DRA325. This item loaded alone on Factor 7, loading at .459. However, it cross-loaded with an almost identical loading, .458, on Factor 3 with the *vicarious achievement* items, consistent where this item loaded in the initial factor analysis.

Table 6
Results of Second Factor Analysis (Principal Components with Varimax Rotation)

	1	2	3	4	5	6	8
SOA18	.68						
SOA328	.63						
ENT110	.56						
ENT330	.51						
DRA215	.48						
ESC213	.46						
SOC335		.74					
SOA218		.63					
SOC224		.59					
SOC14		.46					
VA11			.77				
VA211			.67				
VA321			.48				
ESC323				.66			
ESC13				.55			
ENT220				.41			
PHS114					.75		
PHS327					.61		
PHS217					.51		
DRA15						.80	
DRA431						.71	
DRA325							.46
Eigenvalues	4.80	1.61	1.38	1.23	1.13	1.05	1.03
Cumulative %	21.80	29.10	35.37	40.97	46.10	50.85	55.54

The factor analysis results suggest that the subscales hang together fairly well. These results in addition to the marginal reliabilities of the subscale in the full data set, warrant further exploration of the subscales. Individual factor analyses were not conducted from each country. Although there were some differences, the results were insignificant.

DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH

The MSSC and SII spectator motivation scales were based, developed, and tested among Western-thinking populations in the U.S. and Asia (Japan/Korea). Overall, the results of the analyses show that Eastern European soccer fans may conceptualize their enjoyment of sport in a manner similar to their counterparts in Western-thinking American and Asian countries, as evidenced by the factor analysis which generally kept similar items together. However, it is clear from the poor reliability results that there are problems with the design of the subscales, at least with respect to the interpretation of them by respondents from Eastern Europe.

However, it is not unusual for effect sizes for exploratory research in relatively new fields to be small due to extraneous variables (Cohen, 1988). It is possible that extraneous variables played some role in some of the unexpected results for this research as well. For example, since this study was not conducted in a laboratory setting, it was difficult to control factors in the

environment (e.g., venue quality, noise and other distractions) while subjects were taking the survey. These factors contributed to a lower level of control, and may have caused more differences between our findings and findings from previous research, as well as influencing the intra-country comparisons within Eastern Europe.

One area for future research would be to further understand the role that sociocultural factors may have on sports fans' motivations. Measuring variables such as amount of disposable income, amount of leisure time, national patriotism, amount of time that one has been a sport fan may give additional insights into the variables measured by the MSSC and SII, and the relationships between the variables of those scales. These factors may further the literature with respect to understanding differences by country, and perhaps by specific regions.

CONCLUSION

Overall, the current study produced three results. First, it challenged the authors to investigate spectators' consumption motives in previously untapped Eastern Europe. Doing so required a greater conceptualization about the applicability of several existing scales, the MSSC and SII, with combined samples from four Eastern European countries. In this endeavor, the authors added to the existing spectator sport motivation literature, and opened new geographical areas for expanded research. Second, the analyses indicated some comparability between the way in which spectators from Eastern Europe conceptualize enjoyment with the sport and their Asian and Western counterparts. Entertainment and socializing also appeared to be important motives guiding Eastern European sport fans in this study. However, given weaker than expected reliability results, there is opportunity to more fully refine consumer motivation scales for use in Eastern Europe. Finally, the study suggests that among spectators in Eastern Europe younger fans tended to be more socially interactive while watching or attending soccer matches. Thus, sport marketers may want to focus on initiatives which target younger, more socially interactive fans by perhaps attracting this spectator group through more technologically modern and aesthetically pleasing venues. On the whole, the findings underscore the utility of conducting exploratory research in more countries, and with different cultures to better understand spectators' sport consumption motives.

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Appendix
Questionnaire Subscales and Items

Vicarious Achievement (Esteem)	
VA11	I feel like I have won when my soccer team wins.
VA211	I feel proud when my soccer team plays well.
VA321	I feel a sense of accomplishment when my soccer team plays well.
Escape (From boredom/day-to-day life)	
ESC13	Soccer games provide me with an escape from my day-to-day activities.
ESC213	Watching soccer games helps me forget my troubles.
ESC3 23	Soccer games are a great change of pace for what I regularly do.
Drama (Suspense)	
DRA15	I enjoy soccer games more when the score is close.
DRA325	I am very disappointed when my soccer team loses.
DRA431	A game is more enjoyable when the outcome is not decided until the very end.
Physical Skill (Aesthetics)	
PHS114	I enjoy watching the skillful performances of soccer players.
PHS217	Watching a well-executed athletic performance is something I enjoy.
PHS327	I enjoy the gracefulness I see in soccer games.
Socialization (While <u>Attending</u> Live Soccer Games)	
SOA18	Interacting with other fans is an important reason to be at soccer games.
SOA218	Attending stadium soccer games gives me the feeling of belonging to a group.
SOA328	Soccer games are great opportunities to socialize with other fans.
Socialization (While <u>Watching</u> Live Telecast of Soccer Games)	
SOC14	I like to watch National Team soccer games on TV with family and/or friends.
SOC235	Watching televised soccer games is a great opportunity to socialize with other people.
SOC324	I enjoy meeting with other fans to watch televised soccer games of my team.
Entertainment	
ENT110	I look forward to soccer games because they are exciting entertainment.
ENT220	Soccer games offer an alternative pastime.
ENT330	Attending soccer games is a fun way to spend time.
ENT434	I don't find soccer games to be very exciting. (Reverse Code)
ENT536	I am more interested in watching individual players than the soccer team as a whole.

LOVE THEM OR HATE THEM: CONTRASTING EMOTIONS IN FOREIGN PRODUCT PURCHASE ARE MORE SIMILAR THAN NOT

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ABSTRACT

Initial research on the construct of animosity presented evidence that animosity is a separate and distinct construct from ethnocentrism. Some additional research has supported the notion that international animosity and consumer ethnocentrism are distinct constructs that play different roles depending on the set of products available to consumers. Other research, however, has yielded findings that are not as consistent. As such then, it may be the case that these constructs are more closely linked; specifically, both having significant impact on consumer's judgments of product quality. This research extends the existing literature by examining potential revisions to the Animosity Model of Foreign Product Purchase, and investigates the impact of animosity on product judgments. American consumers were surveyed regarding their attitudes towards Japan and Japanese products. Results indicate that animosity does indeed impact product judgments, implying that the constructs of ethnocentrism and animosity represent greater consistency of consumer attitudes than previously described.

