

Managers' gender role attitudes: a country institutional profile approach

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Abstract

In this paper, we use the country institutional profile to investigate how selected cognitive, normative, and regulative aspects of various countries relate to traditional gender role attitudes of managers from these countries. Our cross-level analyses, using hierarchical linear modeling, control for a number of individual characteristics (i.e., age, education, gender, and social class). Results support our hypotheses that managers' traditional gender role attitudes relate positively to nation-level uncertainty avoidance and power distance. Moreover, the results support our predictions that gender egalitarian normative institutions, degree of regulation, and degree of educational development are negatively related to managers' traditional gender role attitudes. However, results reject our hypotheses regarding nation-level religiosity, assertiveness, and masculinity, not showing the proposed relationship with managers' traditional gender role attitudes. Implications for research and practice are discussed. *Journal of International Business Studies* (2008) 39, 795-813, doi: 10.1057/palgrave.jibs.8400384

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INTRODUCTION

All societies develop gender role attitudes, "the opinions and beliefs about the ways that family and work roles do and should differ based on sex" (Harris & Firestone, 1998: 239). Some societies hold *traditional gender role attitudes* and believe in a clear division of labor, where "men must be more concerned with economic and other achievements, while women must be concerned with taking care of people in general and children in particular" (Hofstede, 2001: 280). In contrast, non-traditional gender role attitudes in some societies suggest a less distinct gender-role-based division of labor, where men and women share various responsibilities (VanYperen & Buunk, 1991).

Previous research suggests that gender role attitudes are associated with critical issues related to the workplace environment for women (Eyring & Stead, 1998; Hammick & Acker, 1998; Kirchmeyer, 2002; Schreiber, 1998). Given the significant importance of managers' gender role attitudes to the workplace environment for women, and the sustained growth in international trade, we believe that it is crucial to further the understanding of gender role attitudes from a cross-national perspective.

Our paper offers several contributions. Most importantly, this study focuses on *managers' traditional gender role attitudes*, an

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area not addressed by prior research. Although studies in sociology and social psychology have focused on gender roles mostly at a domestic level (e.g., Lipman-Blumen, 1984, for gender roles and power; VanYperen & Buunk, 1991, for the relationship between sex role attitudes and marital satisfaction), the concern is more general as opposed to managerial. Similarly, other sociological research has considered related issues such as occupational sex segregation (i.e., the degree to which occupations tend to be dominated by specific genders: Chang, 2000; Charles & Grusky, 1995), the effects of such sex segregation on earnings (Firestone, Harris, & Lambert, 1999), and determinants of sex segregation both domestically (Charles & Grusky, 1995) and internationally (Chang, 2000).

While providing an important -conceptual basis for our study, the above sociological inquiries did not focus on managers (as a small subset of society), and considered mostly the US domestic situation. However, our study makes an important contribution by providing enhanced understanding of the cross-cultural antecedents of gender role attitudes in a large number of countries, including non-Western societies such as Bangladesh and Pakistan, among others. Earlier research has shown that the national context provides significant guidance for managers handling daily events in their organizations (e.g., Gibson, 1995; Smith, Peterson, & Schwartz, 2002), and we expected similar effects for managerial attitudes.

Another critical contribution of this manuscript is providing guidance using multilevel analyses for small country sample sizes. Most international business researchers are constrained by the costs and difficulties of country-level data collection, and typically have small sample sizes. However, as more of these researchers use multilevel techniques such as hierarchical linear modeling, they are facing low statistical power for level 2 (i.e., nation-level) analyses and potentially unstable parameter estimates because of small sample sizes. Researchers seldom address such small sample size issues (Bowers & Drake, 2005). In this paper we discuss some important ways to assess one critical issue associated with small sample sizes in cross-level research, namely parameter stability. As more researchers use cross-level techniques such as hierarchical linear modeling, this manuscript provides some possible ways to deal with modest sample sizes.

COUNTRY INSTITUTIONAL PROFILE AND GENDER ROLE ATTITUDES

We use Kostova's (1999) country institutional profile as the basis for specifying theoretically relevant country-level antecedents of managers' gender role attitudes. The country institutional profile refers to "the set of all relevant institutions that have been established over time, operate in that country, and get transmitted into organizations through individuals" (Kostova, 1997: 180). We also agree with Kostova's (1997) assertion that the selected country institutions have to be "domain-specific" and therefore consider specific cognitive (e.g., shared knowledge), normative (e.g., values and norms), and regulatory (e.g., laws and rules) elements that are relevant to the specific phenomenon under study, such as in our case managers' traditional gender role attitudes.

Cognitive Context

The cognitive component of the country institutional profile reflects the cognitive structures and categories widely shared among individuals (e.g., shared knowledge). As Kostova (1999: 314) points out, "cognitive programs such as schemas, frames, inferential sets, and representations affect the way people notice, categorize, and interpret stimuli from the environment," referring to those elements that have a "taken for granted" aspect.

In this paper, we consider two important cognitive social institutions, namely the educational system and the degree of religiosity. Of the many other cognitive social institutions such as polity, the economic system, and social stratification (Martin, 2004), the gender literature suggests that education and religiosity are arguably the most important elements of the institutional environment for developing the taken-for-granted elements of gender roles (Lindsey, 2005). Previous research provides empirical evidence that gender role attitudes are strongly related with education (Banaszak & Plutzer, 1993) and religiosity (Himmelstein, 1986). As we discuss below, both social institutions are important transmitters of norms and values that lead to shared views of gender role attitudes (Inglehart & Baker, 2000; Lindsey, 2005).

Education. Education is a social institution that provides "socializing experiences which prepare individuals to act in society" (Meyer, 1977). The educational system therefore plays an important

role of transmitting societal norms and beliefs from generation to generation (Turner, 1997).

To examine the link of the educational system with managers' gender role attitudes, we take a sociological approach (Inglehart & Baker, 2000; Warwick, 1998) and adopt Inglehart's post-materialist thesis in conjunction with modernization theory. Specifically, we argue that national educational systems with greater access, success, and societal significance foster the development of "modern" world values, including concern for gender role equality (Bergh, 2006). This occurs because such educational systems are more likely to inculcate and socialize societal members with a belief in equality and in individual freedom (Warwick, 1998). Furthermore, Wilensky (2002) argues that increased educational access gives more women the ability to participate in the workforce. This leads to acceptance of more modern gender role attitudes as more women work alongside men.

Although we adopt this modernization view of the effects of education as a social institution, we recognize that other factors may mute or reverse such effects. For instance, Inglehart and Baker (2000) argue that how countries experience the effects of education may differ based on the level of democracy, cultural persistence, or even religion. Japan and South Korea serve as specific examples where we believe that the persistence of normative/cultural institutional profiles regarding power distance and masculine roles possibly mutes the otherwise modernizing effects of their well-developed educational systems on managers' gender role attitudes.

