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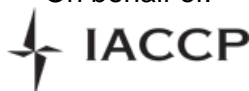
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# National Culture as a Moderator of the Relationship Between Managers' Use of Guidance Sources and How Well Work Events Are Handled

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## Abstract

Managerial leadership within 56 nations is examined in terms of the sources of guidance that managers use to handle work events. Correlations between the sources of guidance that managers use and the perceived effectiveness of how well these events are handled are employed to represent their schemas and attributional propensities for effectiveness. These correlations are predicted to vary in relation to dimensions of national culture. The hypotheses are tested using data from 7,701 managers. Reliance on one's own experience and training, on formal rules and procedures, and on one's subordinates are positively correlated with perceived effectiveness globally, whereas reliance on superiors, colleagues, and unwritten rules are negatively correlated with perceived effectiveness. Cross-level analyses revealed support for hypotheses specifying the ways in which each of these correlations is moderated by one or more of the dimensions of national culture first identified by Hofstede (1980). These results provide an advance on prior analyses that have tested only for main effect relationships between managerial leadership and national culture.

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Research into managerial leadership has included substantial attention to the impact of cultural factors on leaders' effectiveness (Aycan, 2008). One way of thinking about these factors was proposed in the model presented by Smith and Peterson (1988). This focused on the way that culture affects the relationship between managers and the various members of their role set, as well as their links with prevailing rules and norms. The model has been tested by showing that characteristics of national culture predict the extent to which managers in different parts of the world report that different roles, rules, and norms are used as sources of guidance (Smith, Peterson, & Schwartz, 2002). Building on that research, the present article takes the position that correlations between the sources used and perceived effectiveness provide a new way of identifying national differences in the attributions or cognitive schemas that managers have about effectiveness. Specifically, it tests whether cultural dimensions moderate the relationship between managers' reliance on different roles, rules, and norms and how effectively they believe that the work events which they face are handled.

The dimensions of culture identified over the past several decades summarize variance in survey responses aggregated to the level of organizations or nations, rather than variance between individuals. Researchers have frequently used Hofstede's well-known dimensions of this type to predict and explain cultural differences in reactions to leadership and other aspects of organizational behavior (Hofstede, 2001; Kirkman, Lowe, & Gibson, 2006). Another recent study, the GLOBE project (House, Hanges, Javidan, Dorfman, & Gupta, 2004), has sought to update and improve on the Hofstede project using data from 61 nations. The present article builds on the results achieved by these two studies by testing hypotheses with data derived from the Smith et al. (2002) study.

The two key prior studies involved differing conceptualizations of the nature of managerial leadership and of its relationship with cultural factors. We therefore first consider the way in which leadership is conceived in the GLOBE (House et al., 2004) and the Smith et al. (2002) studies, then turn to the implications of the Hofstede (2001) and House et al. (2004) culture dimensions.

### *The Globe Study of Managerial Leadership*

The GLOBE researchers identified the beliefs of managers in 61 nations about leadership by asking them to rate the extent to which each of 112 traits and behaviors substantially impedes or substantially facilitates effective leadership. These ratings were then aggregated to the nation level. Subsequent analyses of these items yielded a series of dimensions. These dimensions in turn were correlated with the dimensions of national and organizational culture that the GLOBE researchers had also identified. Significant relationships were identified between dimensions of culture and each of the dimensions of perceived leader effectiveness (Dorfman, Hanges, & Brodbeck, 2004).

The results of the GLOBE project were complex, due to the extensive range of cultural dimensions that they identified. For present purposes, it is important to note three aspects of this study. First, the GLOBE researchers focused on respondents' generalized beliefs about leader effectiveness and did not include any measures of perceived effectiveness in specific settings. Second, their analyses were conducted with scores aggregated to the organizational and national levels. Third, their analyses were concerned solely with main effects, as in most cross-cultural studies of leadership (Aycan, 2008). What they established was that across nations, there is a significant

concordance between national culture characteristics on the one hand and the types of leadership that are on average believed to be effective on the other hand.

The perspective of the present study differs from that of the GLOBE researchers in two important ways. First, we develop separate measures of the ways in which managers operate and of whether these ways are seen as effective. Second, we test a cross-level theory linking nation-level culture to variations in individual-level relationships between managers' reliance on various sources of guidance in handling work events and their perceptions of how effectively these events are handled. We test hypotheses that the effectiveness of leaders' management of work events can vary within as well as across cultures.

These two characteristics of the present project are crucial and are interwoven with one another. An understanding of managerial leadership and its relation to culture requires a clear formulation of the levels of analysis problem (Fischer, 2008). Leadership can best be considered either at the level of individual relations between leaders and those around them or at the team level, as has been fully explored by single-nation leadership researchers (Dansereau, Alutto, & Yammarino, 1984). The choice between these levels depends on whether one posits that a manager relates to all members of his or her team in the same way. The present project assumes that a manager's relations with different team members may vary. The link between managers and individuals around them is thus conceptualized as an individual-level phenomenon. The GLOBE researchers tested only for relationships between average managerial leadership practices and nation-level dimensions of culture. For instance, they found that charismatic leadership traits were on average seen as effective in nations scoring high on in-group collectivism. To build on this type of finding, it is important to establish the extent to which individual-level relationships between particular managerial leadership practices and perceived effectiveness are universal or vary in ways that are predicted by prevailing cultural values. For instance, do managers in a collectivist culture agree more on the effectiveness of a particular practice than do those in another type of culture? This can be accomplished through multilevel analysis.