INTRODUCTION

This research extends the existing literature by examining certain variables and their relationships within the Animosity Model of Foreign Product Purchase. In doing so, this research:

1. Is conducted within a diverse population, with subjects possessing varying characteristics, as measured by a list of demographic identifiers.
2. Investigates the relationship of animosity and ethnocentrism with each other and with product quality judgments.

Are animosity and ethnocentrism truly separate and distinct constructs, or are they more closely linked than indicated in previous research? In contrast to the findings in previous research, do both positive (ethnocentrism) and negative (animosity) emotions have a significant impact on product judgments? Explored here is the notion that feelings of animosity, do, indeed, influence U. S. consumers' feelings about the quality of foreign (in this case, Japanese) products being considered for purchase. This research will also examine whether animosity and ethnocentrism have consistent demographic predictors.

LITERATURE REVIEW

The initial research on animosity establishes that consumers avoid products from particular countries, not because of the inherent quality of the product, but because of animosity towards the country of origin. Animosity is defined as ill will or resentment tending toward active hostility: an antagonistic attitude. A history of conflicts, overt or covert acts of violence or terrorism, political positions, religious, ethnic and cultural differences are all reasons why citizens of one country will develop feelings of animosity towards another country, and hence, an aversion to consuming products and/or services originating in that country. For the most part, this initial research concentrated on situations and circumstances that facilitate evaluation of this animosity:

1. The consuming country and the producing country have reasonably homogeneous populations, with similar thinking, beliefs and behavior.
2. A well documented history of poor bilateral relations between the two countries.
3. Trade relationships which are not overly diverse. The producing country provides a large portion of the imports of the consuming country, hereby limiting product choice.

Klein, Ettenson and Morris (1998) developed and presented the Animosity Model of Foreign Product Purchase, and tested its validity by surveying Chinese consumers and their attitudes on consumption of Japanese-made products. They proposed that “the construct of animosity--defined as the remnants of antipathy related to previous or ongoing military, political, or economic events--will affect consumers' purchase behavior in the international marketplace. Furthermore, in contrast to the large amount of extant literature on foreign product purchase, we propose that a product's origin can affect consumer buying decisions independent of product judgments. In other words, consumers might avoid products from the offending nation not because of concern about the quality of goods, but because the exporting nation has engaged in military, political, or economic acts that a consumer finds both grievous and difficult to forgive.”

Klein and Ettenson (1999) examined U. S. consumers of Japanese goods to determine antecedents for the animosity and ethnocentrism constructs. They found that the profile of the ethnocentric consumer is different from the consumer holding animosity towards a specific exporting nation, further supporting the model structure and earlier conclusions that animosity and ethnocentrism are separate and distinct factors.

Subsequently, the model was tested by a number of authors, varying production and consumption pairings, with general support for the model (Shin (2001 – Korean consumers of Japanese products), Klein (2002 – additional survey of U. S. consumers), Nijssen and Douglass (2004 – Dutch consumers of German products), (Shoham, Davidow, Klein and Ruvio (2006 - examining the buying behavior of Jewish Israelis from Arab Israelis).

More recent research has indicated less consistent agreement with the original findings and model specification. Hoffman, Mai and Smirnova (2011) addressed the development of a cross-nationally stable scale of consumer animosity and identified three drivers of general animosity to be added to the model. Ishii (2009) examined Chinese consumer's animosity towards both Japan

and the United States. Results indicate greater levels of animosity towards Japan than the U. S. Interestingly; the results also indicate that animosity affected the product judgments of both U. S. and Japanese products. In the original research (Klein, Ettenson & Morris (1998)), only ethnocentrism affected product quality judgment.

Richardson (2012) investigated various demographic measures as antecedents of animosity and ethnocentrism, and found that the predictive variables (age and education) were the same for each construct, indicating that ethnocentrism and animosity are more similar than originally thought.

METHODOLOGY

Hypothesis

H₁: Animosity will be a significant predictor of product judgments

Measures

American consumers were surveyed regarding their attitudes towards Japan and Japanese products. Respondents were asked to complete a survey and indicate their agreement (on a 1 = "strongly disagree" to 7 = "strongly agree" scale) with statements regarding four general constructs:

- (1) Japanese product quality
- (2) Willingness to buy Japanese products
- (3) Consumer Ethnocentrism
- (4) Animosity toward Japan.

The measures for product judgments, willingness to buy, animosity and ethnocentrism were taken from Klein, Ettenson & Morris (1998), who credited Darling and Wood (1990) for the measures on product judgment and willingness to buy, and Shimp and Sharma (1987) and Netemeyer, Durvasula, and Lichtenstein (1991) for the CETSCALE (ethnocentrism) measures.

Data Collection

The survey was administered through an online market research tool, yielding 451 responses. 103 surveys were rejected because they were incomplete. The study was conducted with the remaining 348 surveys.

The demographic profile of the sample portrays the sample respondents as men and women (almost equally split, males 52%, females 48%), with a modal age of 31 to 40 years, a mean age of 41, typically college educated at the Bachelor's or Master's degree level, and above average household income (mean of \$90,000). Ethnicity was almost equally represented (30% Caucasian, 35% African-American, 35% Hispanic American).

ANALYSIS

The measurement scales for each of the constructs were examined through the application of confirmatory factor analysis, confirming the reliability (Cronbach's alpha ranging from .83 to .85) of each of the scale items, as shown in previous research involving the Animosity Model of Foreign Product Purchase.

Regression analysis was performed to evaluate the relationship between both ethnocentrism and animosity with product judgments. The relationships of the demographic variables with animosity and/or ethnocentrism were tested by analysis of variance, checking for response differences across the categories specified for each demographic measure.

FINDINGS

Overall, the results show low levels of ethnocentrism and animosity, and positive feelings about products and services from Japan. These results are directionally consistent with Klein (2002). See Table 1.

Product Quality	5.26
Animosity	2.35
Ethnocentrism	2.84

As seen in Table 2, Animosity (-.292) and Ethnocentrism (-.305) are both significantly, negatively correlated with Product Judgments. In addition, Animosity and Ethnocentrism are significantly, highly positively correlated with each other (.452).

	ETHNOCENTRISM	ANIMOSITY	PRODUCT JUDGMENTS
ETHNOCENTRISM	1	.452	-.305
ANIMOSITY	.452	1	-.292
PRODUCT JUDGMENTS	-.305	-.292	1

Both Ethnocentrism and Animosity are significant predictors of Product Judgments (see Table 3 and 4), and demographic predictors of animosity and ethnocentrism are the same – age and education (see tables 5 and 6). These findings support the hypothesis.