Additionally, Lindsey (2005) argues that the content of education may also affect gender role attitudes. For instance, if the educational content tends to reinforce gender stereotyping (boys doing more interesting or "heroic" things than girls in textbooks, or other gendered curriculum), it is likely that people will share more traditional gender role attitudes. However, other things being equal, we offer the modernization hypothesis as the more general underlying effect.

Hypothesis 1: The level of educational system development in a society relates negatively to managers' traditional gender role attitudes.

Religiosity. Religions - the shared set of beliefs, activities, and institutions based on faith in supernatural forces (Stark & Bainbridge, 1985) - continue to be important institutions in most

societies (Iannaccone, 1998). Religious institutions often prescribe what is considered right and wrong, acceptable and unacceptable (Turner, 1997).

Previous research suggests that most religions encourage and reinforce values consistent with traditional gender roles (see Lindsey, 2005, for most religions; Mayer & Smith, 1985, and Sjoberg, 2004, for Catholicism and Protestantism), although there are certainly variations (Hofstede, 1998a). Banaszak and Plutzer (1993: 149) note that most "Western religious institutions tend to have advanced and reinforced traditional gender norms that include separate subordinate positions for women." Additionally, even the non-Western countries in our sample have religions promoting women's roles subordinate to men's (see Lindsey, 2005, and Ludwig, 2001, for Islam, Buddhism, and Hinduism).

Our approach of linking religion irrespective of forms of religion is not novel. For example, at the individual level, dimensions of religiosity have been linked to well-being (Ellison, 1991), health (Ellison & Sherkat, 1995), and even deviance (Tittle & Welch, 1983), independent of the individual's religious affiliation. In a review, Iannaccone (1998) also discusses the many economic variables that are related to religion, irrespective of the type of religion. However, most importantly and consistent with our approach, regardless of the dominant religion practiced in a country, country-level religiosity measures have been linked to economic growth (Barro & McCleary, 2003) and even acceptability of tax fraud (Stack & Kposowa, 2006). Verweij (1998) also found that nation-level measures of religiosity correlate with general cultural values supporting distinctive role differentiations.

Because most religions tend to promote distinct gender roles, and most societal members use religion to justify such arrangements (Banaszak & Plutzer, 1993), countries with higher levels of religiosity are more likely to have individuals exposed to views promoting traditional gender roles (Lindsey, 2005). As people interact in society and conform to prevailing norms supporting traditional gender roles (Moore & Vanneman, 2003), it is also more likely that managers in such societies view traditional gender roles as the norm. Thus:

Hypothesis 2: The degree of religiosity in a society relates positively to managers' traditional gender role attitudes.

Normative/Cultural Context

A country's normative institutional component consists of "social norms, values, beliefs and assumptions that are socially shared and are carried by individuals" (Kostova, 1997: 180). In the Busenitz, Gomez, and Spencer (2000) conceptualization of a country institutional profile, the normative element is similar to the concept of national culture. Through the embodied values, beliefs, and assumptions, national culture encourages and rewards the pursuit of some types of goal while discouraging and sanctioning others (Schwartz, 1999).

To consider the normative component of the institutional profile, we used cultural dimensions from both the Global Leadership and Organizational Behavior research (GLOBE) (House, Ranges, Javidan, Dorfman, & Gupta, 2004) and Hofstede (2001). Several reasons support this decision. First, GLOBE and Hofstede provided dimensions that we could relate theoretically to gender role attitudes. Second, Hofstede's (2001) national culture scheme has dominated management research, and remains one of the most cited works in the *Social Science Citation Index* (Chandy & Williams, 1994). Although not without critics (House et al., 2004), Hofstede's dimensions have been replicated and have received extensive validation (Hofstede, 2002). Finally, the GLOBE framework and measures represent the latest attempt to conceptualize and measure culture at the national level. It also has significant conceptual overlap-with the Hofstede framework.

To consider normative/cultural dimensions, regardless of their origin with Hofstede or GLOBE, we followed Kostova's (1997) recommendations to use only those elements that theory suggests are *most relevant* to the issue under investigation. We chose only those theoretically compelling cultural dimensions that are more likely to relate to managers' gender role attitudes.

From the Hofstede cultural scheme, we used uncertainty avoidance, power distance, and masculinity. The primary reason for choosing these cultural dimensions is that they represent a more conservative and masculine-dominated hierarchical society, and thus seem more likely to preserve traditional gender role attitudes. Similar to previous research (Parboteeah & Cullen, 2003), we excluded Hofstede's cultural dimension of individualism because of its high correlation with power distance. Additionally, individualism does not reflect the hierarchical or status nature of society, and we

therefore do not expect individualism to be conceptually related to traditional gender roles.

Although the GLOBE study identifies nine dimensions, we used power distance, uncertainty avoidance, assertiveness, and gender egalitarianism. Similar to our argument for the Hofstede dimensions, we expected that these cultural dimension*Identify more traditional, male dominated, and hierarchical societies with more traditional gender roles.

We excluded both of GLOBE'S collectivism dimensions as they pertain to the influence of the collective in society, and we have no reason to expect relationships with traditional gender role attitudes. Similarly, we had no theoretical support to expect a relationship between gender role attitudes and future orientation, as the latter is concerned more with societies' views of time and the reward for future-oriented behaviors (House et al., 2004: 282). For reasons of parsimony, we excluded the GLOBE dimensions of performance orientation and humane orientation. The use of other cultural dimensions with parallel theoretical logic for links with traditional gender role attitudes drove this decision.

We also note that, as recognized by both Hofstede (2006) and Peterson and Castro (2006), the nine GLOBE factors "may be too highly correlated to be considered distinct at the nation level" (Peterson and Castro, 2006: 513). For instance, Hofstede (2006) re-analyzed the GLOBE data and found that the nine factors could actually be reduced to only five factors that correlate highly with the corresponding Hofstede cultural dimensions. We also looked at the correlation table for our GLOBE scores and found that, for instance, future orientation is highly correlated with uncertainty avoidance. By focusing on only four GLOBE cultural dimensions, we therefore avoid including highly correlated dimensions in the same model.

Uncertainty avoidance. The uncertainty avoidance dimension refers to the degree to which societal members perceive ambiguous and uncertain situations as threatening (Hofstede, 2001). In societies with high uncertainty avoidance, people prefer orderliness, consistency, and structure to uncertainty and ambiguity (House et al., 2004).

Because traditional gender role attitudes emphasize clear gender role differentiation, it is logical to expect high uncertainty avoidance cultures to prefer gender role clarity and hold traditional gender role attitudes. Traditional gender roles,

where women are responsible for caring for children and where men are responsible for economic achievement, reflect clarity and certainty about gender roles. High uncertainty avoidance societies are therefore less likely to tolerate situations where gender roles have no clear definition. We therefore argue that uncertainty avoidance and traditional gender role attitudes are positively related.