### *The Sources of Guidance Model*

We next describe our conceptualization of managerial leadership. This study is part of a project that conceptualizes the work of people in organizations in terms of "event meaning management" (Peterson & Smith, 2000; Smith & Peterson, 1988). This project has explored variability in managers' reliance on eight different sources of guidance in many nations (Smith et al., 2002). Examples of sources of guidance are formal rules, one's superior, one's own experience and training, and so forth. Social and organizational structures such as these are viewed as sources that managers use to exert influence during the process of making decisions and taking action. Most research about the way managers deal with work events has been rooted in classic theories of social and organizational structure that are formulated in terms of roles, norms, and rules (Peterson & Smith, 2008; Smith & Peterson, 1988). For example, Weber (1947) analyzed bureaucratic social structures at both the societal and organizational levels as being built on relationships between superiors and subordinates (i.e., hierarchy), systems of national laws and organizational rules, and societal norms such as the Protestant work ethic. Role theory conceptualizes the social structures that link individuals and organizations as being based on expectations from superiors, subordinates, and colleagues as well as on organizational rules and norms (Biddle & Thomas, 1966; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Within this perspective, we propose that the central function of managers is to influence the meanings that others give to the events that happen at work. A manager's impact on decisions or specific behaviors is one of the more overt consequences of having already influenced meanings. Previous studies have established cross-cultural differences in the influence that parties occupying different roles has on

organizational decision making (Heller, Drenth, Koopman, & Rus, 1988; Tannenbaum, Kavcic, Rosner, Vianello, & Wieser, 1974), but the linkage between these differences and the processes that precede decision making has rarely been discussed (Peterson, Miranda, Smith, & Haskell, 2003).

Hypotheses tested to date have concerned the sources that managers report using most heavily for different kinds of events in relation to value-based culture dimensions (Peterson, Elliott, Bliese, & Radford, 1996; Smith et al., 2002). A typical research question, for example, has been whether collectivist values are actually associated with heavier managerial reliance on colleagues, subordinates, or superiors, as one might predict. We further develop this perspective here by highlighting cultural effects on the *relationship* between these sources and a measure of how effectively managers view work events as being handled. We view the correlations between sources of guidance used and perceived effectiveness as reflecting the implicit theories of leadership and effectiveness that prevail within populations of managers in different nations.

Implicit leadership theory was originally formulated as a way of drawing on cognitive theory to explain the correlations that had long been observed between measures of leadership style and various outcomes (Lord & Maher, 1991; Phillips & Lord, 1981). Implicit leadership theory suggested that these correlations were not the result of the effects of leadership on performance (Lord, Binning, Rush, & Thomas, 1978). Instead, they were said to occur because respondents would first observe indications of leader effectiveness and then unconsciously shape their perceptions of leader behavior to explain the observed effectiveness. Our position here is that cultural differences in these explanations are of interest because they suggest differences among societies in cognitive structures that are linked to national culture characteristics (Brett & Crotty, 2008; Peterson & Wood, 2008). While many of these cognitive structures will be implicit, there is no reason to exclude the certainty that some will actually be explicit. When asked, managers will most often provide accounts of why events were handled in particular ways within their distinctive context. Nonetheless, differences in implicit indicators provide a more comprehensive basis for study. These differences will affect how receptive managers in different societies are to organizational practices that rely on different roles, rules, and norms as sources of guidance.

### *Universals in Reliance on Roles, Rules, and Norms*

In handling work events, managers may rely on one source of guidance or on several. Prior research suggests that reliance on three of the many available sources is likely to have universally positive implications: one's superior, formal rules, and one's own experience. We focus here on these in turn. In each case, we do not exclude the possibility that the strength of these effects will also vary between cultures, as documented in our subsequent hypotheses.

*Superiors.* Managers may rely on their superiors for a variety of reasons. For instance, they may seek guidance or instruction because the superior requires them to do so and sanctions them if they do not. They may also rely on their superiors because they respect their superior's expertise or experience. In the recent literature, reliance on superiors has more typically been discussed in terms of charisma. Studies of charismatic and transformational leadership have considered the dynamic that occurs when a leader establishes an emotionally charged identification with the goals of the organization among his or her subordinates. A climate is established in which subordinates look upwards to gain guidance from the vision of forward progress articulated by their leader. Studies of how chief executives and senior managers exert influence through the transformational leadership of whole organizations have been replicated in a range of separate single-nation studies (Bass, 1997). As we have noted, the GLOBE project has also established the endorsement of charismatic traits in many nations (Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1999; House et al., 2004). Thus, there are a broad range of reasons why managers

are likely to rely on their superiors. Their reasons for doing so may vary between cultures, but reliance is likely to be strong universally.

*Formal rules.* The tradition of treating reliance on rules as universally desirable can be traced back to Weber's (1947) analysis of the generic advantages of bureaucracy and Taylor's (1911) prescriptions about how to formalize manufacturing operations. International comparative analysis of the virtues of relying on rule systems has been an occasional theme in organization design research. The ebbs and flows of discourse emphasizing rules and rationality as compared to less explicit sources of influence have been documented by Barley and Kunda (1992) and Abrahamson (1997). Nevertheless, the theme that managers should rely on extensive systems of rules persists. It is reflected in numerous strategic planning systems that specify rules of varying levels of generality, ranging from visions to values to strategic plans to operational plans, ISO certification programs, systems of human resources requirements, and accounting systems. Although comparisons between U.K. and Germany (Child, 1981) and between the United States and Japan (Lincoln, Hanada, & McBride, 1986) indicate societal variability in whether managers associate extensive reliance on rules with decision effectiveness, advocacy of the consistent, universal importance of relying on rules persists.

*Own experience and training.* The view that managers' reliance on their own experience and training will be universally associated with perceived effectiveness may at first blush seem to be an artifact of the individualism characterizing the nations where the greatest amount of social research is done (Peterson, 2001). However, it is actually based on the presence of self-awareness even in collectivist societies and on the influential role that managers are expected to play in most organizations. Cognitive theories of collectivism do not suggest that self-awareness is eliminated by collectives. Instead, they suggest that the self in collectivist societies is more closely connected to a stable network of others than is typical in individualistic societies (Erez & Earley, 1993; Markus & Kitayama, 1991; Triandis, 1995). Within organizations, people are appointed to managerial roles because there is something distinctive about their experience and training that makes it possible for them to help deal with events in the workplace for which their subordinates, colleagues, and others around them require assistance. By using their experience and training, managers are providing evidence of their competence to themselves and others. For all of these reasons, we anticipate that managers who believe their own experience and training is used heavily to handle work events are likely to see work events as being effectively managed, although we also predict that the degree of importance will be culturally variable, for reasons explained below. Consideration of the issues outlined in the preceding paragraphs enables the formulation of the first hypothesis:

*Hypothesis 1:* Throughout the world, rated effectiveness will be positively associated with reliance on (a) superiors, (b) formal rules, and (c) one's own experience and training.