	COEFFICIENTS	r ²	F	significance
CONSTANT	6.063			
ANIMOSITY	-0.115			
		.085	32.206	.000

Table 4 – REGRESSION OF ETHNOCENTRISM AND PRODUCT JUDGMENTS				
	COEFFICIENTS	r ²	F	significance
CONSTANT	5.999			
ETHNOCENTRISM	-.0655			
		.093	35.616	.000

Table 5 – REGRESSION ANALYSIS Ethnocentrism = f (Age, Education)		
<i>Variable</i>	<i>Coefficient</i>	<i>t-Value</i>
Age	0.317	4.131**
Education	-0.442	-4.372**
F – Value = 13.048** r ² =.102		

** - significant at <.01

Table 6 – REGRESSION ANALYSIS Animosity = f (Age, Education)		
<i>Variable</i>	<i>Coefficient</i>	<i>t-Value</i>
Age	0.173	3.073**
Education	-0.211	-2.815**
F – Value = 7.578** r ² =.042		

** - significant at <.01

DISCUSSION AND IMPLICATIONS

The results of this research have contributed in both theoretical and managerial ways. With regard to academic research, this study confirms other recent research, potentially questioning the broad validity of the original investigation, model and settings on animosity:

- “Homogeneous” populations
- Strong bi-lateral trading relationships
- Strong emotions likely for consumers surveyed, with potential sampling bias based on geography

The results of this study also show that there are greater linkages between animosity and ethnocentrism; the two constructs are two sides of the same coin, as shown by the following:

- Ethnocentrism is positive emotion, animosity is negative emotion
- The two constructs are highly correlated, with consistent antecedents
- Both emotions affect product judgments, suppressing cognitive dissonance, promoting cognitive consistency

Original research on ethnocentrism concluded that ethnocentric consumers will justify their patriotism through biased shifts of assessments in quality of goods produced domestically. Original research on the animosity construct concluded that the emotion of animosity does not cause

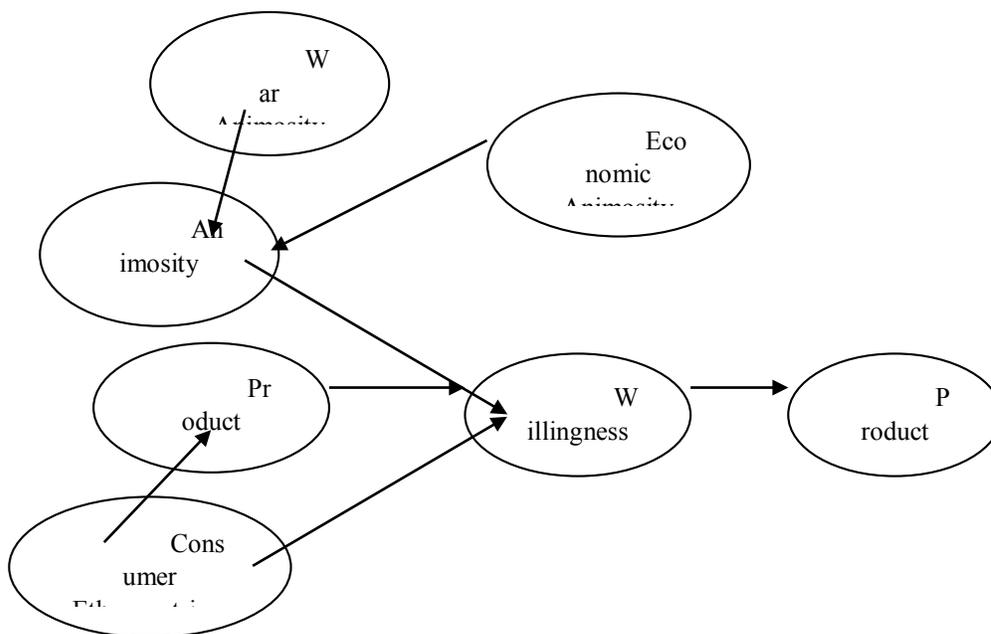
consumers to shift their product judgments to reconcile with their negative nationalistic feelings. However, as shown in this research, both ethnocentrism and animosity affect product judgments, and hence they will be significant influences in consumer choice of goods, whenever country of origin is a factor in the decision. From a managerial perspective, producers must be aware that country of origin signals may lead to positive or negative emotions in certain groups of consumers, i. e. those that possess high levels of nationalistic emotions, whether positive ethnocentrism or negative animosity. This will require enhanced awareness of non-market issues, such as cultural, political, economic and/or military events.

LIMITATIONS OF THE STUDY AND OPPORTUNITIES FOR FUTURE RESEARCH

Limitations of this research would include the lack of product specification. Countries often have specific areas of expertise, which may drive consumer opinion regarding product quality. Utilizing a diverse population presents its own challenges. Considering other identifying characteristics of the research subjects not measured here (religion, geographic residency, life experiences, and value measures, etc.) may contribute to the predictive methodology. Finally, emotions are recognized as being temporal and situational. Positive and/or negative feelings about specific countries may shift or simply be supplanted by specific current events particular to other countries or geographic regions.