Hypothesis 3: Uncertainty avoidance relates positively to managers' traditional gender role attitudes.

Power distance. Power distance refers to the degree to which members of a society expect power to be distributed hierarchically (Hofstede, 2001; House et al., 2004). In general, in high power distance countries people accept inequalities as a legitimate basis of relationships, and the common perception is that power differences are basic to proper societal functioning. In contrast, individuals in low power distance societies believe that everyone should be equal, and that inequalities should be minimized (Hofstede, 2001).

In high power distance societies there is a general emphasis on hierarchy and control from people at the top (Hofstede, 2001). Such societies tend to be more traditional, where women are typically lower in this hierarchy, and people are more likely to accept such inequalities (Hofstede, 2001; House et al., 2004). In contrast, in low power distance societies, as argued by Lee, Pillutla, and Law (2000), individuals tend to react negatively when they feel treated unfairly, and are more likely to find ways to minimize such inequalities. Therefore, consistent with Bajdo and Dickson (2001), we propose the following:

Hypothesis 4: Power distance relates positively to managers' traditional gender role attitudes.

Masculinity, gender egalitarianism, and assertiveness. Masculinity and the GLOBE equivalents of assertiveness and gender egalitarianism are expected to relate to traditional gender roles, as they tap directly into societal values regarding gender roles. According to Hofstede (2001: 297), the cultural dimension of masculinity stands for a society with clearly distinct gender role expectations: men are assertive, tough, and focused on material success; women are modest, tender, and concerned with the quality of life. We therefore expect Hofstede's masculinity cultural dimension

to relate positively to traditional gender role attitudes. By definition, a masculine society "stands for a society in which social gender roles are clearly distinct" (Hofstede, 2001: 297).

Hofstede's cultural dimension of masculinity represents a continuum, with masculinity at one extreme and femininity at the other (Hofstede, 2001). However, the GLOBE researchers have argued that masculinity and femininity are not extremes of the same cultural dimension. Therefore they conceptualized masculinity-femininity into two different cultural dimensions, namely assertiveness and gender egalitarianism (House et al., 2004).

The GLOBE conceptualization of assertiveness is similar to Hofstede's (2001) masculinity dimension, referring to the degree to which individuals in a society are confrontational and aggressive in social relationships (House et al., 2004). Similar to Hofstede's masculinity, assertive societies are "masculine," emphasizing assertiveness, toughness, material possessions, and lack of caring for others. Given the above, we also expect assertiveness to relate positively to traditional gender roles.

Finally, gender egalitarianism refers to "the degree to which ... society minimizes gender role differences while promoting gender equality" (House et al., 2004: 12). We therefore expect that in societies with higher levels of gender egalitarianism, managers will be less likely to hold traditional gender role attitudes. In contrast, we expect low gender egalitarianism, where gender role differences are emphasized (House et al., 2004), to be positively related to traditional gender roles.

Hypothesis 5a: Hofstede's masculinity relates positively to managers' traditional gender role attitudes.

Hypothesis 5b: GLOBE'S assertiveness relates positively to managers' traditional gender role attitudes.

Hypothesis 5c: GLOBE's gender egalitarianism relates negatively to managers' traditional gender role attitudes.

Regulatory Context

Drawing on institutional theory (Meyer & Rowan, 1991; Scott, 1995), Kostova (1997: 180) defines the regulatory component of a country's institutional characteristics as those "existing laws and rules in a particular national environment, which

promote certain types of behaviors and restrict others." Through rules, boundaries, laws and regulations, the regulatory component aims to ensure stability and order in society (North, 1990; Williamson, 1991).

Government policies promoting more modern gender role attitudes among managers represent the regulatory institutional environment (Chang, 2000). For instance, some countries have specific legislation encouraging female participation at all levels of the workforce (e.g., affirmative action in the US) or laws granting women extra paid leave or employment guarantees during pregnancy and some time after child birth (e.g., many social democracies of Western Europe) (Charles & Grusky, 1995). It should be noted, however, that the effectiveness of such policies might vary. For instance, the mere presence of legislation requiring companies to provide for extra leave and job guarantees during and some time after pregnancy may emphasize employers' reservations regarding the hiring of women because of the potential extra cost of employment. Therefore policies supporting women in the workforce often also include equal opportunity requirements, alongside any pregnancy or maternity benefits.

Extending the work of Chang (2000), we argue that the more regulation and legislation there is aimed at redressing gender equality, the less likely such societies are to be "sex segregation regimes" and the less likely it is that managers will have traditional gender role attitudes. We expect that societies with more legislation concerned with redressing gender equality are more likely to focus on agendas relevant to working women (e.g., providing for child care support or facilitating re-entry of women into the workforce after maternity leave) (Flammang, 1985; Saint-Germain, 1990).

Certainly, some reciprocal relationship between evolving gender role attitudes and the propensity of a nation to create institutions that promote gender equality is likely. However, we believe that the motivation for creating such institutional structures occurs when a society's members recognize that gender equality should exist, but will not occur in a timely manner without regulative institutional pressures. Thus, after the tipping point of attitude change concerning what should be leading to institutional creation, we believe that the dominant force of change is institutional.

As coercive institutional pressures compel companies to adjust to equal opportunity employment practices, managers are more likely to shed

traditional views of gender roles. In contrast, in societies with less regulation, managers are less likely to address such issues, as there is less coercive force to encourage people to abandon traditional gender role attitudes.

Hypothesis 6: The degree of institutional regulation, of gender equality relates negatively to managers' traditional gender role attitudes.

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METHODS

Sample

All individual-level data for the present study came from the 1995-1997 World Values Survey (WVS) wave (Inglehart, Basanez, & Moreno, 1998; World Values Study Group, 2000), as provided by the Inter-University Consortium for Political and Social Research. The 1995-1997 WVS wave is a survey of representative national samples from over 50 societies (World Values Study Group, 2000). To prepare the questionnaire, the WVS research team followed a number of steps to ensure appropriate cross-cultural equivalence of the variables. Specific details regarding these steps are available from the Inter-University Consortium for Political and Social Research website (see <http://www.icpsr.umich.edu/>).

The WVS participants collected data with face-to-face interviews. In most cases, the interviewer read the various questions and recorded the interviewees' responses. Interviews in Eastern European countries were conducted by national academies of science or university-based institutes, while interviews in Western countries were carried out by professional survey organizations, typically the Gallup organization. Hui, Au, and Fock (2004) provide an additional description of the WVS methods in an earlier *JIBS* article. A full explanation of the WVS methodology is available from the Inter-University Consortium for Political and Social Research website (see <http://www.icpsr.umich.edu/>).