Because of the expectation of their positive implications, appointment of superiors, the creation of formal rules, and the selection of managers having appropriate experience and training to exert influence effectively are also the mechanisms on which organizations typically rely most heavily to maintain control. Although, as we predict, the positive implications of reliance on each of these sources will be found globally, it is also likely that their effects will be stronger in some locations than in others.

Apart from these three sources, the literature relevant to reliance on other sources of guidance suggests a larger range of cultural contingency, so that they would be experienced as having positive implications in some societies and negative implications in others. Specifically, we consider reliance on unwritten organizational rules (or organizational culture), on subordinates, and on

colleagues. We do not include here the further sources of guidance studied by Smith et al. (2002), notably reliance on specialists and on widespread beliefs, because these sources were found to be used much less than the others.

We anticipate that in some societies, unwritten organizational rules will have some of the advantages attributable to “strong” organizational cultures as a constructive overall organizational framework that people can use to guide their choices (Wilderom, Glunk, & Maslowski, 2000). In other societies, a variety of unwritten rules will facilitate bypassing of or resistance to explicit rules and superiors (Smith, 2008). The literature about participation also indicates that relying on subordinates and colleagues is more acceptable as a useful and legitimate means of reaching decisions that facilitate implementation in some cultures than in others (Heller et al., 1988; Jago et al., 1993; Newman & Nollen, 1996). For instance, in Puerto Rico, a program of participation was seen as a failure on the part of authorities to adequately do their jobs of guiding their organization (Juralewicz, 1974). Consequently, while we control for main effects of these other three sources of guidance—unwritten rules, colleagues, and subordinates—before testing for their predicted effects, we do not offer hypotheses about their main effects.

### *National Culture Dimensions as Predictors*

The formulation of hypotheses about cultural contingencies in the individual-level relationships between reliance on sources and outcomes requires some initial assumptions. Managers may regard the way in which events are handled as effective because this has been done in ways that are culturally congruent. Alternatively, if they see business practices typical of their nation as ineffective, they might evaluate positively ways of handling events that are culturally incongruent. Yet another alternative is that an effective manager might steer a middle path between these extremes. The hypotheses below are constructed on the basis of the first of these three possibilities, that cultural congruence is likely to be seen as effective more frequently than cultural incongruence.

The culture dimensions used here to predict the relationship between sources of guidance and effectiveness are selected from the two best known prior characterizations of cultural differences derived from business employees. First, as we will detail below, the original four dimensions of cultural variation identified by Hofstede (1980) have theoretical implications for the links of the sources of guidance considered here with effectiveness. These four dimensions continue to influence many researchers and show evidence of continuing predictive validity (Hofstede, 2001). Second, four of the nine GLOBE project dimensions (House et al., 2004) that are conceptually parallel to the Hofstede dimensions are the ones most relevant to the effectiveness implications of our sources of guidance measures. It is important to include both the Hofstede and the GLOBE dimensions in our analysis for several reasons. These surveys were conducted at different times, sampled a different range of nations, and used survey questions that were phrased in different ways. Controversy continues as to which provides the more valid basis for prediction (Peterson & Castro, 2007; Smith, 2007).

We use national culture dimensions to represent a very broad set of contingencies. Differences between nations resemble some of the contextual contingencies specified in early contingency theories of leadership and decision making. For instance, nations differ in power distance (Hofstede, 2001), while Fiedler (1967) included variations in position power in his model and Vroom and Yetton (1973) included various aspects of power (e.g., the probability of willing compliance) in theirs. However, research showing the convergence between nation-level measures of values and social structures suggests that national differences for a variety of social phenomena are larger than differences among settings within a single nation (Hofstede, 2001; Roberts, 1970).

In exploring the predictive power of four dimensions of national culture in relation to reliance on six sources of guidance, some control over complexity is required. The nine predictions presented below are those for which we find a substantive basis in the existing literature.

*Individualism/collectivism.* Managers in any nation are likely to associate reliance on self, reflected in the present data as reliance on one's own experience and training, with effectiveness. By virtue of their appointment, the organization has presumably deemed them to have the requisite experience and training. Despite the main effect already proposed as Hypothesis 1, an extensive literature suggests that the hypothesis should also be tested that managers in individualistic nations are particularly prone to believing that reliance on their own experience and training results in positive outcomes. In contrast, analyses of Japanese organizational behavior emphasize the utility of establishing a strong system of norms on which organization members can rely (Brannen & Kleinberg, 2000), which suggests that reliance on unwritten rules will be viewed as associated with positive outcomes in more collectivist nations. Those working within collectivist cultures, at least in nations such as Japan, where the work group is part of the collectivity with which managers usually identify, may also be expected to rely strongly on the peer group of managers that sustains their identity. Survey data analyzed by Smith, Dugan, and Trompenaars (1996) showed that across 43 nations Hofstede collectivism scores were associated with stronger preference for working conditions where "everybody works together and where you don't get individual credit" and a series of other similarly collectivistic priorities.

*Hypothesis 2:* Nation-level collectivism will predict the relationship of perceived effectiveness with reliance on (a) unwritten rules positively, (b) colleagues positively, and (c) self negatively.

*Power distance.* Most treatments of power distance suggest that members of high power distance nations are likely to expect and respond positively to ongoing guidance from their superiors. For instance, Wong and Birnbaum-More (1994) found across 14 nations that banks were more centralized in high power distance nations. Several lines of theory suggest that power distance supports reliance on centralized personal control exercised by managers rather than reliance on rules. Weber's (1947) formulation of bureaucracy suggested that the establishment of systems of rules in modern organizations involves a step away from the more personal control by managers that characterized traditional organizations. Also at the organizational level, Mintzberg (1979) identified a set of contingencies that promote reliance on superiors and distinguishes them from those that promote reliance on rules created by techno-structure departments like accounting and industrial engineering. Both the Hofstede and GLOBE formulations of culture dimensions equate power distance with reliance on persons in authority and contrast this with uncertainty avoidance as a societal preference for reliance on impersonal rules. Thus, the perceived effectiveness of reliance on superiors should be stronger in high power distance nations, while the perceived effectiveness of reliance on formal rules should be lower.