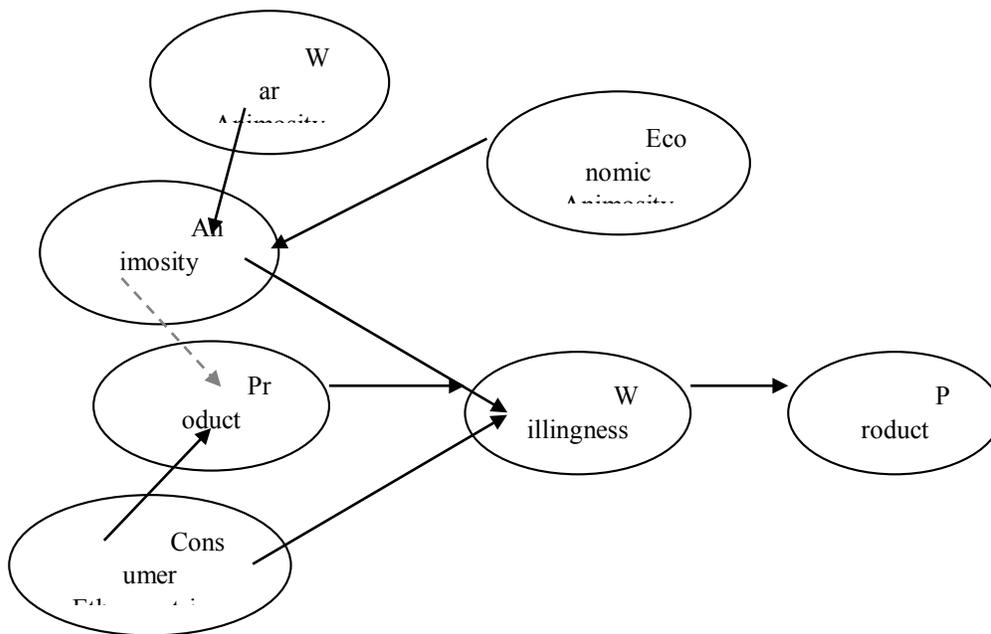
Figure One

THE ANIMOSITY MODEL OF FOREIGN PRODUCT PURCHASE



Future research would do well to further investigate additional antecedents and moderators of the animosity construct, as well as additional components of the construct itself. Other constructs such as materialism and commitment to other cultural components of identity (religion, ethnic identification, country of origin or region of residence) may override nationalistic loyalty and yield further insight into cross-cultural versus nationalistic consumer segmentation. Paths in the existing model may be examined for circumstantial variation. Additional antecedents for the construct Willingness to Buy might be identified, including consumer characteristics, or more product-centric attributes.

Figure Two
PROPOSED MODEL



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STOCK PRICES AND INFLATION: EVIDENCE FROM JORDAN, SAUDI ARABIA, KUWAIT, AND MOROCCO

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ABSTRACT

This paper attempts to investigate monthly stock price indexes and good price indexes for selected Mashreq and Maghreb countries: Jordan, Saudi Arabia, Morocco, and Kuwait for 2000-2009 using cointegration methods. Our findings support the long-run relationship between stock prices and goods prices. The long-run Fisher elasticities of stock prices with respect to goods prices are in the range of 1.01 to 1.36 across the four countries under study. With the exception of Kuwait, the Fisher effect coefficient estimates are significantly greater than one. In the case of Jordan, Saudi Arabia, and Morocco the empirical results support the Fisher hypothesis, with estimated coefficients near unity.

Keywords: Stock Returns, and Inflation

JEL Classification codes: G12

INTRODUCTION

The relationships between stock returns and inflation rates or stock prices and goods prices have been the subject of numerous research papers during the last five decades. Mixed results were obtained ranging from no relationship, to negative and positive relationships. However, the short-term negative relationship and the Long-term positive relationship seem to be well established in the literature.

Theoretically, stocks are assumed to be inflation neutral for unexpected inflation which should have a negative effect on stock prices. The standard discounted cash flow model calculates stock prices as the present value of future expected cash flows. For stocks to be inflation neutral and represent a good long-term hedge against inflation, firms should pass on any increase in inflation rates on future cash flows. Investors on the other hand should discount the adjusted cash flows by inflation-adjusted rate of return or discount the real cash flows by the same real discount rate.

This argument is now known as the Fisher hypothesis (1930) or Fisher effect. Fisher argues that stocks are claims against real assets therefore they are neutral and uncorrelated with inflation rates. Stock returns are equal to the real rate of return plus an inflation premium. Since this is an equilibrium relationship, it is supposed to hold in the long -run. Hoguet (2009) reports that when inflation rates were historically high or accelerating in the US, price/earnings ratios were declining, a phenomenon which puzzled researchers and practioners as well.

The literature offers three theories as possible explanations for this relationship. Fisher hypothesis is more applicable in the long –run as an equilibrium relationship. The behavioral hypothesis proposed by (Modigliani & Cohn, 1979) has been used to explain the short – run relationship, or what is known today as the *inflation illusion phenomena*. This hypothesis says that investors mistakenly price future real cash flows by discounting by the nominal rate of return. The proxy hypothesis proposed by Fama (1981) argues that because stock returns are positively related to future real economic growth, as inflation increases, real economic growth declines and become more volatile which pushes investors to require higher risk premiums to cover the additional risk. Stock prices therefore start declining accordingly. This hypothesis is also supported by Sharpe (1999).

The debate is still ongoing although standard investment and finance theory implies that stocks are good hedging instruments at least in the long run. It is however necessary to differentiate between the effect of anticipated inflation and unanticipated inflation. While stocks should be inflation neutral, it is reasonable to assume that their prices react negatively to inflation shocks. New investors require risk premium for any increase in unanticipated inflation, and this implies a decline in stock prices. However, one should admit that investors sometimes do not follow standard investment theory because of behavioral reasons and lack of sophisticated knowledge about finance fundamentals. In markets with more and more institutional investors, the behavioral hypothesis becomes less realistic on the grounds that institutional investors are expected to be sophisticated investors.

Stocks should be good hedging assets against inflation but they are also sensitive to future changes in inflation rates. Investors may have incentives to adjust their valuation of stock piecemeal. That is, every time they are faced with new inflation rate, they make the adjustment instantaneously as if they are dealing with a short-term security with short-term investment horizon.

In this paper, we contribute further evidence on the long-run Fisher effect for stocks by using stock prices and goods prices. Consistent with Engle and Granger (1987), this approach allows us to fully use long-run information contained in the levels of the variables, as opposed to focusing on partial long-run information contained in selected holding periods. Additionally, by using levels rather than first differences, we avoid using data over long historical periods, in which the accuracy and relevance of the data series can be compromised.

We examine monthly time series of stock price indexes and goods price indexes (consumer price indexes) for four Arab countries (Jordan, Saudi Arabia, Kuwait, and Morocco) from January 2000 to December 2009. While the use of cointegration analysis abounds in the empirical literature that previously examined the hypothesis, such as Mishkin (1992), Anari and Kolari (2001) and Shrestha, Chen and Lee (2002), we have found no studies that employed cointegration analysis in testing the hypothesis for these countries. In addition, we are applying a relatively new and powerful methodology, the generalized forecast error variance decomposition components and the generalized impulse response functions computed from estimated unrestricted vector autoregressive (UVAR) models.

Unlike the traditional forecast error variance decomposition and impulse response functions, these approaches do not require orthogonalization of shocks and is invariant to the

ordering of the variables in the UVAR model, while the widely used Choleski factorization is known to be sensitive to the ordering of the variables. Finally, the UVAR is employed to avoid using arbitrary choice of the restrictions needed to settle the identification.