Although the World Values Study Group collected data in over 50 countries from various occupational categories ranging from managers to unskilled manual workers to farmers, similar to Cullen, Parboteeah, and Hoegl (2004), we focused our analyses on managers only. We argue that it is critical to understand gender role attitudes of managers, because managers have stronger influences on how the organization deals with women and gender issues than other occupational groups such as workers. Furthermore, our measure shows acceptable overall sample reliability only for

managers rather than other occupational groups. Because the WVS team collected data from random household samples, it is likely that, in many countries, the sampled non-managerial population has low education. This could potentially explain the low reliability for other occupational groups.

Consistent with procedures recommended by Singh (1995) for establishing measure equivalence across countries, we computed the reliability of the gender role measure separately for each country, and included in the study only those countries that had reliabilities of 0.60 and higher. Although reliabilities of 0.70 are preferable, given a total sample reliability of 0.70, a reliability criterion of above 0.60 is acceptable (Bagozzi, 1994; Cohen, Cohen, West, & Aiken, 2003). Moreover, as we report later, the high intra-class correlations for the nation-level measures indicate high reliabilities for estimates of nation-level means, the main focus of our study. We also note that previous research on gender role attitudes used similar reliability criteria (Sjoberg, 2004).

Nineteen countries of the WVS countries had reliabilities above our study-inclusion criterion of 0.60. Hofstede's (2001) normative/cultural dimensions were available for all of these countries. This sample included 2,086 managers living in 19 nations: Australia, Bangladesh, Brazil, Chile, Finland, Germany, Japan, Mexico, Norway, Pakistan, Peru, Poland, Slovenia, South Korea, Spain, Sweden, Turkey, USA, and Uruguay.

For the analyses using GLOBE'S normative/cultural measures, five of the 19 WVS countries (Bangladesh, Pakistan, Poland, Peru, and Uruguay) did not have GLOBE normative/culture measures. Excluding these countries reduced the sample to 1584 managers living in 14 nations for the GLOBE measure-based analyses. Additional sample details are available from the authors.

Measures

Managers' traditional gender role attitudes (individual level of analysis). Consistent with past research (Banaszak & Plutzer, 1993; Sjoberg, 2004; VanYperen & Buunk, 1991), we measured gender role attitudes using four items from the WVS. Interviewers read the following statement: "People talk about the changing roles of men and women today. For each of the following statements I read out, can you tell me how much you agree with each?" and asked the interviewee to respond on a four-point scale (1 strongly disagree to 4

strongly agree). The first three items are: "On the whole, men make better political leaders than women do," "If a woman earns more money than her husband, it's almost certain to cause problems," and "A university education is more important for a boy than for a girl." Finally, the fourth item asked respondents their level of agreement with the following statement: "When jobs are scarce, men should have more right to a job than women." Factor analysis by country shows that these four items load consistently on only one factor.

Country institutional profile. Our measures of nation-level social institutions borrow directly from those commonly used in the extensive comparative research in economics (e.g., Durham, 1999), political science (Duch & Taylor, 1993), and sociology (Smits, Ultee, & Lammers, 1997).

Although cross-national researchers typically measure the effects of national education systems with a single indicator, most often using the United Nations Development Program's (2003) educational attainment score (Parboteeah & Cullen, 2003; Parboteeah, Cullen, & Lim, 2004), we developed a multiple indicator measure of *educational system development* that is more reflective of the accessibility, success, and importance of education in a nation. The educational development score reflects the degree to which the population is literate, and thus has achieved basic levels of education, and the degree to which the population has completed schooling. In addition, we added one more measure, namely the percentage of gross domestic product that goes into education expenditures. This also, provides an indication of the extent of education access for the population. The more resources are devoted to education, the more likely it is that education is available to a larger proportion of the population. Data were obtained from the *World Bank World Development Indicators* (at <http://publications.worldbank.org/e-commerce>). These two-item measures had a reliability of 0.81. To weight each component equally, we standardized each item, taking the average to form our educational accessibility score.

As noted earlier, we considered societal-level religiosity rather than religion type mixtures and memberships as the best indicator of the effects of religion on gender role attitudes. Although previous research has measured national *religiosity* with the percentage of people attending religious services weekly (Parboteeah et al., 2004), extant research suggests additional dimensions for the

concept of religiosity (Verweij, 1998). We therefore considered three items to tap a nation's religiosity. First, we used the percentage of people in each country that reported attending religious services, a comprehensive measure of attendance of religious services around the world. Second, we used the national average score on the WVS question regarding the degree to which people reported believing in God. Third, we used the national average on the WVS question regarding the degree to which people believed that God was important in their lives. These three items were then standardized and averaged to form our nation-level religiosity measure. Reliability for this scale was 0.96.

For our normative/national culture measures, we used the scores reported in Hofstede (2001) and House et al. (2004). The GLOBE researchers assessed their cultural dimensions in-the form of "should be" judgments (i.e., the way things should be) and "what is" judgments (i.e., the way things are). Given that we are interested in understanding how the current cognitive environment relates to gender role attitudes, we used the "should be" scores, reflective of the normative component of the cultural values of managers. Furthermore, we used the adjusted scores for the GLOBE measures (House et al., 2004: 742-747) to eliminate culturally biased response patterns.

We also found that the Hofstede and corresponding GLOBE scores did not necessarily correlate as expected. For instance, GLOBE's power distance was uncorrelated with Hofstede's power distance ($r=0.03$; $p>0.01$). Although surprising, this is nevertheless consistent with GLOBE's discussion of the correlation in the GLOBE book (House et al., 2004). One possible reason for the difference is that Hofstede's data were collected from marketing and service employees from the same multinational company, whereas the GLOBE data were collected from middle managers (Peterson, 2004). Furthermore, Hofstede's dimensions also seem to correspond to the "as is" rather than the "should be" nature of society. However, uncertainty avoidance for both schemes was significantly correlated in the expected direction ($r=0.65$; $p<0.01$). Masculinity was also positively correlated with GLOBE's assertiveness. The full matrix of correlations between the Hofstede and GLOBE cultural dimensions for the countries studied here is available from the authors.

Consistent with Chang's (2000) approach, we constructed a measure of the regulatory institutional environment with five items representing

various aspects of country gender regulations. Our regulatory measure included:

- (1) female representation on the legislature as a percentage of all legislators (similar to Kenworthy & Malami, 1999) (available from the Inter-Parliamentary Union website, <http://WTiSiv.ipu.org/>); and
- (2) percentage of women at ministerial level (World Bank, 2003).

