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What is This?
Does the Job Satisfaction–Job Performance Relationship Vary Across Cultures?

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The purpose of this study is to examine whether culture moderates the relationship between job satisfaction and job performance. Multiple theoretical frameworks regarding culture are used as the theoretical guide. Based on meta-analytical moderator tests, the authors find some support for their hypotheses that the effect size for the job satisfaction–job performance relationship is likely to be stronger in individualistic (vs. collectivistic) cultures, in low-power-distance (vs. high-power-distance) cultures, in low-uncertainty-avoidance (vs. high-uncertainty-avoidance) cultures, and in masculine (vs. feminine) cultures. They also observe stronger evidence of these effects for task performance than for contextual performance. Implications for theory, practice, and future research are discussed.

**Keywords:** job satisfaction; job performance; national culture; moderator; culture

Few topics in organizational behavior research have attracted as much attention as the nature of the relationship between job satisfaction and job performance (Judge, Thoresen, Bono, & Patton, 2001). There are at least two reasons for the intense interest in this topic. First, job satisfaction is a major work attitude held by employees, and job performance directly affects organizational effectiveness (Harrison, Newman, & Roth, 2006). As such, it is intriguing to see whether job satisfaction and job performance are theoretically and empirically related. Second, many researchers are puzzled by the empirical findings that suggest that job satisfaction is only weakly related to job performance (Iaffaldano & Muchinsky, 1985). The counterintuitive observation that happy workers are not necessarily productive workers has prompted researchers to more fully investigate the topic (C. D. Fisher, 2003).

Recently, Judge et al. (2001) performed a comprehensive quantitative review of the research on the job satisfaction–job performance relationship and concluded that these two variables were at least moderately correlated (corrected correlation = .30). Judge et al.’s study has served to restore researchers’ confidence in the predictive power of job attitudes and to motivate them to further investigate the topic. In spite of Judge et al.’s review, however, there is still at least one major missing element in our understanding of the job satisfaction–job performance relationship, namely, we know little about the universality of this relationship.
across cultures. Does the strength of the job satisfaction–job performance relationship change across different countries and cultures? The literature does not provide a clear answer to this question because most reviews of this stream of the literature have focused on studies conducted in the United States. Addressing this gap is important for several reasons.

First, there is growing empirical evidence demonstrating that the job attitude–job behavior relationship may be moderated by culture (Farh, Hackett, & Liang, 2007; Lam, Schaubroeck, & Aryee, 2002). Indeed, previous research has shown that bases of job satisfaction and components of job performance differ across nations (Farh, Zhong, & Organ, 2004; G. B. Fisher & Hartel, 2004; Huang & Van De Vliert, 2003, 2004). As such, it is reasonable to expect that the extent to which job satisfaction is related to job performance may vary from one culture to another as well, yet no studies to date have investigated this possibility.

Second, although previous research has sought to identify work conditions (e.g., job design features) and individual differences (e.g., need for achievement) that may reveal a stronger effect size for the job satisfaction–job performance relationship at the individual level (Hochwarter, Perrewé, Ferris, & Brymer, 1999; Steers, 1975; Varca & James-Valutis, 1993), how broader group-level factors (e.g., the demographic profile of one’s team) or institutional-level factors (e.g., organizational size) may affect the relationship has been largely ignored. This also may be the reason why mixed findings have been observed regarding the nature of the relationship. Finally, understanding if and when the job satisfaction–job performance relationship is strong or weak in different cultures has particularly important managerial implications for multinational corporations, which often find it inappropriate to apply one universal set of management principles to employees of different nations and cultures (Kirkman, Lowe, & Gibson, 2006; Newburry & Yakova, 2006).

The purpose of the current study, then, is to investigate whether culture may moderate the relationship between job satisfaction and job performance. In particular, we examine whether the cultural dimensions identified by previous researchers, including Hofstede (1980, 1997); House, Hanges, Javidan, Dorfman, & Gupta (2004); Inglehart (1997); and Schwartz (1994), are empirically related to the strength of the relationship between job satisfaction and job performance. In the following sections, we first briefly discuss the nature of the relationship between job satisfaction and job performance. Next, we discuss the four frameworks regarding culture mentioned above and outline the theoretical reasons supporting the premise that culture moderates the strength of the job satisfaction–job performance relationship. Finally, we discuss the results of a meta-analysis testing this premise.

**Theoretical Background**

Historically, attitudes have been defined as broad constructs denoting cognitive, affective, and behavioral predispositions with respect to some social, physical, or ideological object (Katz & Stotland, 1959; Rosenberg & Hovland, 1960). Attitudes have been studied extensively in social psychology due to the general belief that attempts to change attitudes are often accompanied by changes in behavior (Kim & Hunter, 1993). That is, when an individual’s attitude toward an object becomes more favorable, he or she should exhibit behaviors directed at the object that reflect his or her underlying favorable attitude. However, disappointingly, this relationship frequently has not held in early empirical research (Eagly
& Chaiken, 1993). For instance, researchers have observed that even when individuals hold positive attitudes toward an activity, they sometimes do not participate in that activity (Ajzen & Fishbein, 1977; Wilson, Dunn, Bybee, Hyman, & Rotondo, 1984). These findings have led some researchers to express a rather pessimistic view of the role of attitudes in predicting behaviors. This negative view is further fueled by the disappointingly weak empirical relationship between job satisfaction and job performance in earlier studies (Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985).

The Job Satisfaction–Job Performance Relationship

Since as early as the 1950s, researchers have been finding evidence of only a weak relationship between job satisfaction and job performance. Although there are many reasons asserted to explain this weak relationship (Acock & DeFleur, 1972; Lewin, 1951; Miller & Ginter, 1979), three core reasons are particularly relevant to the current study; the first two are substantive and the other is methodological. First, researchers suggest that in strong situations in which there are stimuli or incentives inducing uniform responses from individuals (Snyder & Ickes, 1985), behaviors are elicited according to those stimuli or incentives and not by internal attitudes. Thus, in a culture that is highly collectivistic, for example, employees’ job satisfaction may not necessarily predict positive job behaviors because demonstration of these behaviors is already expected by others. Similarly, the theory of planned behavior (Ajzen, 1991) also has emphasized the important role of subjective norms in motivating or constraining behaviors. Therefore, the extent to which job satisfaction is associated with job performance may vary across different nations and cultures.

Second, researchers suggest that the definition of job performance used in previous investigations of the satisfaction-performance relationship is too narrow. When the definition of job performance is expanded to include contextual performance, the observed correlation between job satisfaction and job performance is increased (Organ, 1988). Specifically, according to Borman and Motowidlo (1997), task or in-role performance is concerned with the effectiveness with which job incumbents perform activities that contribute to the organization’s technical core. These authors argue, though, that it is equally important to examine work behaviors above and beyond core task performance (what they call contextual performance) because they “shape the organizational, social, and psychological context that serves as the catalyst for task activities and processes” (p. 100). For this reason, the current study also adopts a broad definition of job performance that includes both task and contextual components of performance. Examples of contextual performance are altruism (e.g., taking on additional work to help others), conscientiousness (e.g., better than average attendance), sportsmanship (e.g., not complaining about trivial matters), courtesy (e.g., consulting with others before taking action), and civic virtue (e.g., keeping up with matters that affect the organization) (LePine, Erez, & Johnson, 2002; Organ, 1988).

Third, some previous studies on the satisfaction-performance relationship may be methodologically flawed due to measurement error and sampling bias, and this may weaken the relationship found. For instance, behavioral scientists suggest that observations from single studies do not provide enough support to warrant concluding that a weak relationship exists between attitudes and behaviors due to the potential for error stemming from sampling bias. In fact, when researchers have accumulated studies across different samples, they
have found that the overall relationship between attitudes and behaviors is on average .41 (Wallace, Paulson, Lord, & Bond, 2005), which is not a small effect size in the social sciences (Cohen, 1988). With respect to the satisfaction-performance relationship, Judge et al.’s (2001) improved meta-analysis demonstrated a higher correlation between job satisfaction and job performance (.30) compared to the correlation observed in the meta-analysis performed by Iaffaldano and Muchinsky (1985), who found a correlation of only .17.