Our study provides evidence on the long-term Fisher effect on stocks in four Arab countries markets – Jordan, Saudi Arabia, Kuwait, and Morocco. While we perform the regression analysis with stock return and inflation rates, we use the levels of stock prices and corresponding changes in inflation in our cointegration tests. Evidence has shown that it is impossible to measure fully both contemporaneous and inter-temporal correlations between stock returns in real terms and inflation when variables are evaluated by their first differences (Gallagher, 1986).

As Hendry (1986) and Juselius (1991) observe, when a time series is differenced, long-run information contained in the levels of variables is lost. Consistent with the findings of Granger (1986), Engle and Granger (1987) and Anari and Kolari (2001), the use of levels allows us to fully evaluate long-term information that may be contained in continuous time series variables, as opposed to focusing on the segmented information variables whose values in their first differences are susceptible to different lengths of observation.

The findings of this study support the long-term Fisher effect between stock prices and corresponding changes in the price of goods as measured by the consumer price index; namely, stock prices appear to reflect a time-varying memory associated with inflation shocks that make stock portfolios a reasonably good hedge against inflation over the long run in four Arabic equity markets. This means that the stock markets are relatively efficient in impounding forthcoming inflation from the concurrent changes in stock prices, and investors can adjust their portfolios accordingly.

The organization of the paper is as follows. Section 2 presents the literature review. Section 3 describes the data. Section 4 introduces the VAR model. Section 5 reports evidence from the VAR model. Section 6 concludes.

LITERATURE REVIEW

Traditionally, it was believed that stocks provide a good hedge against inflation given that stocks represent claims on real assets so that stock returns are positively correlated with actual inflation. In recent years, empirical research showed that inflation affects stock returns negatively (Sharpe, 1999). In the United States, high expected inflation and accelerating inflation have been associated with decreasing price/earnings ratios. Stocks seem to be better hedges against inflation in the medium-term and long-term compared to the short-run.

However, Fisher (1930) contends that return on assets move one – for – one with anticipated inflation. That is, stocks should be inflation neutral but stock prices react negatively to high unexpected inflation. Fisher argues that real stock returns are related to real factors and that stocks should maintain their purchasing power in the long-term. Fama and Schwert (1977) argue that anticipated inflation negatively affected stock returns during the period 1953-1971 and concluded that stocks are not good hedges against inflation. Cohn and Modigliani (1979) argue that U.S investors undervalued stocks because they discounted (mistakenly) future real cash flows by using nominal rates of return. They use quarterly data over 1953-1977 on price /earnings ratios and inflation rates in their analysis.

Lansing (2004) confirms the behavioral anomaly of investors discounting future real cash flows by nominal rates of return. It is well established in the literature that rising inflation and future real economic growth are negatively correlated. During the 1970s, the U.S. experienced a decline in economic activity when inflation was rising (Hoguet 2009). This view is confirmed by Fama (1981). Fama argues that stock returns are positively related to expected real economic growth. Future real economic growth is, on the other hand, associated with low inflation rates. When future economic growth (in real terms) is expected to decline due to high inflation, investors required higher risk premiums on their stocks.

The negative short-term relationship between stock returns and anticipated and unanticipated inflation is reported by Geske and Roll (1983) and Jaffe and Mandelker (1976) and Wei (2009). Wei found that stock returns' negative reaction to unanticipated inflation is higher during economic contractions than expansions. On the other hand, the long – run positive relationship (Fisher effect) is reported by many authors. Jaffe and Mandelker reported positive relationship over a long period (1875 -1970). Boudoukh and Richardson (1993) confirmed the same result applying one-year and five- year holding period returns during 1802-1990 in both the United Kingdom and the United States.

Anari and Kolari (2001) used stock prices and goods prices instead of the first difference in order to overcome the problem that the first difference eliminates the long – run information. They use monthly stock price indices and goods price indices for Canada, France, Germany, the United Kingdom and the United States during 1953- 1998. They employ the co-integration technique developed by Johansen (1988) for those goods prices and stock prices are co-integrated and non-stationary and confirm the long memory Fisher effect which says that stocks are good inflation hedges over a long holding period. However, they also report the negative initial effect in all six countries.

Luintel and Paudyal (2006) support previous results and report the existence of the long – run hedging relationship in the UK stock market. Although the short-run negative effect (the inflation illusion as named by Modigliani and Chon (1979)) and the long – run hedging Fisher effect are well established in empirical research, Ely and Robinson (1997) found no long – run relationship. They apply the Johansen's (1988) method on sixteen countries during 1957-1992.

Aga and Kocaman (2006) tested the impact of price/earnings ratios, industrial price indices (IPI) and the consumer price indices (CPI) on returns of stocks traded in Istanbul stock Exchange. They claim that macroeconomic variables such as inflation rates should have two possible effects.

The direct effect hypothesis implies that stock markets normally react negatively to bad news and positively to good news. The policy signaling hypothesis implies that it is possible for the market to react positively to adverse movements in macroeconomic variables due to anticipated government remedial actions.

Their findings indicate that only the price/earnings ratio appears to be significant in explaining the movements in stock returns, while industrial price indices and consumer price indices are not. Exponential GARCH model was applied to test the impact of CPI and IPI on stock return and volatility. They also found that these variables are not statistically significant in explaining stock returns and volatility.

AN OVERVIEW OF THE DATA

This study covers four Arab equity markets: Jordan, Saudi Arabia, Kuwait, and Morocco. Monthly consumer price index (CPI) and monthly stock prices are used. Stock price indices from their respective homepages, consumer price indices for all countries are from Monthly Financial Statistics (International Monetary Fund). The sample period begins in January 2000 and ends in December 2009. All variables are transformed into natural logarithms. Using data from different countries enables comparative analysis to check the robustness of the results. In this regard, there is some concern about the power of tests to detect cointegration for different sample sizes. Based on the literature on this subject (e.g., see Hakkio and Rush (1991) and Junttila (2001)), we infer that our sample sizes are sufficiently large to provide reliable cointegration tests. Hakkio and Rush (1991) say that "co-integration is a long run concept and hence requires long span of data to give tests for co-integration much power rather than merely large numbers of observations". Also, testing several models for multiple countries allows the consistency of the estimated test statistics to be observed.