Reliance on subordinates is most frequently discussed in terms of participative management approaches, with the typical conclusion being that subordinates in large power distance societies will not expect or respond well to participation. Hofstede (2001) summarized a number of projects indicating that while increases in participative management may be advocated in large power distance societies, the typical practice in such societies is not to include subordinates in decision making. When participation or empowerment is attempted, it is prone to fail (Hui, Au, & Fock, 2004). The House et al (2004) project provides a similar review, and the negative correlation they found between perceptions of power distance and preferences for power distance is consistent with Hofstede's argument.



*Hypothesis 3:* Nation-level power distance will predict the relationship of perceived effectiveness with reliance on (a) formal rules and procedures negatively, (b) subordinates negatively, and (c) superiors positively.

*Uncertainty avoidance.* Most ways of handling events achieve some reduction in initial uncertainty. The GLOBE researchers suggest that sources that offer well-established ways of doing so are likely to be most favored in nations where uncertainty avoidance is a particular priority. In their analysis, explicit rules and laws are particularly significant in uncertainty avoidant nations. It is less easy to enter a prediction in terms of Hofstede's dimension of uncertainty avoidance, because his conceptualization and the measures that he used to tap it lay less emphasis on routinization. Indeed, he suggests that his items may reflect anxiety and could encompass either increased risk taking or increased caution (Hofstede, 2001, pp. 148-150). Nonetheless, it is important to test the predictive power of his measure, since part of his theoretical explanation for its effects rests on the view that it reflects reliance on rules.

*Hypothesis 4:* Nation-level uncertainty avoidance will predict the relationship of perceived effectiveness with reliance on formal rules and procedures positively.

*Masculinity/femininity.* Hofstede characterized femininity in terms of preference for good work relationships and masculinity in terms of earnings, ambition, and achievement. Thus, in masculine nations, self-reliance may be favored as a proof of one's leadership abilities, whereas in feminine nations preservation of harmony will be a stronger motive. This would most often be achieved through choosing the more indirect means of communication that are provided by unwritten rules rather than by overt initiative and confrontation. Across 12 nations, Bass and Burger (1979) found that managers favored assertiveness more than a service orientation in masculine nations. GLOBE developed several dimensions that have conceptual roots either directly in this dimension or in literatures from which Hofstede's discussion of this dimension draws. The related GLOBE dimensions are assertiveness, gender egalitarianism, and humane orientation. Of these, assertiveness has the closest conceptual link to reliance on own experience and unwritten rules.

*Hypothesis 5:* Nation-level masculinity and assertiveness will predict the relationship of perceived effectiveness with reliance on (a) one's own experience and training positively and (b) unwritten rules negatively.

### *Reliance on Guidance Sources and Perceived Outcome*

Evaluation of how well work events have been handled can perhaps be best defined in terms of the perceptions of the various parties involved. However, our focus here is on the manager's own understanding of event outcome. Although the use of ratings of self-perceived managerial effectiveness cannot escape the likelihood of egocentric bias (Lowe, Kroeck, & Sivasubramaniam, 1996), this is not problematic in the present context. Indeed, variations in egocentric attributions for event outcome are one aspect of the phenomenon that is being studied. It is the cross-cultural variation in association between rated effectiveness and reliance on different sources that is of interest, not the absolute level of rated effectiveness. In order to gain a more reliable estimate of managers' evaluations of event outcome, they were asked to evaluate outcomes in the short run and in the long run. While understandings of time perspective will certainly vary across cultures, these ratings proved strongly correlated.

## Method

### *Nation-Level Predictors*

Nation-level predictors were taken from published sources. Nation scores on Hofstede's (2001) four original dimensions were used. Consistent with Hofstede's practice, his scores for the Arab region were used for Lebanon, while his scores for West Africa were used for Nigeria. His scores for East Africa were based on data from Ethiopia, Kenya, Tanzania, and Zambia. They were used here for Uganda, Kenya, Tanzania, and Zimbabwe. His scores for Russia were used for Belarus and Ukraine. The GLOBE "as is" scores for perceived societal culture on in-group collectivism, power distance, uncertainty avoidance, and assertiveness were used. The versions employed were those that have been adjusted for response bias, except for Iran, for which the GLOBE group has not published adjusted scores (M. Javidan, personal communication, June 2006). Extensive measure design and validity information are available for both sets of measures (Hofstede, 2001; House et al., 2004).

### *Sources of Guidance Questionnaire*

Ratings of how much reliance is placed on the six social structures identified earlier as sources from which managers draw guidance were requested, as well as two effectiveness ratings, for each of eight work events. The eight events were described as follows: "appointing a new subordinate in your department"; "one of your subordinates is doing consistently good work"; "one of your subordinates is doing consistently poor work"; "some of the machinery or equipment in your department seems to need replacement"; "another department does not provide the resources or support that you require"; "there are differing opinions within your department"; "you see the need to introduce new work procedures into your department"; and "the time comes to evaluate the success of new work procedures." These events were selected as likely to occur within the work of any manager in any type of organization in any nation, so as to permit comparability of the results obtained. The phrasing for each event was: "When [event] . . . , to what extent are the actions taken affected by each of the following?" For each event, the question was followed by a listing of the eight guidance sources, which were described as follows: "my own experience and training," "my superior," "others at the same level," "my subordinates," "formal rules and procedures," and "informal rules about how things are usually done around here." Responses were made on 5-point Likert-type scales, anchored by terms ranging from *not at all* to *a very great extent*. Guidance source scores were created by mean-centering the raw scores for each respondent. To do so, the score for reliance on each source for handling each event was subtracted from the mean score for all sources across all events for each respondent. Reliance on each of the eight sources was then averaged across the eight events. Ninety-seven percent of the 335 Cronbach alphas were above .70, with the remainder spread across nine nations. One missing alpha was due to a typographical error that led to the omission of reliance on superiors from the Qatar survey. The consistently high reliability coefficients in each nation for the sources of guidance measures suggest that the relative use of each source was consistent across events. This suggests that the particular events we selected for study are of secondary importance and that similar results would be obtained had we selected others, as long as they were events that most managers would encounter regularly enough to answer. As noted below, these measures are not highly correlated with one another. Additional information for the measures of sources used has been provided at the nation level (Smith et al., 2002) and at the individual level (Smith et al., 2005).