These were included as more women in the legislative and government components of a country imply the existence of more legislation supporting and enforcing gender equality (Thomas, 1991). Representation of women in the legislature as well as at top levels of government also suggests that such policies are enacted and enforced, as well as reviewed and revised if found ineffective. Additional items were dummy variables, namely:

- (3) the ratification of the United Nations Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW) (see Liu & Boyle, 2001, for the example of Japan) (1 = ratified);
- (4) the presence of affirmative action policies (1 = affirmative action present); and
- (5) the ratification of the International Labor Organization Convention 111 prohibiting discrimination against women in employment and occupation (1 = ratified).

The latter measures were available from the International Labour Organization (ILO) website (<http://www.ilo.org>). Similar to Chang's (2000) more abbreviated measure, these measures were standardized and averaged to form a regulatory index, with a reliability of 0.74.

Individual-level controls. Previous research at the individual level of analysis suggested a number of individual-level variables that potentially influence gender role attitudes (Banaszak & Plutzer, 1993; Sjoberg, 2004; VanYperen & Buunk, 1991). We therefore also controlled for those important individual-level variables as collected by the WVS team. We controlled for *gender* (dummy variable with 1=male) and *age* (in number of years), as previous research has shown that these individual-level variables influence gender role attitudes (Banaszak & Plutzer, 1993; Sjoberg, 2004; VanYperen & Buunk, 1991). Consistent with previous research (Banaszak & Plutzer, 1993), we

controlled for individual *religiosity*. We measured religiosity through attendance at religious activities. Respondents were asked, "Apart from weddings, funerals and christenings, about how often do you attend religious services these days?" Previous research suggests that frequency of attendance at religious services is a valid cross-cultural and objective measure of a person's religiosity (Parboteeah et al., 2004). In line with previous research (Banaszak & Plutzer, 1993), we controlled for *education* (highest degree achieved). Because of cross-country differences in the ordinal levels used by WVS to measure educational achievement, we standardized education scores within each country. Finally, we controlled for subjective *social class*, assessed by respondents' self-rating on a scale ranging from lower to upper class. The assumption is that respondents rated their social class relative to others within their country and its social class system. Unfortunately, we were not able to control for other important individual controls such as industry of employment or gender of the interviewer, as the WVS did not collect those.

Hierarchical linear modeling. Given that our dependent variable and control variables were measured at the individual level, and the independent variables (cognitive, normative, and regulative institutions) were measured at the country level, our hypothesis testing necessitated hierarchical or cross-level techniques. Conventional statistical techniques are inadequate to test hierarchical models and can result in aggregation bias, misestimated precision and levels of analysis problems (Bryk & Raudenbush, 2002). Therefore, because ordinary least squares (OLS) techniques have been criticized for their inadequacy in addressing cross-level issues in studies such as ours (Rousseau, 1985), we used hierarchical linear modeling (HLM) to test our cross-level relationships (Bryk & Raudenbush, 1992, 2002; Snijders & Bosker, 2003).

Since our study involved assessing the impact of country-level factors on individuals, the HLM models consisted of two levels (Bryk & Raudenbush, 1992). At level 1, the unit of analysis was the individual, and each person's outcome was a function of a set of individual characteristics (e.g., age, gender). At level 2, the unit of analysis was the nation, where the dependent variable was hypothesized to depend on specific country factors adjusted for the regression coefficients in the level 1 model.

Since our hypothesis tests were for main effects of level 2 variables on the country mean level 1 outcome (managers' gender role attitudes) adjusted for within-country level 1 predictors, we used intercept-as-outcomes models (as opposed to a slopes-as-outcomes model). Furthermore, given that we are interested in the effects of country-level factors after controlling for all individual-level factors, we used the grand-mean centering option for our individual-level variables (Hofmann & Gavin, 1998). Finally, because we are interested in the effects of the level 2 variables on a level 1 variable, we used a random effects model (as opposed to a fixed effect model) to deal with variance in our individual-level variables.

Although the use of HLM addresses many of the unique problematic issues associated with cross-level analysis, few researchers attend to sample size (Bowers & Drake, 2005). Because most cross-national researchers are constrained by the costs and difficulties of country-level data collection and the limited country coverage of national culture measures, they often have small sample sizes. Small sample sizes generally have low statistical power for level 2 (i.e., nation-level) analyses, and parameter estimates can be unstable. Therefore, below we discuss power and parameter estimate issues in the context of our cross-level analysis.

Most research on the appropriate level 2 HLM and multilevel sample sizes focuses on the issue of power (Raudenbush, Spybrook, Liu, & Congdon, 2006; Snijders & Bosker, 1993, 2003). This is not surprising, given that small sample sizes lack the power to detect all but the strongest effect sizes, and are thus subject to Type II error (Snijders & Bosker, 2003). However, as we report below, significant results for the various level 2 predictors in this study show that we have been able to detect effects even with a small sample size. As Raudenbush et al. (2006: 7) note, "it is logically impossible for a researcher who has rejected H_0 to have made a Type II error." Our findings of significant effects were therefore robust, as they were detected with relatively small sample sizes.

Of more relevance to our paper is the appropriate level 2 sample size needed for the number of level 2 predictors, something also often ignored in HLM analyses (Bowers & Drake, 2005). Concerns are that small ratios of N to predictor make parameter estimates unstable, or magnify the effects of multicollinearity (Bryk & Raudenbush, 2002). Various "rules of thumb" exist for the ratio of N to predictors in regression analysis. Most range from

a low of 5:1 (Raykov & Widaman, 1995) to a high of 30:1 (Pedhauzer, 1997). Unless directly related to power, most of these rules seem based on tradition.

To offset the potential instability of parameter estimates, and to alleviate concerns of being outside the "rule of thumb" ranges of N to predictor ratios, we addressed these issues in three ways. First, we adopted the approach suggested by Bryk and Raudenbush (2002) to deal with small level 2 samples. Bryk and Raudenbush (2002: 267) propose that researchers divide the model into "conceptually distinct subsets" and then estimate a separate model for each subset. This not only increases the size of A^f relative to the number of predictors but also increases the power of the test for each individual variable. Our conceptual approach of subdividing the country institutional profile into cognitive (two variables), normative (three to four variables), and regulative (one variable) components identified the subgroups of country-level variables for separate analyses. Second, we also estimated unique models for each of the level 2 predictors. By showing that the level 2 predictors were consistent across single-variable, conceptual subgroup, and total models, we provide further

evidence of parameter estimate stability. Finally, we also note that testing our normative institutional hypotheses using two different national culture frameworks (Hofstede and GLOBE) provided an additional test of the stability of results.

The decision rule for accepting or rejecting the hypotheses was based on a number of considerations. We considered significance in the overall model as well as the sub-models (i.e., cognitive, normative, and regulative) for each of the components of the country institutional profile. Because of limited level 2 sample size and statistical power, we used a significance level of $p < 0.10$. However, if results were not significant for any of the models (i.e., overall models or sub-models based on the country institutional profile), we rejected the hypothesis. Given our aim of showing consistency among models, we believe that this decision rule provides a stringent and robust test of our hypotheses.