An important consideration, however, is whether there are theoretical reasons to expect a positive relationship between job satisfaction and job performance. The theoretical framework recently proposed by Watson, Wiese, Vaidya, and Tellegen (1999) offers important insights. These sociologists suggested that emotions are closely related to cognitive functioning in that they govern two major behavioral systems in humans—the behavioral approach system and the behavioral inhibition system. Positive emotions promote approach-type behaviors (e.g., working toward goals and rewards, active interpersonal behaviors) because positive emotions enhance “feelings of energy and vigor,” which in turn motivate an individual to pursue his or her goals (Watson et al., 1999, p. 830). Within the organizational context, this theoretical framework would suggest that “happy employees,” or those who are satisfied with their jobs, are often more energized and therefore have more energy to dedicate to work tasks (George & Brief, 1996).

On the other hand, Watson et al. (1999) suggested that individuals’ negative emotions increase withdrawal-type behaviors (e.g., social isolation, avoidance of challenges) because negative emotions activate the behavioral inhibition system; they promote “vigilant apprehensiveness,” which directs individuals’ behaviors away from negative stimuli (Watson et al., 1999, p. 830). In the organizational context, this suggests that “unhappy employees,” or those who are dissatisfied with their jobs, may be more reluctant to give extra effort to job tasks that are a source of dissatisfaction. In extreme cases, these employees may exhibit counterproductive behavior (e.g., tardiness, absenteeism) or opt to exit the company. The above theoretical reasons suggest that job satisfaction and job performance should be positively related.

Cultures

Culture is defined as “the collective programming of the mind which distinguishes the members of one human group from another” (Hofstede, 1980, p. 25). Therefore, culture is a phenomenon at the group, institutional, or societal level, even though it has strong relevance for predicting individuals’ behaviors. Four frameworks regarding national cultures have been discussed and compared most frequently in the literature—Hofstede’s, Schwartz’s, GLOBE’s (Global Leadership and Organizational Behavior Effectiveness), and Inglehart’s (Javidan, House, Dorfman, Hanges, & Sully de Luque, 2006; Vinken, Soeters, & Ester, 2004). These frameworks all emphasize that values that are held deeply and widely by most individuals are a core element or indicator of a society’s culture (Vinken et al., 2004). However, these frameworks propose different dimensions of culture, and we consider these various dimensions briefly below.

Hofstede’s framework. Hofstede’s (1980, 2001) work on culture has helped many researchers to study and evaluate a number of organizational behaviors and management practices (Kirkman et al., 2006). In his original studies of IBM workers, Hofstede (1980)
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identified four cultural dimensions—power distance, individualism-collectivism, uncertainty avoidance, and masculinity-femininity.

Power distance is the extent to which the less powerful members in organizations accept unequal power distributions. Individualism-collectivism refers to the extent to which identity derives from the self versus the collective. Uncertainty avoidance refers to the extent to which uncertain, unknown, or unstructured decisions are perceived as a threat by employees. A high-uncertainty-avoidance culture will have explicit rules and policies so that people have shared guidelines to follow. Masculinity-femininity is concerned with the degree to which a culture is dominated by traditionally masculine or feminine ways of thinking and doing. In a masculine culture, assertiveness, career achievement, and social recognition are emphasized. On the contrary, in a feminine culture, the depth and quality of relationships are emphasized.

Schwartz’s framework. Through an international value study of teachers and students in 67 nations, Schwartz (1994) identified three bipolar dimensions of culture based on seven interrelated cultural value orientations: embeddedness versus autonomy (which includes intellectual and affective autonomy), hierarchy versus egalitarianism, and mastery versus harmony. Embeddedness emphasizes maintaining the status quo and avoidance of changes that may disturb in-group solidarity or the traditional order, whereas the two value types of intellectual and affective autonomy together emphasize self-direction and freedom in the pursuit of personal goals and hedonism. Hierarchy emphasizes the legitimacy of hierarchical roles, whereas egalitarianism emphasizes social equality and promotion of and concern for others’ well-being. Mastery emphasizes active and behavioral mastery of one’s natural and social environment, whereas harmony refers to the degree of emphasis on unity with nature and protection of the environment.

Inglehart’s framework. Inglehart (1997) proposed two dimensions of culture on which countries can be compared—survival versus self-expression and tradition versus secular-rational. The survival versus self-expression dimension is strongly based on the author’s earlier studies that contrast the value of postmaterialism with materialism (Inglehart, 1990). It addresses the degree to which a culture has a strong orientation toward the pursuit of survival needs and material achievements (i.e., physical and economic security) versus the pursuit of individual choices, life satisfaction, and social trust. For instance, individuals in self-expression cultures are likely to subordinate economic gains to the concern for improved well-being and for affecting one’s environment, such as achieving a less impersonal society, having more control or input in one’s job, expressing ideas and delivering speeches freely, and creating a better community. On the other hand, the tradition versus secular-rational dimension is concerned with the degree to which a culture has a strong orientation toward authority (parents, religious leaders, bureaucracy) and respect for traditions.

GLOBE. GLOBE is an international project intended to study cross-cultural differences in leadership. Led by Robert House (House et al., 2004), this project surveyed more than 60 nations and generated a theoretical framework of culture consisting of nine major dimensions. They are performance orientation, future orientation, gender egalitarianism, assertiveness, institutional collectivism, in-group collectivism, power distance, humane orientation,
and uncertainty avoidance. For each dimension, House et al. (2004) differentiated between cultural values and cultural practices and provided country scores for them.

Performance orientation is the degree to which a culture encourages and rewards performance improvement and excellence. Future orientation is the extent to which individuals engage in future-oriented behaviors such as delaying gratification, planning, and investing in the future. Gender egalitarianism is the degree to which a culture minimizes gender inequality. Assertiveness is the degree to which individuals are assertive, confrontational, and aggressive in their relationships with others. Institutional collectivism is the degree to which inducements and rewards for collective goals and behaviors are emphasized. In-group collectivism is the degree to which individuals identify with their family, group, community, and organization. Power distance is the degree to which members of a culture expect power to be distributed equally. Humane orientation is the degree to which a culture encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others. Finally, uncertainty avoidance is the extent to which a culture relies on social norms, rules, and procedures to alleviate the unpredictability of future events.

Hypotheses

Because of the prevalence of the use of Hofstede’s framework of culture in the academic literature (Kirkman et al., 2006), we use this framework to substantiate our hypotheses. However, in so doing, we also discuss some of the dimensions of Schwartz’s, GLOBE’s, and Inglehart’s frameworks that correlate with Hofstede’s four dimensions. These culture dimensions may have moderating effects similar to those proposed for Hofstede’s dimensions.

Individualism-collectivism. First, we suggest that the extent to which a culture is individualistic versus collectivistic may affect the strength of the relationship between job satisfaction and job performance. In an individualistic culture, one acts according to one’s own discretion and preferences (Triandis, 2004). If an employee feels favorably about the job, it makes sense that he or she chooses to devote more time and energy to the job and is willing to exert additional effort to ensure that the work is done well. On the contrary, in a collectivistic culture, job satisfaction may be a lesser determinant of job behavior compared to group norms or collective goals (Earley & Gibson, 1998). In a collectivistic culture, for example, dissatisfied employees may still feel the need to perform well to contribute to the group objectives.

Although direct evidence is not available, there is indirect empirical evidence supporting the above assertions. More specifically, previous research has found that the job attitude–job behavior relationship is stronger for employees in an individualistic culture. For instance, Thomas and Pekerti (2003) found that job satisfaction has a stronger effect on reported behavioral intentions to leave the company for employees in New Zealand (an individualistic country) than for those in Indonesia (a collectivist country). They reasoned that collectivists’ job behaviors may be best predicted by norms, duties, and obligations rather than job satisfaction. Agarwal (1993) also found that in the United States (an individualistic country), the negative relationship between organizational commitment and job withdrawal is significantly stronger than in India (a collectivist country). They reasoned that in individualistic cultures, employees are more strongly motivated by personal needs.
than are those in collectivist cultures. As such, favorable job attitudes should be directly and closely related to positive job behaviors.