Of the two perceived effectiveness ratings, one asked how well the event had been handled "in the short run," while the other asked how well the event had been handled "in the long run."

Responses were on 5-point Likert-type scales, with response categories ranging from *extremely well* to *very poorly*. The 16 effectiveness ratings (two per event) were pooled. Reliability for the 16 items (two evaluations for each of eight events) was between .72 and .92 for each of the nations sampled and in all but four nations exceeded .80. Results using this outcome measure have not been reported prior to the present study. The perceived effectiveness measure has a low, significant correlation ( $r = .37, p < .001$ ) with a four-item job satisfaction measure across all respondents.

### Translation Comparability and Measure Equivalence

The survey was created in English and translated by competent bilinguals who were either our research collaborators or were supervised by them. Our collaborators were experienced researchers in management or organizational psychology. The present study made use of translations into Arabic, Bahasa Indonesia, Bulgarian, Czech, Danish, Dutch, Farsi, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Mandarin Chinese, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish (Castilian and Latin American versions), Swedish, Tagalog, Thai, and Turkish. Checks on translation accuracy were completed by back-translation or parallel translations, with subsequent correction when necessary. We used the English version in 18 countries, Spanish in five, Russian in three, and Arabic, Chinese, Czech, German, and Portuguese in two each. The consistently high alpha coefficients noted above support the equivalence of these measures in the nations studied here (Van de Vijver & Leung, 1997).

A substantial problem in cross-cultural studies is that acquiescent response style varies by nation both as a consequence of norms about responding positively and due to subtle differences in translation of response alternatives (Smith, 2004). Hence, analyses using raw means are likely to produce spurious differences. While differences among nations in response style could not logically affect differences in the relationships of reliance on sources with effectiveness (Hypotheses 2 to 5), they could affect the tests of Hypotheses 1a through 1c. As noted above, bias in scale use was eliminated by mean-centering of the guidance source ratings provided by each respondent. This practice eliminates differences between nations in the overall mean for reliance on guidance sources across all events. The effectiveness ratings were not also standardized in this way, thus protecting against the possibility of detecting spurious relations between predictors and dependent measures that are due to common method bias.

### Sampling

The complete data set comprised 7,701 managers from 56 nations. Hofstede scores are available for 47, GLOBE for 41. Data from those respondents who had not experienced all eight events were averaged across those events that were available as long as they provided answers for at least four events, in practice rarely less than seven. Respondents whose demographic data were incomplete were discarded, as were respondents whose nationality did not match their location. Demographic controls for age, gender, and work in a government-owned organization were selected, based on findings reported elsewhere (Smith et al., 2005). Details of sample sizes and of the demographic characteristics that were used in the present analyses are given in Table 1.

### HLM Analysis

Hierarchical Linear Modeling analysis was carried out using HLM 5 (Raudenbush, Bryk, Cheong, & Congdon, 2001). A basic choice in HLM is whether to analyze the raw data directly, center the data around the grand mean across all respondents, or center the data separately around

**Table 1.** Sample Characteristics and Demographics

Country	Hofstede/GLOBE	N	Mean Age	% Male	% State	Country	Hofstede/GLOBE	N	Mean Age	% Male	% State
Argentina	H/G	67	36	75	35	Mexico	H/G	278	33	76	5
Australia	H/G	160	37	73	60	Netherlands	H/G	110	40	88	22
Austria	H/G	121	43	79	21	New Zealand	H/G	86	41	44	57
Belarus	H*	313	42	58	84	Nigeria	H*/G	572	38	71	45
Brazil	H/G	150	35	55	45	Norway	H	89	45	58	57
Bulgaria	H	155	42	62	54	Pakistan	H	88	40	86	9
Canada	H/G	123	42	56	14	Poland	H/G	80	46	62	62
Chile	H	105	41	88	11	Portugal	H/G	183	42	73	40
China	H/G	534	34	56	52	Qatar	H*/G	60	32	78	33
Colombia	H/G	87	39	74	41	Romania	H	79	45	68	72
Czech Republic	H	67	42	85	6	Russia	H/G	39	44	61	56
Denmark	H/G	102	46	84	30	Saudi Arabia	H*	280	41	94	42
Finland	H/G	112	44	91	20	Singapore	H/G	84	39	49	71
France	H/G	250	41	74	29	Slovakia	H	35	38	77	51
Germany	H/G**	155	44	94	7	South Africa (White)	H/G	146	36	82	14
Greece	H/G	100	43	76	35	South Africa (Black)	G	70	36	77	47
Hong Kong	H/G	77	31	58	31	S. Korea	H/G	261	37	99	0
Hungary	H/G	92	42	72	52	Spain	H/G	39	37	61	46
India	H/G	99	38	96	78	Sweden	H/G	97	47	68	24
Indonesia	H/G	97	41	88	27	Taiwan	H/G	130	42	79	43
Iran	H	78	36	98	77	Tanzania	H*	60	38	77	38
Israel	H/G	147	42	71	62	Thailand	H/G	147	40	69	29
Italy	H/G	116	46	98	43	Turkey	H/G	61	34	72	0
Jamaica	H	135	33	39	49	Uganda	H*	227	35	76	44
Japan	H/G	92	46	98	53	Ukraine	H**	107	39	43	49
Kenya	H*	57	36	72	32	United Kingdom	H/G	131	39	78	22
Lebanon	H*	100	37	63	29	United States	H/G	373	35	62	25
Malaysia	H/G	39	36	79	38	Zimbabwe	H*/G	49	37	88	26

\* Hofstede regional scores were used. \*\* Hofstede scores for adjacent nation were used. \*\*\* GLOBE score for West Germany used.

the means for each group (nation in the present instance) (Kreft, DeLeeuw, & Aiken, 1995; Raudenbush & Bryk, 2002). Hofmann and Gavin (1998) note that group mean centering is the more appropriate choice when researchers want a precise estimate of the within-group slopes and to separate the overall effects across all respondents from the differences in effects between groups. Since Hypotheses 1a through 1c refer to relationships across all respondents, whereas Hypotheses 2 through 5 concern differences in effects between nations, we used group mean centering and a fixed effects model.