RESULTS

Tables 1 and 2 show matrices of correlations and sample statistics of the variables used in this study for level 2 variables for the overlapping country-level samples using Hofstede's or GLOBE's

Table 1 Correlations and descriptive statistics for level 2 with Hofstede normative/cultural dimensions

Variables	Mean	s.d.	1	2	3	4	5	6
1. Gender role attitudes	0.92	0.72						
2. Educational development	8.28*	2.75	-0.56*					
3. Religiosity	0.04	0.96	0.47*	-0.64**				
4. Uncertainty avoidance	73.16	19.35	0.42 [†]	-0.55**	0.35			
5. Power distance	55.53	16.45	0.56*	-0.51***	0.66**	0.53**		
6. Masculinity	45.42	22.31	0.38	-0.29	0.27	0.30	0.27	
7. Degree of regulation	0.40	0.71	-0.53*	0.41**	-0.28	-0.34	-0.31	-0.51*

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
 $N = 19$; degrees of freedom = 18.

Table 2 Correlations and descriptive statistics for level 2 with GLOBE normative/cultural dimensions

Variables	Mean	s.d.	1	2	3	4	5	6	7
1. Gender role attitudes	0.93	0.71							
2. Educational development	0.20	0.70	-0.70**						
3. Religiosity	0.16	0.92	0.54*	-0.42 [†]					
4. Uncertainty avoidance	4.47	0.61	0.65**	-0.51**	0.56*				
5. Power distance	2.61	0.25	0.13	0.25	0.27	-0.17			
6. Assertiveness	3.90	0.79	-0.02	0.07	-0.23	0.10	0.30		
7. Gender egalitarianism	4.74	0.29	-0.65**	0.36	-0.23	-0.47*	0.01	-0.25	
8. Degree of regulation	0.28	0.70	-0.53*	0.36	-0.04	-0.24	-0.20	-0.23	0.42 [†]

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
 $N = 14$; degrees of freedom = 13.

normative/cultural measures respectively. Since our hypotheses concerned only level 2 (country) effects, and to reduce the number of tables, we report only the level 2 correlations and statistics. In these matrices the dependent variable, traditional gender role attitudes, is the country mean adjusted for the within-country individual (i.e., level 1) controls, as is consistent with HLM analyses. Correlations and sample statistics for individual-level variables are available from the authors.

To test our hypotheses, we followed Bryk & Raudenbush's (2002) small samples procedure discussed earlier. Because the use of normative/cultural measures based on Hofstede and GLOBE resulted in five fewer countries having GLOBE measures, we conducted separate HLM analyses for samples based on measurement source. Tables 3 and 4 show the results for each sample. The tables contain standardized coefficients with their associated standard errors and significance levels. As suggested by Bryk and Raudenbush (2002), we transformed all independent and dependent variables into standard scores prior to the HLM analyses to obtain standardized estimates.

In both Tables 3 and 4, Model 1 shows the overall model with all predictors. Model 2 shows the sub-model for the cognitive component. Model 3 shows the normative/cultural component sub-model. Model 4 shows results for the regulative aspect of the country institutional model. Models 5 and 6 show the separate level 2 parameter estimates for education and religion, respectively. Models 7-9 in Table 3 show the separate parameter estimates for normative/cultural measures from Hofstede. In Table 4, Models 7-10 show the separate parameter estimates for normative/cultural measures from GLOBE.

Following Bryk and Raudenbush (2002: 70, 74), we estimated the explained variance for our level 2 variables representing the institutional profile. The intraclass correlation or the proportion of variance between countries in managers' traditional gender role attitudes was 23% for the sample using Hofstede normative/cultural measures and 21% for the sample using GLOBE normative/cultural measures. For the Hofstede measures-based model, the full model containing all institutional profile variables explained 70% of the available between-country variance in managers' traditional gender role attitudes. Furthermore, the normative, cognitive, and regulative components explained 35, 23, and 13% of the available between-country

variance respectively. For the GLOBE measures-based model, the full model containing all institutional profile variables explained 63% of the available between-country variance. The normative, cognitive, and regulative components models for the GLOBE sample explained 32, 20, and 10% of the available between-country variance respectively.

Individual controls. To better identify the effects of the nation-level institutional profile on managers' traditional gender role attitudes, we controlled for five important individual-level characteristics with potential effects on gender role attitudes. Tables 3 and 4 show that four of the individual-level control variables had significant relationships with managers' traditional gender role attitudes. Consistent with Sjoberg (2004), we found that older managers have more traditional gender role attitudes. Furthermore, consistent with prior research, our results showed that male managers have more traditional gender role attitudes (Banaszak & Plutzer, 1993). Our measure of individual religiosity also had a positive and significant relationship with managers' traditional gender role attitudes. Such results are consistent with our explanations that religiosity tends to be positively related to traditional gender roles (Sjoberg, 2004). Consistent with Banaszak and Plutzer (1993), we also found that individual-level educational achievement had a negative relationship with traditional gender role attitudes. Finally, managers' social class was not related to traditional gender role attitudes.

Hypotheses. Tables 3 and 4 show that the results for level 2 institutional profile variables, using either Hofstede or GLOBE normative/cultural measures, were very stable across Models 1-5. This stability across models is critical, as the small level 2 sample sizes can magnify multicollinearity among level 2 predictors (Bryk & Raudenbush, 2002). To provide a further test of the stability of the results, we also ran separate models for each of the level 2 predictors. Results are generally consistent with the final full models, suggesting that multicollinearity is not an issue.

Regarding the cognitive institutional profile variables, results reported in Table 3 (Models 1, 2 and 5) and Table 4 (Models 1, 2 and 5) supported Hypothesis 1 and show that educational system development has the anticipated negative relationship with traditional gender roles for samples using either Hofstede's or GLOBE's normative/cultural

Table 3 Hierarchical linear modeling results for managers' traditional gender role attitudes and country institutional profile using Hofstede's normative/cultural dimensions

Variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8		Model 9	
	Overall model		Cognitive sub-model		Normative sub-model		Regulative sub-model		Education		Religion		Uncertainty Avoidance		Power Distance		Masculinity	
	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.
<i>Level 1</i>																		
Age	0.01**	0.00	0.01**	0.00	0.01**	0.002	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00
Gender	0.32***	0.06	0.32***	0.06	0.32***	0.06	0.32***	0.06	0.32***	0.06	0.32***	0.06	0.32***	0.06	0.32***	0.06	0.32***	0.06
Education	-0.13*	0.05	-0.13*	0.05	-0.13*	0.05	-0.13*	0.05	-0.13*	0.05	-0.13*	0.05	-0.13*	0.05	-0.13*	0.05	-0.13*	0.05
Religiosity	0.05***	0.01	0.05***	0.01	0.05***	0.01	0.05***	0.01	0.05***	0.01	0.05***	0.01	0.05***	0.01	0.05***	0.01	0.05***	0.01
Social class	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02
<i>Level 2</i>																		
Cognitive																		
Educational development	-0.06 [†]	0.03	-0.35***	0.02					-0.39***	0.02								
Religiosity	0.04	0.03	0.06*	0.03							0.33***	0.02						
Normative/cultural																		
Uncertainty avoidance	0.07**	0.03			0.11***	0.02							0.35***	0.02				
Power distance	0.25***	0.04			0.31***	0.02									0.42***	0.02		
Masculinity	0.03	0.02			0.14***	0.02											0.27***	0.02
Regulative																		
Regulation	-0.17***	0.02					-0.29**	0.09										

[†]p<0.10; *p<0.05; **p<0.01; ***p<0.001.