Other frameworks of culture also contain dimensions that are related to Hofstede’s individualism-collectivism dimension and thus may have the same moderating effects as those proposed above. Schwartz (2004) suggested that the autonomy-embeddedness dimension is similar to Hofstede’s individualism-collectivism dimension in that both dimensions contrast an autonomous view of people with an interdependent view. He also reported that an index of autonomy-embeddedness was related to Hofstede’s individualism at .61. Consistent with this assessment, Inglehart (2004) suggested that his self-expression versus survival dimension overlaps considerably with Hofstede’s individualism-collectivism dimension and Schwartz’s autonomy-embeddedness dimension because all three dimensions address cross-cultural variation in the drive toward broader human choice. He observed that the average correlation among these three culture dimensions was .66. Finally, House et al. (2004) reported strong correlations between GLOBE’s institutional collectivism values dimension and Hofstede’s individualism dimension at −.55 and between GLOBE’s in-group collectivism practices dimension and Hofstede’s individualism dimension at −.82. Thus, we predict the following:

**Hypothesis 1a:** The satisfaction-performance relationship is stronger in individualistic (vs. collectivistic) cultures as defined by Hofstede.

**Hypothesis 1b:** The satisfaction-performance relationship is stronger in autonomy (vs. embeddedness) cultures as defined by Schwartz.

**Hypothesis 1c:** The satisfaction-performance relationship is stronger in self-expression (vs. survival) cultures as defined by Inglehart.

**Hypothesis 1d:** The satisfaction-performance relationship is stronger in low institutional collectivism values (vs. high institutional collectivism values) cultures as defined by GLOBE.

**Hypothesis 1e:** The satisfaction-performance relationship is stronger in low in-group collectivism practices (vs. high in-group collectivism practices) cultures as defined by GLOBE.

**Power distance.** Regarding the power distance dimension in Hofstede’s framework, we believe that job satisfaction will have a weaker relationship with job performance in cultures wherein social inequality is perceived to be legitimate because individuals recognize that superior performance is expected from their supervisors (Hofstede, 1997). Because individuals in such cultures expect to be told what to do and how to do their jobs by authority figures, job attitudes, including job satisfaction, may play a much lesser role in determining performance in these cultures compared to cultures that emphasize social equality.

Some cross-cultural studies examining job attitudes and job behaviors provide at least partial support for the above reasoning. For instance, Farh et al. (2007) observed that the relationship between perceived organizational support and task performance is weaker for individuals high on power distance value. They explained that high-power-distance individuals tend to defer to authority figures with respect to the amount of work effort needed. Similarly, Lam et al. (2002) found that employees’ justice perceptions have a weaker positive effect on task performance in a high-power-distance culture (Hong Kong) than in a low-power-distance culture (the United States). They reasoned that because individuals high in power distance are more willing to accept arbitrary treatment from organizations or...
supervisors and less likely to expect fair treatment, justice perceptions may not have a significant effect on job performance.

Other frameworks of culture also contain dimensions that are related to Hofstede’s power distance. For instance, Schwartz (2004) highlighted that the dimension of egalitarianism-hierarchy is conceptually similar to Hofstede’s power distance because both are concerned with legitimizing social inequality. Schwartz (2004) reported that Hofstede’s power distance relates to an index of egalitarianism-hierarchy at –.40. Schwartz (2004) also reported that his egalitarianism-hierarchy dimension has some conceptual overlap with Inglehart’s tradition versus secular-rational dimension of culture because both concern deference to authority, even though the empirical correlation he has observed is weak.

In addition, Schwartz (2004) observed that Inglehart’s self-expression dimension contain elements that are consistent with egalitarianism, such as trust, tolerance, and support for the equal rights of individuals. Furthermore, he observed that their correlation was .61. Therefore, like power distance, the survival versus self-expression dimension is likely to moderate the satisfaction-performance relationship (cf. Hypothesis 1c). Finally, House et al. (2004) observed that GLOBE’s power distance values dimension was unrelated to Hofstede’s power distance index, even though the power distance practices dimension was related to Hofstede’s at .57. Therefore, we predict the following:

**Hypothesis 2a:** The satisfaction-performance relationship is stronger in low-power-distance (vs. high-power-distance) cultures as defined by Hofstede.

**Hypothesis 2b:** The satisfaction-performance relationship is stronger in egalitarianism (vs. hierarchy) cultures as defined by Schwartz.

**Hypothesis 2c:** The satisfaction-performance relationship is stronger in secular-rational (vs. traditional) cultures as defined by Inglehart.

**Hypothesis 2d:** The satisfaction-performance relationship is stronger in low-power-distance practices (vs. high-power-distance practices) cultures as defined by GLOBE.

**Uncertainty avoidance.** Hofstede’s uncertainty avoidance dimension addresses the extent to which societal cultures emphasize change versus stability. There are reasons to expect that this aspect of culture may moderate the job satisfaction–job performance relationship. In a culture that is oriented toward tradition and stability, individuals are more concerned about keeping the status quo and are less willing to disturb the order once a state of equilibrium is attained (Hofstede, 1997). Because of this concern for preserving traditions, for following established norms, and for meeting role expectations, personal job attitudes may play only a limited role in determining work behaviors. On the other hand, cultures that emphasize creativity and change typically are less formal and more tolerant of differences (House et al., 2004). As such, the relationship between job attitude and job performance should be more apparent and direct.

For instance, Ehrhart and Naumann (2004) discussed the nature and effects of citizenship behavior norms on employees. Their proposed model suggests that when a strong citizenship behavior norm is enacted in a work group or in an organization, individuals are more likely to perform citizenship behaviors, especially for those who respect the group norm more strongly. Consistent with this reasoning, Farh, Earley, and Lin (1997) also suggested that the extent to which job attitudes might have effects in determining behaviors may depend on whether people adhere to behavioral norms strictly. Thus, in a high-uncertainty-avoidance
culture where individuals rely more on both written and unwritten rules (such as norms) in their decision making and behavior, we expect that job satisfaction will play a weaker role in affecting job performance.

The GLOBE framework of culture addresses the societal differences in emphasis on uncertainty avoidance as well. Specifically, House et al. (2004) reported Hofstede’s uncertainty avoidance dimension was related to GLOBE’s uncertainty avoidance values dimension (.35), even though it was negatively related to GLOBE’s uncertainty avoidance practices dimension. Overall, the above reasoning leads us to predict the following:

**Hypothesis 3a:** The satisfaction-performance relationship is stronger in low-uncertainty-avoidance (vs. high-uncertainty-avoidance) cultures as defined by Hofstede.

**Hypothesis 3b:** The satisfaction-performance relationship is stronger in low-uncertainty-avoidance-values (vs. high-uncertainty-avoidance-values) cultures as defined by GLOBE.

**Masculinity-femininity.** Finally, there are societal differences in emphasis on material achievement versus nonmaterial rewards (or quality of life) (Hofstede, 1997). In cultures where achievement and material success are the norm, a favorable job attitude is likely to result in stronger job performance because satisfied workers may be likely to spend their time and effort on work activities that are instrumental for gaining monetary returns and hierarchical advancement. On the contrary, in cultures where harmony and relationships are the core concerns, satisfied employees may prefer to dedicate greater energy to social activities (e.g., expanding social networks, cultivating relationships), which do not necessarily help increase core task performance even though they may increase contextual performance.

Although direct cross-cultural studies examining masculinity-femininity as a moderator are scarce, there are some studies that demonstrate that the job attitude-job behavior relationship is stronger for individuals who value material rewards more than relationships. For instance, Steers (1975) found that for those who score high on need for achievement, the relationship between job satisfaction and job performance is significantly stronger than for those who score low on this attribute. Similarly, Orpen (1978) found that the job satisfaction–job performance relationship is stronger for those employees who score higher on intrinsic work motivation, which individuals in a masculine culture are likely to have because they are achievement oriented and success driven. Finally, Abdel-Halim (1980) found that the relationship between satisfaction and performance is stronger for those who have higher order need strength, or the need for personal growth and development and the need for challenge and achievement.