METHODOLOGY

4.1 Unit Root Tests

The first step in our statistical analysis is to analyze the stationary properties of the macro time series considered in this study by applying the unit root. Applying the unit root test will do this. Unit root tests are important in examining the stationary of a time series, which is a matter of concern in three important areas. First, a crucial question in the ARIMA modeling of a single time series is the number of times the series needs to be first differenced before an ARMA model is fit. Each unit root requires a first differencing operation. Second, stationary of regressors is assumed in the derivation of standard inference procedures for regression models. Nonstationary regressors invalidate many standard results and require special treatment. Third, in cointegration analysis, an important question is whether the disturbance term in the cointegrating vector has a unit root.

The Augmented Dickey-Fuller Test (ADF) is applied in this paper. The ADF test consists of running a regression of the first difference of the series against the series lagged once, lagged difference terms, and optionally, a constant and a time trend. With two lagged difference terms.

There are three choices in running the ADF test regression: to include a constant term in the regression, to include a linear time trend, or to determine how many lagged differences are to be included in the regression.

In each case the test for a unit root is a test on the coefficient of the regression. If the coefficient is significantly different from zero then the hypothesis that y contains a unit root is rejected and the hypothesis is accepted that y is stationary rather than integrated.

The output of the ADF test consists of the t-statistic on the coefficient of the lagged test variable and critical values for the test of a zero coefficient. A large negative t-statistic rejects the hypothesis of a unit root and suggests that the series is stationary. Under the null hypothesis of a unit root, the reported t-statistic does not have the standard t-distribution. We must refer to the

critical values presented in the test output. The reported critical values are chosen on the basis of the number of observations and the estimation option.

After running the ADF test, If the Dickey-Fuller t-statistic is smaller (in absolute value) than the reported critical values, we cannot reject the hypothesis of nonstationarity and the existence of a unit root. We would conclude that our series might not be stationary. We may then wish to test whether the series is I (1) (integrated of order one) or integrated of a higher order. A series is I (1) if its first difference does not contain a unit root.

4.2 The VAR Model

This study adopts an unrestricted vector autoregression (UVAR) framework to analyze the dynamic relationship between the variables. The UVAR does not impose arbitrary restrictions of the effects of the endogenous variables. It was common in earlier VAR-type analyses to rely on a Choleski factorization. Unfortunately, the Choleski factorization is known to be sensitive to the ordering of variables when the residual covariance matrix is non-diagonal. This paper employs generalized forecast error variance decomposition developed in Koop, Pesaran and Lee (1996) and Pesaran and Shin (1998) to deal with this problem. Unlike the orthogonalized forecast error variance decomposition, the generalized approach is invariant to the ordering of the variables in the UVAR model. The generalized forecast error variance decomposition from the UVAR model is computed in order to investigate interrelationships within the system. The empirical work undertaken in this study is based on estimating the UVAR on eight definitions of money.

The UVAR approach, introduced by Sims (1980), suggests a standard tool to analyze time series relationships among macroeconomic variables. A VAR is a system in which every equation has the same right hand variables, and those variables include lagged values of all of the endogenous variables. VARs are well suited to forecasting variables where each variable helps forecast other variables.

The mathematical form of a UVAR is

$$\Delta y_t = \beta_1 y_{t-1} + \beta_2 \Delta y_{t-1} + \beta_3 \Delta y_{t-2} + \beta_4 + \beta_5 t \quad (1)$$

Here y_t is a vector of endogenous variables; m is a vector of constant, N is the vector autoregressive order, A_i are matrices of lag coefficients of y_t up to some lag length N , and ε_t is a vector of innovations. The components of vector are each white noise process with zero mean, constant variance, and are individually serially uncorrelated. However, the components of vector could be contemporaneously correlated.

UVARs have proven successful for forecasting systems of interrelated time series variables. Vector autoregression is also frequently used, although with considerable controversy, for analyzing the dynamic impact of different types of random disturbances on systems of variables. However, the estimated coefficients of UVARs themselves are difficult to interpret. We will look at the generalized forecast error variance decomposition and the generalized impulse response functions of the system to draw conclusions about a UVAR.

4.2.1 The Generalized Forecast Error Variance Decomposition

Innovation accounting analysis refers to two tools used to trace the impact of shocks (innovations) in the VAR system. These tools were introduced by Sims (1980) to measure the dynamic interaction among the variables. The first, the forecast error variance decomposition (FEVD), analyzes the errors the model would tend to make if it is used to forecast its variables. The FEVD shows how much of the average squared forecast error, which the model tends to make, is caused by innovations associated with each of the variables in the model. The FEVD of a variable, thus, can suggest that forces associated with one variable are major influences on the evolution of another variable.

The GFEVD shows how much of the average squared forecast error, which the model tends to make, is caused by innovations associated with each of the variables in the model. The GFEVD of a variable thus can suggest that forces associated with one variable are major influences on the evolution of another variable. In other words, the GFEVD of a VAR provides information about the relative importance of the random innovations. It was common in earlier VAR-type analyses to rely on a Choleski factorization. Unfortunately, the innovation accounting results, based on the Choleski factorization, are sensitive to the ordering of variables in the VAR model. In this paper, we apply generalized forecast error variance decomposition developed by Koop, Pesaran and Lee (1996) and Pesaran and Shin (1998) to deal with this problem. Unlike the orthogonalized method, the generalized approach is invariant to the ordering of the variables and does not impose the constraint that the underlying shocks to the VAR are orthogonalized before decompositions are computed. The generalized approach explicitly takes into account the contemporaneous correlation of the variables in the VAR model. The approach provides meaningful results at all the horizons including initial impact.

We calculate a separate variance decomposition for each endogenous variable. The first column is the forecast error of the variable for different forecast horizons. The source of this forecast error is variation in the current and future values of the innovations. The remaining columns give the percentage of the variance due to specific innovations. One period ahead, all of the variation in a variable comes from its own innovation, so the first number is always 100 percent.

4.2.2 Generalized Impulse Response Function

The other tool, the impulse response function, shows how one variable responds over time to a single innovation in itself or in another variable. Specifically, it traces the effect on current and future values of the endogenous variable of a one standard deviation shock to one of the innovations. Innovations or surprise movements are jointly summarized by the error terms of the UVAR model.

4.2.3 VAR Specification Issues

The following issues are related to specifying VAR models. Alternative specifications differ with respect to ordering of variables, method of "trend" removal, lag length on the VAR

equations, and level of temporal aggregation. These issues must necessarily be addressed beyond the choice of variables to be included.

4.2.4 Lag Length

The empirical evidence from a VAR model is very sensitive to the choice of lag length in the equations of the model. Alternative choices will give different innovations series and, thus, will likely make a difference in the variance decomposition results. The appropriate lag length could be tested using the likelihood ratio test, the Akaike Information Criterion, or the Schwarz Criterion. In this study, the lag length will be specified based on these criteria and the results obtained in each case will be compared. Changing the lag length will also test the robustness of the empirical results.