We also needed to determine whether to include one national culture predictor at a time or multiple predictors simultaneously in those instances in which multiple predictors have the potential to affect the relationship between a given source and an outcome. In instances where the predictors each come from the same project, either Hofstede or GLOBE, including multiple predictors is problematic because the within-subject standardization (ipsatizing) used in both of these projects creates dependencies among the national culture predictors. Similarly, the measures of manager reliance on sources have also been transformed by within-subject standardization. In addition, in instances where the predictors come from different projects (some from Hofstede and others from GLOBE), using multiple predictors would reduce the number of nations that can be included. Consequently, we chose to control for all three individual-level, Level 1 demographic covariates in each equation but to test hypotheses for only one nation-level, Level 2 predictor at a time.

Before considering whether national culture measures predicted the relationships between sources of guidance and perceived effectiveness, we also assessed whether overall effectiveness at the individual level was predicted by each of the eight sources of guidance, after controlling for demographic covariates for all nations combined. These analyses included tests of Hypotheses 1a through 1c as well as analyses for the other sources of guidance for which we had little reason to predict main effects. Finally, we examined whether each of the parameters reflecting individual-level relationships between predictors and criteria varied according to the nation-level Hofstede and GLOBE value dimensions before we tested the effects of the national culture predictors. The outcome of the individual-level analysis is provided in the Results section.

## Results

### *Preliminary Analyses*

Table 2 shows individual-level descriptive statistics and pan-cultural correlations for the measures of sources and perceived effectiveness. These show that the measures for reliance on each of the sources have at most modest correlations at the individual level, ranging from  $-.34$  to  $.10$ . The many negative relationships among the source measures are found because the measures have been transformed through within-subject standardization to reduce response bias, as noted above. This provides a more valid indication of their relationships with one another.

Table 3 shows means, standard deviations, and correlations between nation-level variables in the present sample. As has been noted by House et al. (2004), the theoretically corresponding measures in the Hofstede and GLOBE projects are not always significantly correlated. The correlations between measures shown in Table 3 for the present sample of nations are consistent with those reported by House et al. (2004) for the complete set of overlapping GLOBE and Hofstede nations. The well-known negative correlations of individualism-collectivism with power distance and uncertainty avoidance reported by Hofstede (2001) also appear in our set of nations. Furthermore, as House et al. (2004) found, several of the GLOBE measures correlate with one another. These aspects of the predictor variables will require consideration in interpreting the present results.

**Table 2.** Descriptive Statistics and Correlations for Individual (Level 1) Variables

	M	SD	Formal Rules	Unwritten Rules	Subordinates	Colleagues	Superiors	Own Experience
Formal rules	.28	.67						
Unwritten rules	-.06	.65	-.11					
Subordinates	-.12	.59	-.25	-.10				
Colleagues	-.24	.57	-.26	-.22	-.05			
Superiors	.42	.66	-.04	-.15	-.34	.06		
Own experience	.59	.64	-.17	-.15	.10	-.20	-.13	
Effectiveness	3.32	.49	.05	-.10	.15	-.04	-.17	-.23

Values of *N* for descriptive statistics range from 7,588 to 7,700 depending on missing data. Values of *N* for correlations range from 7,535 to 7,672 depending on missing data. Correlations greater than .03 are significant at  $p < .01$ , two-tailed.

**Table 3.** Descriptive Statistics and Correlations of National Culture (Level 2) Variables

	M	SD	C – H	PD – H	UA – H	M/F – H	COL – G	PD – G	UA – G
Collectivism – H	48.78	25							
Power distance – H	54.06	21	.67***						
Uncertainty avoidance – H	61.22	24	.22	.03					
Masculinity/femininity – H	50.25	18	-.03	.09	.20				
In-group collectivism – G	5.03	.73	.83***	.73***	.33*	.16			
Power distance – G	5.17	.37	.37*	.41*	.53***	.22	.50***		
Uncertainty avoidance – G	4.23	.59	-.49**	-.46**	-.58***	-.23	-.65***	-.54***	
Assertiveness – G	4.15	.34	-.17	-.07	.18	.27	-.04	.02	-.09

*N* = 47 for nations based on Hofstede data, 41 for nations based on GLOBE data, and 36 for nations with both Hofstede and GLOBE data. High scores on masculinity/femininity refer to masculinity.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ , two-tailed.

**Table 4.** Individual-Level Relationships of Sources Used to Perceived Outcome

Reliance on:	Coefficient	SE	df
H1a: Superiors	-.081105***	.008943	6,438
H1b: Formal rules	0.062133***	.008821	6,526
Unwritten rules	-.091285***	.008822	6,507
Subordinates	.076628***	.010079	6,498
Colleagues	-.044748***	.009966	6,495
H1c: Own experience	.161757***	.009454	6,516

Sample includes data from the 47 nations for which Hofstede scores are available. Sample using data for which GLOBE scores are available yields equivalent effects.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . One-tailed tests for hypothesized effects, and two-tailed for effects not hypothesized.

### Tests of Individual-Level Main Effect Hypotheses

We first tested Hypotheses 1a, b, and c, which proposed that reliance on superiors, formal rules, and own experience and training will be associated universally with how effectively work events were evaluated as being handled. Table 4 shows the results of individual-level HLM models for each of these sources. The results indicate that Hypothesis 1a is significantly reversed and that Hypotheses 1b and 1c are supported. Table 4 also shows main effects results for the sources for

**Table 5.** Collectivism as Moderator of Relations Between Sources Used and Outcome

	Coefficient	SE	df
H2a: Unwritten × Collectivism (H)	.000809*	.000363	45, 6,505
H2a: Unwritten × In-Group Collectivism (G)	.013148	.013250	39, 5,756
H2b: Colleagues × Collectivism (H)	.001669***	.000414	45, 6,493
H2b: Colleagues × In-Group Collectivism (G)	.074842***	.014851	39, 5,745
H2c: Own Experience × Collectivism (H)	-.001378***	.000394	45, 6,514
H2c: Own Experience × In-Group Collectivism (G)	-.055174***	.014668	39, 5,770

*N* = 47 (Hofstede); *N* = 41 (Globe analysis).

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001. One-tailed tests.

which no hypotheses are offered, since these are logically prior to the tests for interactions presented below. There is a positive main effect for subordinates and negative main effects for unwritten rules and colleagues.