Schwartz (2004) highlighted the notion that the mastery-harmony dimension in his culture framework conceptually overlaps with Hofstede’s masculinity-femininity dimension because both dimensions emphasize assertiveness and ambition. On the other hand, Inglehart & Oyserman (2004) observed that the survival versus self-expression dimension of culture taps strongly on gender role orientation. Thus, if we conceptualize survival versus self-expression as theoretically similar to Hofstede’s masculinity-femininity, we would have the prediction of a moderating effect contradictory to Hypothesis 1c. That is, the satisfaction-performance relationship is stronger in survival (vs. self-expression) cultures.

House et al. (2004) observed that somewhat surprisingly, both GLOBE’s gender egalitarianism values and its practices dimensions were unrelated to Hofstede’s masculinity-femininity. On the other hand, their assertiveness practices dimension was related to Hofstede’s
masculinity at .37, whereas the assertiveness values dimension was unrelated to masculinity. Finally, House et al. also commented that GLOBE’s performance orientation values dimension intersects with Hofstede’s masculinity because both dimensions are concerned with performance improvement and excellence. Thus, we propose the following hypotheses:

*Hypothesis 4a:* The satisfaction-performance relationship is stronger in masculinity (vs. femininity) cultures as defined by Hofstede.

*Hypothesis 4b:* The satisfaction-performance relationship is stronger in mastery (vs. harmony) cultures as defined by Schwartz.

*Hypothesis 4c* (a competing hypothesis with Hypothesis 1c): The satisfaction-performance relationship is stronger in survival (vs. self-expression) cultures as defined by Inglehart.

*Hypothesis 4d:* The satisfaction-performance relationship is stronger in high-assertiveness-practices (vs. low-assertiveness-practices) cultures as defined by GLOBE.

*Hypothesis 4e:* The satisfaction-performance relationship is stronger in high-performance-orientation-values (vs. low-performance-orientation-values) cultures as defined by GLOBE.

**Method**

To examine whether culture moderates the job satisfaction–job performance relationship, we performed a meta-analysis. The use of meta-analysis is advantageous here because it allows for the accumulation and examination of studies conducted in different countries. Furthermore, measurement errors are corrected in meta-analysis, which is important for understanding the nature of the job satisfaction–job performance relationship (Judge et al., 2001). As noted earlier, there is a strong recent emphasis on studying contextual performance in addition to core task performance. As such, we performed meta-analyses separately for the job satisfaction–task performance relationship and the job satisfaction–contextual performance relationship.

**Literature Search**

We performed a comprehensive search of those articles that examined the relationship between job satisfaction and job performance. We also searched for unpublished studies to reduce the “file-drawer problem” (Rosenthal, 1979). Furthermore, we particularly focused on locating empirical studies conducted outside of the United States. We began our literature search by using the keywords “job satisfaction,” “task satisfaction,” “job performance,” “task performance,” “contextual performance,” “citizenship behavior,” “prosocial behavior,” and “extra-role behavior” in many research databases including the Dissertation Abstracts International, EBSCOHost, Emerald, Factiva, JSTOR, Oxford Journals, Proquest, PsycINFO, ScienceDirect, Sage Full-Text Collections, and Wiley InterScience databases. This search generated 265 articles. Furthermore, the reference lists of all the identified articles were examined carefully to locate other relevant articles. An additional 22 articles were identified in this step.

Multiple inclusion criteria were set prior to the start of the article search. First, we were interested only in field studies in which the job satisfaction and task or contextual performance relationship occurred naturally. Laboratory studies, therefore, were excluded. Also, studies that examined performance at the team level or organization level were excluded.
Moreover, like Judge et al. (2001), we were interested in overall job satisfaction. Therefore, studies that measured only one specific facet of job satisfaction (e.g., satisfaction with pay) were excluded. However, we retained studies that measured at least two facets of job satisfaction because these multiple facets could be combined to represent overall job satisfaction (Judge et al., 2001).

With respect to job performance, we were interested strictly in task and contextual performance. As such, studies that related job satisfaction to absenteeism, turnover, lateness, counterproductive behaviors, and the like were excluded. It should also be noted that for task performance, we were interested only in others-rated task performance or other objective assessments of task performance. Studies that involved self-assessments of task performance were excluded. On the other hand, because it is more common to have employees rate their own contextual performance (e.g., Donavan, Brown, & Mowen, 2004; Pierce, Gardner, Cummings, & Dunham, 1989), we included both self- and others-assessment of contextual performance in the meta-analysis. This inclusion criterion is also based on the fact that the cumulative number of studies would be very small had we retained only studies that adopted others-assessment of contextual performance. A statistical test (to be discussed later) demonstrated that self-rated contextual performance was not necessarily inflated compared to other sources of rating. These inclusion criteria led to the exclusion of an additional 79 articles from the current meta-analysis.

Thus, our search yielded a total of 208 independent samples for meta-analyzing the job satisfaction–task performance relationship, 62 of which were conducted outside of the United States. The publication years of the studies ranged from 1949 to 2007. Even though our article search strategy resulted in fewer studies of task performance than those included by Judge et al. (2001), we located 110 independent samples for the job satisfaction–contextual performance relationship, 46 of which were conducted outside of the United States (15 samples were relevant for meta-analyzing both relationships). The countries included in our study are listed in Table 1.

**Meta-Analytical Procedures**

The first author was responsible for preliminary coding of variables. Major coding criteria include types of performance measures (task vs. contextual performance), sources of performance ratings (self, peers, supervisors, and others), reliability information, sample characteristics, and countries where the samples were drawn. Consistent with the approach taken by Finkelstein, Burke, and Raju (1995), a random sample of 42 studies (i.e., 20%) was independently coded by a research assistant. Agreement among coders was high at 96%. In situations wherein there was disagreement, discussion was used to reach consensus.

Although the coding of most sample characteristics (e.g., average age and proportion of females in a sample) is self-explanatory, the coding for job complexity requires some further explanation. This coding process was guided by previous meta-analyses that coded job complexity (e.g., Avolio & Waldman, 1990; Salgado et al., 2003; Wood, Mento, & Locke, 1987). Specifically, we classified each sample occupation into high and low job complexity according to the general intelligence, verbal ability, and numerical ability required to perform the job (Avolio & Waldman, 1990). The Dictionary of Occupational Titles was used to assist in this coding because jobs in the Dictionary of Occupational Titles are coded and...
classified according to several dimensions (e.g., data, people, and things) that reflect job complexity (Avolio & Waldman, 1990; Salgado et al., 2003). Examples of high-complexity jobs are researcher, accountant, doctor, psychiatrist, engineer, financial analyst, manager/executive, nurse, IT professional, and teacher. Low-complexity jobs include clerk, salesperson, highway maintenance worker, truck driver, and receptionist. Studies that sampled mixed job types were excluded from the analyses. Finally, there were very few samples that involved employees from the public sector. As such, we did not examine the moderating effect of private versus public industry here.

We first corrected each observed correlation for unreliability in the measurement of job satisfaction by adopting the alpha values (α) reported in each study. The rationale for such disattenuation was that job satisfaction is a psychological measure. As such, the responses may contain measurement error, and the severity of measurement error may vary across cultures (Riordan & Vandenberg, 1994). Correlations corrected for unreliability should therefore reflect purer effect sizes and make comparisons of effect sizes across cultures more appropriate.