EMPIRICAL RESULTS

We first test whether the 8 time series are nonstationary. To determine the stationary properties of the series, we use the ADF unit root test and Phillips-Perron (Phillips and Perron, 1990, PP) tests. Table 1 shows that the stock prices (SP) and consumer goods prices (CP) are generally nonstationary in the level. Therefore, the cointegration test will be applied to examine the long-run relationship between stock prices and goods prices. Table 2 represents the result for the first difference of the variables. The results show that the first differences of the series are stationary. In addition, these findings indicate that all variables employed in regressions are stationary and therefore would not cause spurious regression outcomes.

Our next task is to check whether the series are cointegrated. Specifically, having established the presence of a unit root in the first-difference of each variable, we need to test whether the series in each country has different unit roots (non-cointegrated), or shares the same unit root (cointegrated). Cointegrated variables, if disturbed, will not drift apart from each other and thus possess a long-run equilibrium relationship. The existence of cointegration would imply that the two series would not drift too far apart. A non-stationary variable, by definition, tends to wander extensively over time, but a pair of non-stationary variables may have the property that a particular linear combination would keep them together, that is, they do not drift too far apart. Under this scenario, the two variables are said to be cointegrated, or possess a long-run stable relationship.

Country	SPa	SPb	SPc	CPa	CPb	CPc
Jordan						
ADF	-1.584	-1.598	-0.304	0.861	-1.960	3.275
PP	-1.437	-1.367	-0.206	0.557	-1.896	2.710
Saudi						
ADF	-1.343	-1.001	-0.357	1.547	-0.275	1.962
PP	-1.566	-1.392	-0.553	3.487	-1.636	2.736
Morocco						
ADF	-0.285	-1.603	0.991	-0.631	-2.555	3.102

PP	-0.571	-1.846	0.556	0.0949	-3.165	5.216
Kuwait						
ADF	-1.495	-1.445	-0.329	0.667	-1.274	1.931
PP	-1.401	-1.117	-0.252	3.832	-0.309	4.803
Note: <i>SP</i> and <i>CP</i> denote stock price and consumer price. The ADF and PP are the Augmented Dickey Fuller and Phillips-Perron unit root test with intercept (a), with trend and Intercept (b), and with neither trend nor intercept (c), respectively.						

Table 2 Unit Root Tests						
Country	SPa	SPb	SPc	CPa	CPb	CPc
Jordan						
ADF	-5.207	-5.254	-5.202	-8.710	-8.821	-8.180
PP	-1.437	-1.367	-0.206	0.557	-1.896	2.710
Saudi						
ADF	-9.045	-9.062	-9.071	-2.819	-3.897	-1.246
PP	-1.566	-1.392	-0.553	3.487	-1.636	2.736
Morocco						
ADF	-5.514	-5.499	-5.442	-9.176	-9.146	-8.376
PP	-0.571	-1.846	0.556	0.0949	-3.165	5.216
Kuwait						
ADF	-6.179	-6.233	-6.171	-2.441	-4.701	-1.576
PP	-1.401	-1.117	-0.252	3.832	-0.309	4.803
Note: <i>SP</i> and <i>CP</i> denote stock price and consumer price. The ADF and PP are the Augmented Dickey Fuller and Phillips-Perron unit root test with intercept (a), with trend and Intercept (b), and with neither trend nor intercept (c), respectively.						

We test the cointegration hypothesis with the methodology suggested by Johansen (1988) and Johansen and Juselius (1990). Because Johansen tests are performed within a VAR framework, and the results from VARs are sensitive to the lag length (Hafer and Sheehan (1991)), attention should be paid to lag length. Because the data are monthly, and based on lag-selection tests using the Sims (1980) criterion, we introduced twelve monthly lags in the Johansen system. Applying the MLE approach, we show in Table 3 results from Johansen's trace test to determine whether a long-term relation exists between each pair of stock prices and goods prices (CPI).

Table 3 Cointegration Tests Based on the Johansen's Trace Test Likelihood Ratio					
Hypnotized No. of Cointegration Vectors	Jordan	Saudi	Morocco	Kuwait	5% critical Value
None	11.267	10.689	23.213	41.909	19.96
At most one	2.362	2.108	3.674	2.296	9.24
Note: The tests show that there is one cointegrating relation between stock price index and CPI in each country.					

A brief description of the test is in order. Let

$$\Delta x_t = \sum_{i=1}^{p-1} \Gamma_i \Delta x_{t-i} + \pi x_{t-1} + \varepsilon_t \quad (2)$$

Where x_t and ε_t are (n by 1) vectors and π is an (n by n) matrix of parameters. The Johansen (1988) methodology requires estimating the system of equations in (2) and examining the rank of matrix π . If $\text{rank}(\pi) = 0$, then there is no stationary linear combination of the $\{x_{it}\}$ process, the variables are not co-integrated. Since the rank of a matrix is the number of non-zero eigenvalues (λ), the number of $\lambda > 0$ represents the number of co-integrating vectors among the variables. The test for the non-zero eigenvalues is normally conducted using the following two test statistics:

$$\lambda_{\text{trace}}(r) = -T \sum_{i=r+1}^n \ln(1 - \hat{\lambda}_i) \quad (3)$$

$$\lambda_{\text{max}}(r, r+1) = -T \ln(1 - \hat{\lambda}_{r+1}) \quad (4)$$

where $\hat{\lambda}_i$ is the estimated eigenvalues, and T is the number of valid observations. Note that λ_{trace} statistic is simply the sum of λ_{max} statistic. In equation (3), λ_{trace} tests the null hypothesis that the number of distinct co-integrating vectors is less than or equal to r against a general alternative. λ_{max} statistic tests the null hypothesis of r co-integrating vectors against r+1 co-integrating vectors. Johansen and Juselius (1990) and Osterwald-Lenum (1992) derive the critical values of λ_{trace} and λ_{max} by simulation method.

Our cointegration tests parallel those made by Anari and Kolari (2001) for their study on European, U.S., and Japanese markets. In testing the long-run relation between each pair of stock prices and goods prices, the null hypothesis states that there is no co-integration relation.