Table 4 Hierarchical linear modeling results for managers' traditional gender role attitudes and country institutional profile using GLOBE's normative/cultural dimensions

Variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8		Model 9		Model 10		
	Overall model		Cognitive sub-model		Normative sub-model		Regulative sub-model		Education		Religion		Uncertainty avoidance		Power distance		Gender egalitarianism		Assertiveness		
	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	
<i>Level 1</i>																					
Age	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	0.01**	0.00	
Gender	0.26***	0.06	0.26***	0.06	0.26***	0.06	0.26***	0.06	0.26***	0.06	0.26***	0.06	0.26***	0.06	0.26***	0.06	0.26***	0.06	0.26***	0.06	
Education	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	-0.11*	0.05	
Religiosity	0.06**	0.02	0.06**	0.02	0.06**	0.02	0.06**	0.02	0.06**	0.02	0.06**	0.02	0.06**	0.02	0.06**	0.02	0.06**	0.02	0.06**	0.02	
Social class	-0.002	0.02	-0.002	0.02	-0.002	0.02	-0.002	0.02	-0.002	0.02	-0.002	0.02	-0.002	0.02	-0.002	0.02	-0.002	0.02	-0.002	0.02	
<i>Level 2</i>																					
Cognitive																					
Educational development	-0.15***	0.04	-0.33***	0.06					-0.35***	0.02											
Religiosity	-0.001	0.04	0.04	0.08							0.22***	0.02									
Normative/cultural																					
Uncertainty avoidance	0.13**	0.05			0.25***	0.03							0.39***	0.03							
Power distance	0.11**	0.04			0.15***	0.03									0.09**	0.03					
Gender egalitarianism	-0.21***	0.03			-0.25***	0.02											-0.32***	0.02			
Assertiveness	-0.10**	0.03			-0.13***	0.03														-0.08**	0.03
Regulative																					
Regulation	-0.07**	0.03							-0.22***	0.02											

†p<0.10; *p<0.05; **p<0.01; ***p<0.001.

measures. However, Hypothesis 2 regarding religiosity was not supported by these analyses. Religiosity did not show a significant coefficient in either of the overall models, although religiosity did have a positive relationship with managers' traditional gender roles when entered separately in the model. Our aforementioned decision rule, whereby significant results are needed for both the overall model and the sub-model, led us to reject Hypothesis 2.

With regard to our hypotheses on the normative/cultural dimensions as reflected by the national culture dimensions of Hofstede and GLOBE, results from all models from Tables 3 and 4 provide formal tests and support of Hofstede's uncertainty avoidance (Hypothesis 3), power distance (Hypothesis 4), and GLOBE's gender egalitarianism (Hypothesis 5c). However, results for assertiveness (Hypothesis 5b) failed to support the corresponding hypothesis. Results from Table 4 (Models 1, 3, and 9) show that assertiveness is negatively related to traditional gender role attitudes. Furthermore, our results for masculinity lack significance in the overall model, and therefore we rejected Hypothesis 5d, even though the sub-model for the normative element and the individual predictor model show significant coefficients. Again, our more stringent decision rule was that significance must be demonstrated in the overall model and confirmed in the sub-model and the individual predictor model (see aforementioned decision rule and our results on religiosity).

Finally, we hypothesized that the regulative context relates negatively to managers' gender role attitudes (Hypothesis 6). Results from all models as shown in Tables 3 and 4 provide strong support for our hypothesis.

To explicate the findings beyond statistical description, we observed that countries such as Norway, Sweden, and Finland had some of the lowest scores on our dependent variable, thus having the most prevalent non-traditional gender roles among managers. In contrast, Turkey, Pakistan, Bangladesh, and South Korea scored the highest on managers' traditional gender role attitudes. Although the use of different normative/cultural dimensions and measures required removal of countries such as Bangladesh, Pakistan, Poland, Peru and Uruguay for one sample, similar results across the full and reduced samples provide further evidence of the stability of our general institutional profile model.

DISCUSSION

We used Kostova's (1997) country institutional profile to develop conceptual links between important country-level facets and managers' gender role attitudes. Results showed that all three components of the country institutional profile, namely the cognitive, normative and regulative components, influence managers' traditional gender role attitudes. Furthermore, our results provide support for the GLOBE framework and the robustness of the Hofstede framework despite the many criticisms leveled against it by the GLOBE group (House et al., 2004). Below we discuss the results for each of the country institutional profile components.

Cognitive Context

As expected, societies with more productive and successful educational systems have more egalitarian gender attitudes. However, we note that our results pertain to the more general sociological modernization perspective on education (Inglehart & Baker, 2000). We did not examine the specific content of educational systems, which may provide richer insights into the link with gender role attitudes. Furthermore, our results also show that the more enduring cultural dimension of power distance may trump some of the effects of education. Such results are consistent with Inglehart and Baker's (2000) view that some factors, such as cultural persistence, may mute the modernizing effects of education.

The non-significant results across the two overall models suggest that religiosity at the national level is not related to managers' traditional gender role attitudes, independent of other components of the institutional context. However, we advance a number of potential explanations for such counter-intuitive results. First, religiosity had the expected positive relationship with traditional gender roles at the individual level. Perhaps religion is more of a personal experience, and manifests its effects on gender roles only at that level. Second, it is also possible that the degrees to which different religions are related to traditional gender role attitudes are different. It is possible that our broad religiosity measure cannot tease out such differences. Third, with modernization, other social institutions such as the educational system and the coercive powers of political institutions that generate gender equality may offset the effects of religiosity. The data suggest such an explanation, as the significant positive relationship of religiosity with managers' traditional gender role attitudes disappears once

educational development enters the model. Finally, it is possible that because many religions stress compassion for the community (Ludwig, 2001) and are taking stronger stances on many social issues (Fisher, 1999), traditional gender roles are changing.

v

Normative Context

Supporting our theoretical argumentations, findings show that power distance was related positively to managers' traditional gender roles. This provided support for our arguments that, in high power distance societies, women are likely to be at the lower ends of the societal hierarchy, and people are more willing to accept such inequalities. Furthermore, as expected, gender egalitarianism was negatively related to managers' traditional gender role attitudes.