As mentioned earlier, we were interested in overall job satisfaction only. For those studies that reported specific facets of job satisfaction, we computed an equally weighted composite

### Table 1

#### Summary of Effect Sizes

<table>
<thead>
<tr>
<th>Task Performance</th>
<th>Contextual Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Nation</td>
<td>$N$</td>
</tr>
<tr>
<td>Arab countries</td>
<td>226</td>
</tr>
<tr>
<td>Australia</td>
<td>634</td>
</tr>
<tr>
<td>Canada</td>
<td>935</td>
</tr>
<tr>
<td>China</td>
<td>192</td>
</tr>
<tr>
<td>East Africa</td>
<td>336</td>
</tr>
<tr>
<td>Germany</td>
<td>164</td>
</tr>
<tr>
<td>Greece</td>
<td>454</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1,484</td>
</tr>
<tr>
<td>India</td>
<td>280</td>
</tr>
<tr>
<td>Israel</td>
<td>503</td>
</tr>
<tr>
<td>Japan</td>
<td>268</td>
</tr>
<tr>
<td>Korea</td>
<td>848</td>
</tr>
<tr>
<td>Malaysia</td>
<td>584</td>
</tr>
<tr>
<td>Mexico</td>
<td>311</td>
</tr>
<tr>
<td>Netherlands</td>
<td>430</td>
</tr>
<tr>
<td>New Zealand</td>
<td>296</td>
</tr>
<tr>
<td>Philippines</td>
<td>954</td>
</tr>
<tr>
<td>South Africa</td>
<td>1,242</td>
</tr>
<tr>
<td>Singapore</td>
<td>605</td>
</tr>
<tr>
<td>Spain</td>
<td>130</td>
</tr>
<tr>
<td>Taiwan</td>
<td>559</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>638</td>
</tr>
<tr>
<td>United States</td>
<td>29,172</td>
</tr>
</tbody>
</table>

Note: $N =$ cumulative sample size; $k =$ number of studies cumulated; $\rho =$ sample-size weighted mean corrected correlation; $SD\rho =$ standard deviation of $\rho$. Dashes indicate that no $SD\rho$ was estimated because there was only one study.
of overall satisfaction and then corrected for unreliability using a corresponding equally weighted composite of reliability (Judge et al., 2001). Some studies measured job satisfaction with single items. In those cases, we corrected for unreliability using the meta-analytically derived estimate of reliability of single-item measures of job satisfaction provided by Wanous, Reichers, and Hudy (1997).

With respect to job performance, we corrected for the unreliability in measurement following the recommendation of researchers. Specifically, researchers reasoned that it is more appropriate to use interrater reliability to correct for imperfect measurement in job performance rated by supervisors and peers rather than internal consistency estimates (e.g., Judge et al., 2001; Schmidt & Hunter, 1996; Viswesvaran, Ones, & Schmidt, 1996). Unfortunately, individual studies seldom provided this estimate. Therefore, following the example of Judge et al. (2001), for studies that used supervisors to rate job performance (task or contextual), we disattenuated the correlations using the meta-analytical estimate of the reliability of supervisor-rated job performance provided by Viswesvaran et al. (1996). For studies that used peers to rate job performance, we disattenuated the correlations using the meta-analytical estimate of the reliability of peer-rated job performance. For studies that reported both supervisor- and peer-rated job performance, we disattenuated the correlations using the reliability estimates provided by Judge et al.

Moreover, for studies that adopted other sources of measurements of task performance (e.g., quantity of output, sales volume, customer-rated service quality) and reported the reliability, we used that estimate to correct for unreliability. For studies that adopted other sources of measurements but did not report reliability, we adopted the reliability estimates provided by Judge et al. (2001) for correction. Finally, some studies measured more than one facet of contextual performance (e.g., altruism, compliance). Because different facets of contextual performance are often highly correlated (LePine et al., 2002), we computed an equally weighted composite of overall contextual performance and then corrected for unreliability using the meta-analytically derived estimates of reliability depending on the source of rating (supervisor, peer). For self-rated contextual performance, we corrected the unreliability using the internal consistency estimates reported in the individual studies (Hunter & Schmidt, 1990).

### Statistical Techniques to Examine the Moderating Role of Culture

The core research question of this study examines whether culture moderates the strength of the job satisfaction-job performance relationship. To test for the effect of culture, we examined whether the culture scores identified by previous culture researchers were related to the corrected effect sizes observed for the satisfaction-performance relationship. Many researchers have successfully used cultural scores to examine cross-cultural differences in employee attitudes and behaviors (e.g., Kirkman et al., 2006; Steensma, Marino, & Weaver, 2000). The theoretical underpinning here is that if samples associated with a certain culture score demonstrate significantly different effect sizes for the satisfaction-performance relationship compared to other samples associated with other culture scores, then the culture dimension in question may moderate the strength of the relationship.

Hofstede provided culture scores for each of the four dimensions he proposed, and we directly adopted these scores for our analyses. The scores for the two culture dimensions proposed by Inglehart (1997) were also directly used in our analyses. In addition, as noted
earlier, House et al. (2004) differentiated between cultural values and cultural practices for each of the nine GLOBE dimensions and provided country scores for them. Again, we used these culture scores in our analyses. Finally, Schwartz (1994) proposed three bipolar dimensions of culture based on seven interrelated cultural value orientations (e.g., embeddedness, mastery, harmony). Furthermore, he assigned culture scores for each of the seven value orientations he has identified. We created culture scores for the three underlying dimensions by using a difference score approach. For example, the mastery-harmony dimension was represented by the difference between the mastery and harmony scores assigned by Schwartz.

The use of culture scores identified in previous research required us to consider the levels of analysis very carefully. Specifically, each of those samples that were collected within a certain country should be associated with the same culture score. In our pool of studies, there were 23 countries involved in the 208 samples examining the job satisfaction–task performance relationship. In addition, there were 22 countries involved in the 110 samples examining the job satisfaction–contextual performance relationship. Because the sample-level data were nested within the country-level data, we used two-level hierarchical linear modeling (HLM) to detect the existence of any cross-level effects.

Specifically, we adopted the culture scores (identified in previous research) as a country-level (i.e., Level 2) independent variable to predict the disattenuated (or corrected) effect sizes at the sample level (i.e., Level 1). Thus, the independent variable in the regression model is the cultural score, whereas the dependent variable is the corrected effect size for the satisfaction-performance relationship. In addition, Steel and Kammeyer-Mueller (2002) recommended the use of weighted regression in this moderator search strategy; the weighted regression–based technique was found to be the most reliable and robust in their simulation study when compared to other alternative methods. According to these authors, the weights should be set as equal to the inverse of the sampling error variance associated with each effect size. We specified these weights at the sample level (Level 1) in the HLM analyses accordingly.

In terms of Level 2 control variables, like other researchers, we controlled for the country-level differences in gross national product per capita in our hypotheses testing because the economic development of a country may affect levels of job satisfaction, levels of job performance, and the way job satisfaction affects performance (Huang & Van De Vliert, 2003; Van De Vliert, Huang, & Levine, 2004).

At Level 1, we originally attempted to control for the effects of various sociodemographic variables (e.g., proportion of females in a sample, average organizational tenure of the sample) in our hypotheses testing. However, as discussed below in the Results section, we found that none of these control variables at Level 1 had significant effects on the satisfaction-performance relationship in our HLM analyses. As such, we did not include these variables in our final hypothesis testing to conserve degrees of freedom.

It is also important to note here that because of the relatively small sample size at the country level, we (a) adopted a more liberal alpha level (p < .10) in our statistical testing, in addition to the traditionally used alpha levels (i.e., p < .05 or p < .01), and (b) ran the two-level HLM analyses separately for each of the culture dimensions mentioned in Hypotheses 1 to 4. Following the above discussion, we consider the results separately for task performance and contextual performance.
Results

Table 2 illustrates the results of the meta-analysis. First, we examined the overall effect sizes associated with the job satisfaction–task performance and job satisfaction–contextual performance relationships. The corrected effect size associated with the job satisfaction–task performance relationship is .32 \((N = 41,225, k = 208)\). This estimate is very close to what Judge et al. (2001) found (.30). Furthermore, we calculated the fail-safe number, which is the number of nonsignificant studies that need to be added to turn a significant effect size nonsignificant (Rosenthal, 1979). Hedges and Olkin (1985) suggested a \(5k + 10\) guideline, which means that the fail-safe number should be at least five times the number of studies cumulated in that relationship, plus 10. The fail-safe number for the job satisfaction–task performance relationship is 270,095, which far exceeds the \(5k + 10\) guideline. Thus, the corrected effect size did not appear to be biased by the fact that the meta-analysis was heavily based on published studies.

On the other hand, the corrected effect size associated with the job satisfaction–contextual performance relationship is .35 \((N = 30,854, k = 110)\). Judge et al. (2001) did not perform meta-analyses on this dimension of performance. However, this estimate of .35 reinforced their conclusion that job satisfaction was quite solidly related to job performance, especially in terms of contextual type of performance. In addition, the fail-safe number for this relationship is 111,814, which again met the \(5k + 10\) guideline and suggested that the corrected effect size was quite robust.