### Tests of National Culture as a Predictor of Individual-Level Effects

Hypotheses 2a to 2c predicted that both the Hofstede collectivism measure and the GLOBE measure of in-group collectivism would moderate the relationship of perceived effectiveness with reliance on unwritten rules, coworkers, and self. The results are presented in Table 5. Five of the six tests of these hypotheses are significantly supported. For ease of comparison, Hofstede scores refer to collectivism rather than individualism. Hypothesis 2a, predicting that the effectiveness of reliance on unwritten rules would be stronger in collectivist nations, is supported but only for the Hofstede measure. Hypothesis 2b, predicting that the effectiveness of reliance on coworkers would be stronger in more collectivistic nations, is supported both for the Hofstede and for GLOBE measures of collectivism. Hypothesis 2c, predicting that effects of reliance on own experience would be weaker in more collectivistic nations, is supported.

The results for the analyses testing Hypotheses 3a through 5 concerning the dimensions of national culture other than collectivism are shown in Table 6. These hypotheses show a total of seven significant predicted effects from 12 tests, plus one in the direction opposite to that predicted. Hypotheses 3a and 3c, suggesting that a nation's level of power distance will affect the relationship of reliance on formal rules and on superiors with effectiveness, are not supported for the Hofstede measure of power distance. The GLOBE measure does show a significant positive effect for reliance on the superior and also a significant negative effect for reliance on formal rules, both as predicted. Hypothesis 3b, suggesting that power distance predicts a high relationship between reliance on subordinates and effectiveness, is supported using both the Hofstede and GLOBE measures of power distance. Hypothesis 4, suggesting that high nation-level uncertainty avoidance will enhance the relationship of reliance on formal rules with effectiveness, is not supported for the GLOBE measure. Furthermore, there is a significantly reversed effect for the impact of Hofstede uncertainty avoidance on the relationship of formal rules with effectiveness. Hypothesis 5a suggested that Hofstede's masculinity/femininity dimension and the related GLOBE assertiveness measure will affect the relationship of reliance on own experience with the criteria is supported. Finally, Hypothesis 5b, concerning the effectiveness of reliance on unwritten rules, is supported but only for the Hofstede measure.

## Discussion

The results indicate that our hypotheses linking managers' reliance on roles, rules, and norms as sources of guidance with effectiveness does successfully tie a perspective on managerial leadership

**Table 6.** Other Nation-Level Predictors as Moderators of Relations Between Sources Used and Outcome

	Coefficient	SE	df
H3a: Formal Rules × Power Distance (H)	-.000046	.000430	45, 6,524
H3a: Formal Rules × Power Distance (G)	-.058096*	.027898	39, 5,772
H3b: Subordinates × Power Distance (H)	-.001891***	.000472	45, 6,496
H3b: Subordinates × Power Distance (G)	-.065318*	.031530	39, 5,738
H3c: Superiors × Power Distance (H)	.000066	.000413	45, 6,436
H3c: Superiors × Power Distance (G)	.050117*	.026979	39, 5,697
H4: Formal Rules × Uncertainty Avoidance (H)	-.000858**	.000349	45, 6,524
H4: Formal Rules × Uncertainty Avoidance (G)	.000114	.018116	39, 5,772
H5a: Own Experience × Masculinity	.001657**	.000619	45, 6,514
H5a: Own Experience × Assertiveness	.060012*	.030385	39, 5,770
H5b: Unwritten Rules × Masculinity	-.001125*	.000570	45, 6,505
H5b: Unwritten Rules × Assertiveness	-.042639	.027323	39, 5,756

N = 47 (Hofstede); N = 41 (Globe analysis).

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . One-tailed tests for hypothesized effects only.

developed from role theory to the Hofstede and GLOBE dimensions of national culture. The basic theoretical perspective explicating the role of a manager as a link between the social structures that can provide sources of guidance for handling work events has been introduced before (Peterson & Smith, 2000; Smith & Peterson, 1988). Previous research has shown links between national culture and the average use of the sources of guidance studied here (Smith et al., 2002). However, the theoretical and empirical linkage of managers' use of these sources with perceived effectiveness, as well as the place of national culture in predicting the strength of these relationships, has not been previously tested. Other comparative projects have focused on international comparisons of values (Hofstede, 2001; House et al., 2004), beliefs (Leung et al., 2002), and social institutions (Kostova & Roth, 2003). Our project complements these by reformulating perspectives on social structures that have been applied in prior comparative research about decision making, leadership, and influence (e.g., Heller et al., 1988; Tannenbaum et al., 1974). The use of a cross-level approach enables the identification of both culture-general and culture-specific predictors of the ways that managers believe that work events are handled most effectively. Previous studies such as the GLOBE project have identified culture-general relationships between dimensions of culture and characterizations of effective managerial leadership. However, the use of separate individual-level measures of guidance sources and perceived effectiveness ratings in the present study has enabled the identification of variability in these effects that their design could not detect.

Cross-cultural psychologists are currently struggling with the need to reconcile the observation that national culture effects are often strong, yet there is substantial variability within nations in the values of individuals (Au, 1999; Gelfand, Erez, & Aycan, 2007; Kirkman et al., 2006). We treat the dimensional measures in the Hofstede and GLOBE projects as indicating characteristics of the norms and institutions of nations that are implied by prevailing values or practices. The view implicit in these projects is that individuals in a nation have little choice over the norms and institutions to which they are exposed and with which they are most intimately familiar. Such norms and institutions, one's first language being a compelling example, strongly influence the cognitive structures of individuals within a nation (Peterson & Wood, 2008). Nevertheless, we recognize that personal adherence to a nation's norms and institutions does vary considerably among individuals within a given nation (Au, 1999; Gelfand et al., 2007). In the present project, the national culture measures reflect the norms and institutions of nations over which individuals



have little influence. These norms and institutions produce considerable consistency in the knowledge structures of citizens of a nation (Brett & Crotty, 2008). However, the relationships found between individual reports of sources used and effectiveness do reflect individual-level variability within each nation. Results like those in the present study that show effects of measures of national culture on links with perceived leadership effectiveness underline the importance of considering individual preferences and national culture concurrently. It would be possible to build on the success of the present analysis by examining whether individual-level endorsement of culturally salient values and norms can explain variance additional to that thus far identified.