It is also important to note the stable results for uncertainty avoidance, consistent with our hypothesizing for both cultural models. Such results are noteworthy given some of the differences between the way the GLOBE researchers and Hofstede measured uncertainty avoidance. While GLOBE's measurement focused exclusively on following of rules (House et al., 2004), Hofstede's measurement included other items such as the respondents' feelings of stress at work as well as the respondents' intention to stay with the company (Hofstede, 2006).

Although the data supported hypotheses for uncertainty avoidance, power distance, and gender egalitarianism, both aspects of masculinity did not have the expected relationships with gender role attitudes. GLOBE's culture dimension of assertiveness related negatively to managers' traditional gender role attitudes, while Hofstede's masculinity had no relationship with gender role attitudes. It may be, as Hofstede (1998b) argues, that assertiveness as a national cultural characteristic encourages not just men but also women to demand and pursue equality more forcefully (or assertively) in society. Our counterintuitive findings for Hofstede's masculinity may provide evidence of the problematic nature of this dimension, as masculinity may be more a reflection of societal values rather than gender roles (Hofstede, 2001).

Regulatory Context

As expected, the more a country has in place legislation regulating gender equality, the less likely managers are to hold traditional gender role attitudes. This suggests that legislation is likely to be related to increased coercive pressures leading managers to accept that women are not limited to specific gender roles (Banaszak & Plutzer, 1993).

Furthermore, the presence of women at the legislative and government levels ensures that the workplace becomes more accepting of egalitarian women roles.

Managerial Implications

This research has implications for organizational leaders. The country variables investigated in this study are readily observable and measurable, and therefore provide important insights for managers. Specifically, for multinational companies, we see two basic managerial reactions to societal contexts that are conducive to traditional gender role attitudes. First, multinationals can enter countries that offer "women-friendly" work environments. Such efforts will ensure that the company has access to qualified women and does not encounter potential gender equality barriers.

Second, multinationals can aim at counteracting societal influences by explicitly choosing to locate in societies with an institutional profile that promotes more traditional gender role attitudes. This strategy could allow the multinational the opportunity of proactively recruiting female talent specifically from countries where more traditional gender role attitudes may generally limit their own development and professional success. For organizations promoting gender equality, this may contribute to a competitive advantage relative to companies operating under more traditional gender role attitudes.

There are many important steps a multinational can take to counteract traditional gender role attitudes. For instance, companies can provide child care and other family facilities for their employees (both male and female), thereby offering concrete assistance to working parents, and signaling the importance of the contribution of the female workforce. Additionally, companies can implement flexible work schedule arrangements to promote career-family balance (Lyness & Kropf, 2005). Formal work-family benefits such as time off for both genders after childbirth, and other benefits, can also be provided. Similarly, we agree with Eagly and Carli (2003: 807) "that organizations can capture the symbols of progressive social change and modernity by appointments of women in key positions." Such actions can be part of a broader communication strategy, proactively clarifying and promoting organizational values of gender equality. Moreover, companies may want to embark on training programs to change the attitudes of their managers in such societies and

hence promote more modern gender roles. The implementation of a clear performance orientation (e.g., through objectives, rewards, and career advancement based on work outcomes) may also strategically offset societal influences emphasizing traditional gender role attitudes and sex segregation. However, in addition to the more formal policies outlined above, the company can also promote informal support of women through a supportive work-family culture (Lyness & Kropf, 2005).

Theoretical Contributions

We believe that this study makes some important theoretical contributions to the management literature. First, we provide evidence of the utility of the country institutional profile (Kostova, 1999) to test a comprehensive theoretical model that complements the previous work that reflected domain-specific approaches (i.e., preference for institutions in sociology and national culture in management) (VanYperen & Buunk, 1991).

Second, we also consider the impact of social institutions and national cultures in a comprehensive model, rather than the more usual reliance on national culture variables. Given that the management literature increasingly considers the effects of nation-level social institutions on individual outcomes (Cullen et al., 2004; Parboteeah & Cullen, 2003; Parboteeah et al., 2004), we go beyond the traditional preference of management researchers to focus primarily on national culture (Hofstede, 2001; House et al., 2004) to explain cross-national differences. Furthermore, we make an important contribution by integrating relevant elements of both Hofstede's framework and the GLOBE study. Such inquiries are important as we start comparing the merits of both influential cultural approaches.

Third, we provide enhanced understanding of gender role attitudes in a relatively large number of countries, including many non-Western nations. As international trade grows, such inquiries are important, given the need to devise appropriate policies to manage the growing female workforce worldwide.

Finally, in addition to the above, another significant contribution in this paper is methodological guidance about how to deal with small level 2 sample sizes. International management researchers seldom have the luxury of sampling large populations to get the appropriate representative samples. In most cases, social scientists have to contend with existing samples (Bowers & Drake, 2005). Hence, given the problematic issues of making probabilistic inferences with a smaller

sample, this manuscript provides three possible solutions to small level 2 sample issues.

Limitations and Areas for Future Research

Despite these contributions, we note below a few limitations of this study along with suggestions for further research. First, secondary data have some obvious disadvantages, as we did not have full control over sample selection, the development of our dependent variable measure, or the full choice of individual-level controls. However, we believe that the data are sufficiently rich, and cover such a wide array of countries, that we could address questions regarding managers' gender role attitudes not possible with the more limited resources available for gathering original data. Programs such as the WVS, which make timely data available to the research community, allow researchers to address many important questions that might otherwise go unanswered.

Second, we did not consider possible interactions among national culture and social institutions. However, we hope that, based on our discussion of direct effects, future research will tackle more complex interactive models of national culture and social institutions. For example, some countries with high educational development levels (e.g., Japan and South Korea) have more traditional gender role attitudes, counter to the general effects of national educational systems. Yet these same countries have the traditional gender role producing cultural values of high power distance and masculinity, which may suggest countervailing pressures from the institutional and cultural contexts.

Third, we did not consider the specific content of educational systems. We hope that future research can consider whether educational content can reverse the general effects of education in promoting a more modern view of gender roles.

Fourth, we did not consider specific religions (i.e., Christianity, Islam, Hinduism etc.). As we mentioned earlier, it is feasible that some of these religions promote more traditional gender role attitudes than do others. We therefore hope that future studies can examine the relationship of gender role attitudes with specific religions in terms of their distributions and influence in nations.

Finally, this study is cross-sectional in nature, and we cannot establish causality. We hope that future studies can examine, for instance, legislation in a longitudinal manner to determine whether and how this encourages less traditional gender role attitudes over time.

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