The results of the Johansen trace test are provided in Table 3. These results suggest that one co-integrating vector (or a long-run relation) between goods prices measured by the consumer price index (CPI) and the stock price index exists in each country under study. We conclude from the similarity in results across several countries in this study that it takes stock prices a long time to return to their long run relation when there is unexpected movement in goods prices, and that the co-integrating tests are robust. This is similar to the case with European, U.S., and Japanese markets as reported by Anari and Kolari (2001) and Khil and Lee (2000).

5.1 Vector Error Correction Model (VEC)

Cointegration exists when a group of nonstationary variables has a linear combination of them that is stationary. Cointegration means that although many developments can cause permanent changes in the individual elements of the group, there is some long-run equilibrium relation tying the individual components together. If the group is cointegrated, then it is not correct to fit a VAR to the differenced data [Hamilton (1994)]. As argued by Engle and Granger (1987), the VAR estimated with cointegrated data (without including the cointegration term) will be misspecified. However, another representation of VAR, the Vector Error Correction model (VEC), can be used. It is a VAR model for data in difference from augmented by the error

correction term. In a VEC model the short-run dynamics of the variables in the group are influenced by the deviation from an equilibrium relationship.

As the VEC specification only applies to a cointegrated series, we should run the Johansen cointegration test prior to VEC specification. This test is needed to confirm that the variables are cointegrated and to determine the number of cointegrating equations. Estimation of a VEC model proceeds by first determining one or more cointegrating equations using the Johansen procedure. The first difference of each endogenous variable is then regressed on a one period lag of the cointegrating equation(s) and lagged first differences of all the endogenous variables in the system.

The Johansen efficient maximum likelihood test is used to examine the existence of a long-term relationship between stock prices (SP) and consumer goods prices (CP). It is applied using alternative lag lengths in the VAR. Consider a VAR model of order k:

$$X_t = C + A_1 X_{t-1} + \dots + A_k X_{t-k} + v_t \quad (5)$$

where C is a 2 x 1 vector of constants, A_k are 2 x 2 matrices of coefficients to be estimated, and vector v_t , represents the unexpected movements in SP and CP.

It should be noted the VAR model provides information about the short-run relation between stock prices and inflation. For the estimation of the long run relation between the two variables, we follow Anari and Kolari (2001) and compare our findings with those reported by Khil and Lee (2000) on Pacific-Basin markets in the short run. Anari and Kolari use the vector error-correction (VEC) model by Johansen (1991). Equation (5) can be written as:

$$\Delta x_t = \delta + \Gamma_1 \Delta x_{t-1} + \Gamma_2 \Delta x_{t-2} + \dots + \Gamma_{t-k} \Delta x_{t-k+1} + \Pi x_{t-k} + v_t \quad (6)$$

where Γ_i and Π are 2x2 matrixes, and k is the lag order. The rank of matrix Π gives the number of cointegrating vectors, which are long run relations between SP and CP. Anari and Kolari show that the term Πx_{t-k} represents the long-term relation between SP and CP, and a long run relation between SP and CP can be evaluated by:

$$\Delta S_t = \sum_{k=1}^{n-1} a_k \Delta S_{t-k} + \sum_{k=1}^{n-1} b_k \Delta C_{t-k} + e(S_{t-1} - c - dP_{t-1}) \quad (7)$$

where the summation term represents the short run relation between stock prices and goods prices, and the error correction term e represents the speed of adjustment of stock prices to unexpected changes in inflation. The term, which is the vector of deviations from the long run relation between stock prices and goods prices, can be normalized and its long run equation can be expressed as:

$$S_t = c + dP_t \quad (8)$$

If the variables are in log terms, the coefficient (d) in this equation is the elasticity of stock prices with respect to goods prices, otherwise known as the Fisher coefficient (Anari and Kolari, 2001).

Using equation (8), the MLE estimates on long run relations between stock prices and the CPI for the sample period are shown in Table 4. It should be noted that the estimated Fisher coefficients (d) are in the range of 1.01 to 1.36. These coefficients are distributed as follows: Jordan = 1.01, Saudi Arabia = 1.20, Morocco = 1.04, and Kuwait = 1.36. In all countries, the long-

run Fisher effect is supported because of the positive signs for the estimated (d) coefficient of CPI in equation (8). Since all variables are expressed as logarithms, the CPI's coefficient (d) in each equation shows the elasticity of the changes in stock prices with respect to corresponding changes in inflation. For instance, when the estimated coefficient (d) is 1.01 in Jordan, this means that for every increase of 1% in CPI, the stock index is expected to increase by 1.01% over the sample period. We apply t -tests to examine whether the estimated Fisher coefficient is less than, equal to or greater than unity. The results in Table 4 show that estimates for Jordan, Morocco, and Saudi Arabia are greater than unity, whereas those for Kuwait are less than or equal to unity at a 5% level significance.

In Table 4, the estimates of the speed of adjustment coefficients (e) lie between 0.01 and 0.03, which means that it takes a long time for stock prices to return to their long-run relation following an unexpected movement in goods prices.

Table 4			
Long-Run Relations Between Stock Prices and Inflation Based on the Full Information Maximum Likelihood Estimator (MLE)			
$SP_t = c + dCP_t$			
Country	c	d	e
Jordan	-0.16	1.01* (6.55)	-0.01 (4.88)
Saudi	2.34	1.2* (11.23)	-0.04 (3.65)
Morocco	2.45	1.04* (1.02)	-0.03 (5.28)
Kuwait	2.16	1.36 (6.23)	-0.02 (3.4)

Note: * means fail to accept the null hypothesis (at %5) that the Fisher coefficient (d) is less than or equal to one and instead accept the alternative hypothesis that it is more than one. t -values are in parentheses. The term e is the speed of adjustment which is the rate of convergence to the long-run equilibrium.

CONCLUSIONS

This paper attempts to examine monthly stock price indexes and goods price indexes for four Arab countries: Jordan, Saudi Arabia, Morocco, and Kuwait for 2000-2009 using cointegration methods. The results of the cointegration test support the long-run relationship between stock prices and goods prices. The long-run Fisher elasticities of stock prices with respect to goods prices are in the range of 1.01 to 1.36 across the four countries under study. With the exception of Kuwait the Fisher effect coefficient estimates are significantly greater than one. In the case of Jordan, Saudi Arabia, and Morocco the empirical results support the Fisher hypothesis, with estimated coefficients near unity. The results also reveal that stock prices in the those four Arab markets have a long memory with respect to inflation shocks that make stocks a reasonably good inflation hedge over a long holding period. In this respect, our findings are similar to the

evidence already reported by Anari and Kolari (2001) on American, European and Japanese stock markets.

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