### *Limitations*

The scope of this study has been limited by several factors. The data upon which these conclusions rest are subjective perceptions reported by managers themselves. They reflect the variability in implicit theories of effectiveness that are endorsed by managers in different nations in a way that is not given by the average levels of explicitly endorsed managerial leadership that were reported by the GLOBE project. However, they do not reflect links between observed aspects of leadership and independently observed aspects of effectiveness. Despite this limitation, there is no obvious reason why response style should have yielded the pattern of results actually obtained. Conducting mean centering of the sources of guidance measures eliminates any overall acquiescence bias that could also affect the effectiveness criteria. Consequently, some relationships between sources used and rated effectiveness are found to be positive, while others are negative.

Specific limitations in both the Hofstede and GLOBE representations of national culture employed here have been extensively debated (Hanges & Dickson, 2007; Hofstede, 2007; Javidan, House, Dorfman, Hanges, & Sully de Luque, 2007; Peterson, 2003, 2004; Peterson & Castro, 2007; Smith, 2007). Some of our findings show divergent results for the corresponding Hofstede and GLOBE dimensions. Given the modest level of some of the correlations (cf., Table 3) between corresponding dimensions from these two projects, this is unsurprising. We necessarily included only those nations that were represented both in the present survey and in either the Hofstede or GLOBE surveys. Thus, part of the explanation may be that hypothesis tests for Hofstede and for GLOBE were based on somewhat different samples of nations. Similarly, the nation-level correlations shown in Table 3 are based only on the 36 overlapping nations. Table 3 also shows large correlations among the national culture dimensions within each project. The risk that these correlations would invalidate the present hypothesis tests is limited, since in no case are significantly intercorrelated national culture measures hypothesized to affect the same relationship between a particular source of guidance and perceived effectiveness. Debate may well continue as to the most valid way to represent national culture dimensions, as the preceding citations indicate.

In a few instances, we also followed the practice employed in other nation-level analyses (Matsumoto, Yoo, & Fontaine, 2008; McCrae & Terracciano, 2005) of assigning nation scores to adjacent nations that are assumed to be culturally similar. If such assignments were in fact inaccurate, this would favor the null hypothesis, since they would fail to detect variance in the data that is related to predicted effects.

### *Major Findings: Issues and Implications*

The individual-level main effects findings support two of the three most universally advocated views of management. One is the view that managers throughout the world tend to believe that the work events they face are well handled when they rely on established rules and procedures. The second is that managers tend to believe that events are handled well when they are able to rely on their own experience and training.

The more surprising negative individual-level relationship between reliance on superiors and evaluations of how well work events are handled could have two possible interpretations. One is that relying on superiors tends to create problems. Given a substantial body of work indicating that leadership of some sort is frequently valued (House et al., 2004) and that Table 2 indicates that the mean reliance on superiors is quite high throughout the world, this conclusion is implausible. The conclusion we favor is that superiors tend to become involved in dealing with the more problematic situations, while less problematic events are handled in other ways.

We did not formulate hypotheses for the main effects of the other sources of guidance, since the associated literatures emphasize the moderating effects of cultural contingencies. Main effects were nonetheless obtained, and these effects were equally strong as those that were hypothesized. Globally, there is a preference for relying on subordinates and against relying on colleagues or on unwritten rules.

Many of the hypotheses about the moderating effects of national culture that are based on well-established literature are supported. Twelve of 18 predicted moderator effects relating to effectiveness ratings were obtained as well as one that was significantly reversed. These results provide substantial evidence in favor of cultural variability in implicit theories about effective ways of handling work events as well as some assurance that measures of cultural variation from the Hofstede and GLOBE projects can account for these variations. The moderation effects were quite consistent for the two measures of individualism-collectivism. Reliance upon colleagues is perceived as more effective in more collectivist nations and reliance on one's own experience is perceived as more effective in more individualist nations. Reliance on unwritten rules is seen as less effective in individualist nations. The finding that low power distance moderates the effects of relying on subordinates confirms in a large-scale study prior research about cultural contingencies in participation.

Predictions derived from Hofstede's masculinity/femininity dimension and the associated GLOBE dimension of assertiveness were also relatively successful. In masculine or assertive cultures, reliance on oneself is seen as more effective and reliance on unwritten rules is seen as less effective. The overall pattern of moderation effects supports the view that a fuller understanding of cultural variation can be achieved by broadening the enquiries beyond the overworked contrast between individualism and collectivism.

Some scholars, including one of the reviewers of the present article, have been interested in calculating variance explained statistics that correspond to HLM parameter estimates. Calculating variance explained statistics for HLM requires a random effects model where the Level 2 predictors, in this case nations, are treated as representing a larger population of nations. Although we attempted to represent many parts of the world, we do not consider the nations represented in this project to be a random representation of nations in the world. Consequently, our analyses are based on a fixed effects model. Nevertheless, for scholars who wish to give a variance explained interpretation to our results, we have also calculated variance explained statistics (details available from the authors). The formula that we used for assessing variance explained is: (Level 2 residual without moderation – Level 2 residual with moderation) / (Level 2 residual without moderation). To summarize these results, the variance explained indicators show between 50% and 75% variance explained for each result in Hypotheses 2 through 5 that shows  $p < .001$  significance and between 1% and 25% variance explained for the other statistically significant results.

### *Future Directions for Research and Application*

The present project is part of a program of research that has clarified cultural variations in how managers handle work events and what ways of doing so they see as effective. This perspective lends itself to further elaboration. A next step would be to assess the extent to which various

managerial programs and practices are used effectively in different cultural settings. For example, does the more positive effect of reliance on subordinates in low rather than high power distance nations really mean that employee participation programs are more common or more effective in low power distance nations? Similarly, does the more positive effect of reliance on colleagues in collectivist nations mean that more staff meetings are or should be held in such nations? Some have argued that the frequency or appropriateness of particular management programs and practices like these are closely linked to culture characteristics (House et al., 2004). Others argue that organization members readily adapt most any programs and practices toward culturally compatible ways (Hofstede, 2001). Evaluating these views will require research that includes measures of national culture characteristics, the prevailing social structures used in a nation, and concrete management programs and practices.

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