Sample and Design Characteristics

Before we turned to examining the core question of whether different dimensions of cultures moderated the job satisfaction–job performance relationship, we examined whether sample and design characteristics affected the effect sizes. Regarding sample characteristics, we examined the following five variables: proportion of females in a sample, proportion of college degree holders in a sample, average age of the sample, average organizational

---

Table 2

<table>
<thead>
<tr>
<th>Relationship</th>
<th>(N)</th>
<th>(k)</th>
<th>(r)</th>
<th>(\rho)</th>
<th>(SD\rho)</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction–task performance</td>
<td>41,225</td>
<td>208</td>
<td>.18</td>
<td>.32</td>
<td>.33</td>
<td>.31</td>
<td>.33</td>
</tr>
<tr>
<td>Job satisfaction–contextual performance</td>
<td>30,854</td>
<td>110</td>
<td>.24</td>
<td>.35</td>
<td>.18</td>
<td>.33</td>
<td>.36</td>
</tr>
<tr>
<td>Self-rated contextual performance</td>
<td>15,296</td>
<td>46</td>
<td>.28</td>
<td>.36</td>
<td>.18</td>
<td>.35</td>
<td>.38</td>
</tr>
<tr>
<td>Others-rated contextual performance</td>
<td>15,558</td>
<td>64</td>
<td>.20</td>
<td>.33</td>
<td>.19</td>
<td>.32</td>
<td>.35</td>
</tr>
</tbody>
</table>

Note: \(N\) = cumulative sample size; \(k\) = number of studies cumulated; \(r\) = sample-size weighted mean uncorrected correlation; \(\rho\) = sample-size weighted mean corrected correlation; \(SD\rho\) = standard deviation of \(\rho\); 95% CI Lower = lower bound of the 95% confidence interval for \(\rho\); 95% CI Upper = upper bound of the 95% confidence interval for \(\rho\).
tenure of the sample, and job complexity. Because of the lack of sample information contained in individual studies as well as the fact that U.S.-based studies made up a major portion of our study pool, we limited the analysis to studies that were conducted in the United States. This focus on U.S. studies alone also allowed us to more accurately assess the influence of sample and design characteristics without the concern that the results were confounded by cross-cultural differences.

We found that none of the five sample characteristics mentioned above was significantly related to the effect size for the satisfaction-performance relationship. Specifically, average age, average organizational tenure, proportion of female, proportion of college degree holders, and job complexity did not predict the effect sizes for the job satisfaction–task performance relationship. We found similar results for the job satisfaction–contextual performance relationship. These results suggest that these five sample characteristics are unlikely to be within-country factors that would strongly affect the satisfaction-performance relationship.

Besides sample characteristics, we examined two design variables: publication year of a study and source of performance ratings. The year a particular study was published is used here as a rough proxy for the nature of the work environment at the time a study was conducted. In addition, we noted earlier that we included studies that adopted either self-assessed or others-assessed contextual performance (even though we included only studies that adopted others-assessed task performance). It would be useful to see whether these two types of assessment sources are associated with different effect sizes.

We found that the publication year of a study was unrelated to the effect size for the job satisfaction–task performance relationship; it was also unrelated to the effect size for the job satisfaction–contextual performance relationship. Thus, the strength of the satisfaction-performance relationship appears to be relatively stable over time. Furthermore, we found that the source of ratings (self vs. others) did not predict the effect size for the job satisfaction–contextual performance relationship. Expanding this analysis, we included here studies performed in other Western countries besides the United States (Belgium, Canada, Germany, Greece, the Netherlands, Spain, Turkey, and the United Kingdom). The rationale was that self-inflation bias might be likely to exist in Western countries where the norm is to promote a strong self-identity (Farh, Dobbins, & Cheng, 1991). We once again found that the source of ratings (self vs. others) did not predict the effect size for the job satisfaction–contextual performance relationship. Thus, the statistical evidence indicates that self-ratings of contextual performance are not necessarily associated with inflated bias.

**Hypotheses Testing**

**Task performance.** Table 3 illustrates the results of our HLM analyses. We predicted that the satisfaction-performance relationship would be stronger in individualistic (vs. collectivistic) cultures as defined by Hofstede (Hypothesis 1a), in autonomy (vs. embeddedness) cultures as defined by Schwartz (Hypothesis 1b), in self-expression (vs. survival) cultures as defined by Inglehart (Hypothesis 1c), in low-institutional-collectivism-values (vs. high-institutional-collectivism-values) cultures as defined by GLOBE (Hypothesis 1d), and in low in-group collectivism practices (vs. high in-group collectivism practices) cultures as defined by GLOBE (Hypothesis 1e).

We found that Hofstede’s individualism was a significant predictor of the observed effect sizes. This result supports Hypothesis 1a. Furthermore, GLOBE’s in-group collectivism
The satisfaction-performance relationship would be stronger in low-power-distance (vs. high-power-distance) cultures as defined by Hofstede (Hypothesis 2a), in egalitarianism (vs. hierarchy) cultures as defined by Schwartz (Hypothesis 2b), in secular-rational (vs. traditional) cultures as defined by Inglehart (Hypothesis 2c), and in low-power-distance-practices (vs. high-power-distance-practices) cultures as defined by GLOBE (Hypothesis 2d).

We found that both Hofstede’s and GLOBE’s power distance dimensions did not predict the effect size for the job satisfaction–task performance relationship. Therefore, Hypotheses 2a, 2c, and 2d were not supported.

We predicted that the satisfaction-performance relationship would be stronger in low-power-distance (vs. high-power-distance) cultures as defined by Hofstede (Hypothesis 2a), in egalitarianism (vs. hierarchy) cultures as defined by Schwartz (Hypothesis 2b), in secular-rational (vs. traditional) cultures as defined by Inglehart (Hypothesis 2c), and in low-power-distance-practices (vs. high-power-distance-practices) cultures as defined by GLOBE (Hypothesis 2d).

We found that both Hofstede’s and GLOBE’s power distance dimensions did not predict the effect size for the job satisfaction–task performance relationship. Therefore, Hypotheses

Table 3
Hierarchical Linear Modeling Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Dimension</th>
<th>$\beta_{\text{GNP}}$</th>
<th>$\beta_{\text{culture}}$</th>
<th>$R^2_{\text{culture}}$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable = task performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a</td>
<td>Individualism-collectivism (Hofstede)</td>
<td>-0.39</td>
<td>0.15*</td>
<td>1</td>
</tr>
<tr>
<td>1b</td>
<td>Autonomy vs. embeddedness (Schwartz)</td>
<td>-0.24</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>1c/4c</td>
<td>Self-expression vs. survival (Inglehart)</td>
<td>-0.44</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>1d</td>
<td>Institutional collectivism values (GLOBE)</td>
<td>-0.35</td>
<td>-0.43</td>
<td></td>
</tr>
<tr>
<td>1e</td>
<td>In-group collectivism practices (GLOBE)</td>
<td>-0.42</td>
<td>-0.61*</td>
<td>1</td>
</tr>
<tr>
<td>2a</td>
<td>Power distance (Hofstede)</td>
<td>-0.20</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>2b</td>
<td>Hierarchy vs. egalitarianism (Schwartz)</td>
<td>-0.13*</td>
<td>-0.33*</td>
<td>1</td>
</tr>
<tr>
<td>2c</td>
<td>Tradition vs. secular-rational (Inglehart)</td>
<td>-0.51*</td>
<td>-0.43*</td>
<td>2</td>
</tr>
<tr>
<td>2d</td>
<td>Power distance practices (GLOBE)</td>
<td>0.12</td>
<td>-0.24</td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td>Uncertainty avoidance (Hofstede)</td>
<td>-0.30</td>
<td>-0.40*</td>
<td>1</td>
</tr>
<tr>
<td>3b</td>
<td>Uncertainty avoidance values (GLOBE)</td>
<td>-0.49</td>
<td>-0.24</td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>Masculinity-femininity (Hofstede)</td>
<td>0.29</td>
<td>0.27</td>
<td></td>
</tr>
<tr>
<td>4b</td>
<td>Mastery vs. harmony (Schwartz)</td>
<td>-0.06*</td>
<td>0.46*</td>
<td>1</td>
</tr>
<tr>
<td>4d</td>
<td>Assertiveness practices (GLOBE)</td>
<td>-0.23</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>4e</td>
<td>Performance orientation values (GLOBE)</td>
<td>-0.03</td>
<td>0.30*</td>
<td>1</td>
</tr>
<tr>
<td>Dependent variable = contextual performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a</td>
<td>Individualism-collectivism (Hofstede)</td>
<td>0.13</td>
<td>0.17*</td>
<td>2</td>
</tr>
<tr>
<td>1b</td>
<td>Autonomy vs. embeddedness (Schwartz)</td>
<td>0.13</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>1c/4c</td>
<td>Self-expression vs. survival (Inglehart)</td>
<td>0.45</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>1d</td>
<td>Institutional collectivism values (GLOBE)</td>
<td>0.30</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>1e</td>
<td>In-group collectivism practices (GLOBE)</td>
<td>0.47</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>2a</td>
<td>Power distance (Hofstede)</td>
<td>0.04</td>
<td>-0.33*</td>
<td>1</td>
</tr>
<tr>
<td>2b</td>
<td>Hierarchy vs. egalitarianism (Schwartz)</td>
<td>0.26</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>2c</td>
<td>Tradition vs. secular-rational (Inglehart)</td>
<td>0.26*</td>
<td>-0.03</td>
<td></td>
</tr>
<tr>
<td>2d</td>
<td>Power distance practices (GLOBE)</td>
<td>0.34</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td>Uncertainty avoidance (Hofstede)</td>
<td>0.26*</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>3b</td>
<td>Uncertainty avoidance values (GLOBE)</td>
<td>0.44</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>Masculinity-femininity (Hofstede)</td>
<td>0.25*</td>
<td>0.13*</td>
<td>1</td>
</tr>
<tr>
<td>4b</td>
<td>Mastery vs. harmony (Schwartz)</td>
<td>0.26</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>4d</td>
<td>Assertiveness practices (GLOBE)</td>
<td>0.26*</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>4e</td>
<td>Performance orientation values (GLOBE)</td>
<td>0.25*</td>
<td>-0.10</td>
<td></td>
</tr>
</tbody>
</table>

Note: $\beta_{\text{GNP}} =$ standardized regression coefficient for GNP; $\beta_{\text{culture}} =$ standardized regression coefficient for the culture dimension; $R^2_{\text{culture}} =$ variance explained by the culture dimension; GLOBE = .

*p < .05.
2a and 2d were not supported. However, we observed that the relationship was negatively moderated by hierarchy-egalitarianism. That is, job satisfaction mattered more to job performance in a culture where the legitimacy of hierarchical roles is minimized. In addition, the tradition (vs. secular-rational) dimension of culture was also a significant and negative moderator. That is, the satisfaction-performance relationship was stronger in those cultures having a low orientation toward authority (parents, religious leaders, bureaucracy) and traditions. Thus, Hypotheses 2b and 2c received support.

We predicted that the satisfaction-performance relationship is stronger in low-uncertainty-avoidance (vs. high-uncertainty-avoidance) cultures as defined by Hofstede (Hypothesis 3a) and in low-uncertainty-avoidance-values (vs. high-uncertainty-avoidance-values) cultures as defined by GLOBE (Hypothesis 3b). We observe that Hofstede’s uncertainty avoidance was a significant negative predictor, providing support for Hypothesis 3a. No other significant results were observed here. Hypothesis 3b, therefore, was not supported.

Finally, we predict that the satisfaction-performance relationship is stronger in masculinity (vs. femininity) cultures as defined by Hofstede (Hypothesis 4a), in mastery (vs. harmony) cultures as defined by Schwartz (Hypothesis 4b), in survival (vs. self-expression) cultures as defined by Inglehart (Hypothesis 4c), in high-assertiveness-practices (vs. low-assertiveness-practices) cultures as defined by GLOBE (Hypothesis 4d), and in high-performance-orientation-values (vs. low-performance-orientation-values) cultures as defined by GLOBE (Hypothesis 4e).

Although we did not find significant results for either Hofstede’s masculinity-femininity dimension or GLOBE’s assertive dimension, we observed that Schwartz’s mastery-harmony dimension and GLOBE’s performance orientation dimension were significantly related to effect size for the satisfaction-performance relationship in the expected direction. Thus, although Hypotheses 4a and 4d were not supported, Hypotheses 4b and 4e received support.

Hypothesis 4c is a competing hypothesis with Hypothesis 1c, for which we did not find support. Although we did not find support for the moderating effect of survival (vs. self-expression), we observed that the cultural dimension of materialism (vs. postmaterialism), which closely resembles the survival versus self-expression dimension (Inglehart, 1997), was significantly and positively related to the effect size observed. That is, the strength of the relationship between satisfaction and performance is stronger when the culture emphasizes such values as achievement motivation, financial gains, and economic rationality. These results can be taken as supportive evidence for Hypothesis 4c.

**Contextual performance.** We used the same techniques to examine the moderating role of culture in the job satisfaction–contextual performance relationship. The results are again presented in Table 3. Specifically, with respect to Hofstede’s cultural dimensions, we found that three of the four dimensions were significantly related to effect sizes observed. They were individualism, power distance, and masculinity. The directions of these three effects followed our expectations. Those cultures that emphasize high individualism (Hypothesis 1a), low power distance (Hypothesis 2a), and/or high masculinity (Hypothesis 4a) are likely to have a stronger relationship between job satisfaction and contextual performance. On the other hand, we found that uncertainty avoidance (Hypothesis 3a) was not a significant predictor.
We have found no significant results for the remaining three frameworks of culture. Specifically, regarding Schwartz’s framework, we found that the three key dimensions of cultures, embeddedness versus autonomy, hierarchy versus egalitarianism, and mastery versus harmony, did not significantly predict the effect size for the job satisfaction–contextual performance relationship. With respect to Inglehart’s framework of culture, we also found that the tradition versus secular-rational and survival versus self-expression dimensions were not significant predictors here. Finally, the six hypotheses related to GLOBE’s cultural values or practices dimensions were also unsupported.

Discussion

The core purpose of the current study was to examine whether the job satisfaction–job performance relationship varies across cultures. Although the literature does not provide overwhelming evidence that culture affects the strength of the relationship, our metaanalytical test revealed that the (corrected) relationship varied on multiple cultural dimensions, including Hofstede’s individualism-collectivism, power distance, uncertainty avoidance, and masculinity-femininity dimensions; Schwartz’s egalitarianism-hierarchy and mastery-harmony dimensions; Inglehart’s tradition versus secular-rational and materialism versus postmaterialism dimensions; and GLOBE’s in-group collectivism and performance orientation dimensions.

Pattern of Results

One key pattern of the results that we observe here is that there are relatively fewer significant findings for contextual performance compared to task performance. Specifically, three of the four dimensions in Hofstede’s framework of culture demonstrated the proposed moderating effects, whereas no significant results were observed for the culture dimensions contained in other frameworks of culture proposed by Schwartz, Inglehart, and GLOBE. One possible explanation is that culture prescribes stronger behavioral norms for in-role than for extrarole behaviors because both employees and employers are traditionally more concerned with in-role behaviors. Consequently, the moderating effects of culture we predicted in our hypotheses are more likely to be seen for task performance. Therefore, although the current study has provided some preliminary evidence that culture matters to the job satisfaction–task performance relationship, more detailed and comprehensive theoretical reasoning is required to conceptualize how the specific elements contained in each dimension of culture may affect the job satisfaction–contextual performance relationship.

The methodologies researchers used to measure contextual performance in cross-cultural studies might be another reason for the lack of findings here. Researchers have shown that how employees define in-role and extrarole job expectations may vary across cultures (Lam, Hui, Law, 1999). As such, measures of contextual performance developed in the United States might not be fully applicable to other cultures. Unfortunately, because of the lack of validated scales outside of the United States, many cross-cultural studies necessarily use the U.S.-based measure, and as such, there is a greater risk of invalid findings from these studies. In addition, some studies used self-rated measures of contextual performance, and we necessarily followed the practice here to ensure that we had sufficient studies.
in the analysis. On the other hand, the analysis of task performance does not involve self-rated measures. This difference may be another reason contributing to the lack of findings in our analyses of contextual performance.

Another important observation is that among the four dimensions of culture advanced by Hofstede, the proposed moderating effects of the uncertainty avoidance dimension of culture received the weakest support. One possible reason for this finding is that there are different types of uncertainty at work and that uncertainty stemming from core and specific elements (e.g., performance evaluation procedure, pay policies, supervisor instructions) are particularly important for moderating the satisfaction-performance relationship. Furthermore, the response to these work elements may be different as well. For example, one’s avoidance of a threat can be expressed through cognitive distortion, behavioral change, or both (Smith, Beran, Redford, & Washburn, 2006). It may be that avoidance stemming from cognitive distortion affects the satisfaction-performance relationship more through its effect on job satisfaction whereas the behavioral type of avoidance affects the relationship more through its effect on job performance. Because of the nature of meta-analysis, we could not directly examine these issues.

Implications for Theories

The results observed in this study have several implications for theory development in the satisfaction-performance research. First, our results should help restore researchers’ confidence in the satisfaction-performance relationship. Although Judge et al.’s (2001) quantitative review has already made it clear that job satisfaction matters to job performance, we have reinforced this conclusion by incorporating the contextual dimension of performance as well.

This study also has implications for the broader field of social science in which researchers often address the question of whether attitudes matter to behaviors (e.g., Eagly & Chaiken, 1993; Kim & Hunter, 1993). We demonstrate that when the study’s methodological artifacts (i.e., measurement errors and sampling errors) are reduced, the relationship between attitudes and behaviors is more than trivial (Wallace et al., 2005). Even though this study does not shed light on the reciprocal nature of the job satisfaction–job performance relationship because of the cross-sectional nature of the studies included in the meta-analyses, we have presented theoretical reasons and empirical evidence as to why we expect a nonzero relationship between these two core variables in organizational research.

In addition, this study has theoretical implications for international management research. The call for more international management research is based on the premise that observations from one country, culture, or context are not necessarily applicable to other countries, cultures, or contexts (e.g., Newburry & Yakova, 2006; Robert, Probst, Martocchio, Drasgow, & Lawler, 2000). This study highlights the idiosyncratic results associated with each culture. Most studies of the job satisfaction–job performance relationship to date were conducted within the United States, which is a Western, well-developed economy. Employee samples in other cultures, on the other hand, do not necessarily demonstrate the same strength of relationship. Thus, as researchers, we need to be skeptical of assumptions that a relationship observed in one culture will be seen with the same strength in another culture (Aycan, 2000).
Skepticism about applying the findings from one culture to another culture without testing is particularly important for managers of global corporations. For one, organizations that are expanding to other cultures need to perform more thorough analyses of cultural differences beforehand and pay specific attention in the execution of policies and procedures. For instance, in evaluating employees’ performance in a culture that emphasizes material rewards, managers may need to rigorously assess contextual performance in addition to task performance because many employees in that culture may expect to receive rewards for extrarole behaviors. At the same time, however, managers need to ensure that satisfied and energized individuals do not become overly focused on contextual performance such that they sacrifice core task performance (Bolino & Turnley, 2005). To that end, clearer policies for performance evaluation and reward allocation may help prevent this problem.

**Future Research on the Satisfaction-Performance Relationship**

Organizational research has assumed that job satisfaction and job performance are conceptualized equivalently in different cultures. However, to the extent that this assumption is not fully correct, the strength of the satisfaction-performance relationship may vary as well. To date, only very limited research has directly addressed this issue. For instance, Liu, Borg, and Spector (2004) observed that the German Job Satisfaction Survey demonstrated measurement equivalence across German, English, and Spanish countries. There was less equivalence, however, when the authors compared Western and Eastern countries. In terms of performance, there is also empirical evidence demonstrating that the task-contextual performance distinction developed in Western cultures is not entirely applicable to Eastern countries (Farh et al., 1997; G. B. Fisher & Hartel, 2004). Because of the nature of a meta-analysis, we necessarily used the measures chosen by the authors. However, future research addressing the satisfaction-performance link should be sensitive to the issue of equivalence of definitions and measures across cultures.

Furthermore, the current study provides the rationale for researchers to investigate other performance dimensions. The evidence gathered here is that culture moderates the relationship between job satisfaction and these two dimensions of performance in a largely consistent way. However, in addition to core task performance and contextual performance, researchers have identified a number of new dimensions, even though these dimensions have received less attention in the research literature. The relevancy of these other performance dimensions may depend on the cultural context in which the empirical studies are performed. These other dimensions include, for example, adaptive performance (Johnson, 2001), counterproductive performance (Rotundo & Sackett, 2002), and team-player performance (Welbourne, Johnson, & Erez, 1998). It may be that job satisfaction has a relationship with each of these other performance dimensions as well, and the association may again vary across cultures.

Although this study has focused exclusively on the role of culture as a moderator, it serves the additional purpose of reminding researchers not to ignore the influence of broad, macro-level factors on the relationship between job satisfaction and job performance. These factors, in addition to national cultures, may include group norms, organizational cultures, organizational structures and policies, economic conditions, labor market conditions, and diversity of the workforce. The weak and inconsistent relationship found in earlier studies of the job satisfaction–job performance relationship very well may be due to the fact that researchers
have omitted some of the important group-, organization-, or even country-level variables in their investigations. Cross-level investigations of the impact of culture are particularly useful (Kirkman et al., 2006). We have illustrated the use of culture scores in this regard.

In our review, we found that meta-analyses were sometimes used to address different research questions related to cultures (e.g., Bond & Smith, 1996). Although meta-analyses provide a robust picture of cumulated research findings, they have some limitations, too. In our meta-analysis, six limitations in particular were noticeable. First, we have treated the dimensions in previous culture frameworks as largely independent, even though there is also evidence that some of these dimensions are quite strongly correlated (e.g., among GLOBE’s dimensions; House et al., 2004). A second limitation is the relatively small number of aggregated studies for the job satisfaction–contextual performance relationship despite a comprehensive search for such studies. Even though meta-analysis can be executed with as few as two studies (Hunter & Schmidt, 1990), the cumulated effect sizes are more stable when the number of cumulative studies increases. It might also be one of the reasons there were fewer significant findings associated with contextual performance compared to task performance.

Third, the total number of countries involved in our pool of samples was still small. Thus, there might not be sufficient variances in culture to further increase the power of the test. On a related note, the fourth limitation was that we used two-level HLM analyses by treating effect sizes as Level 1 variables and culture as a Level 2 variable. However, when more cross-cultural studies have accumulated, a three-level HLM analysis might be more appropriate—effect sizes at Level 1, studies at Level 2, and cultures at Level 3. Our fifth limitation is that due to the data contained in individual studies, we had no choice but to use proxy variables in our moderator search (i.e., the culture scores developed in the past were used as a proxy for the effect of cultures today). Finally, observed correlations were disattenuated using estimates provided by other researchers who reviewed reliability information in studies that were conducted largely in Western countries. The use of these estimates in the meta-analyses for non-Western samples might not be fully suitable. In sum, the quality of the meta-analysis is constrained by the quality of the empirical studies on which it is based. As the prior research design issues get resolved, the inherent restrictions imposed by meta-analyses will be lessened as well.

Conclusion

Many researchers and practitioners today have a restored belief in the job satisfaction–job performance link. The current study further extends this area of research and finds preliminary evidence that there are some cultural differences with regard to the strength of the job satisfaction–job performance relationship. We hope that this study provides a reminder of the potential variability of the strength of the relationship between job satisfaction and job performance. We also hope that future researchers will broaden the existing perspective on the satisfaction-performance relationship to include cross-cultural variables like we did.

References

References marked with an asterisk indicate studies included in the meta-analysis.


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