The Effect of Culture on the Curvilinear Relationship between Performance and Turnover

Michael C. Sturman, Lian Shao, and Jan H. Katz

Cornell University

Although researchers have theorized that there exists a curvilinear relationship between job performance and voluntary turnover, their research has been tested in the United States or culturally similar Switzerland. Through a study of the performance–turnover relationship from a multinational service oriented organization in 24 countries, we demonstrate that the general relationship between performance and turnover is similar across countries but the details of that relationship change across countries. Using 4 cultural dimensions—in-group collectivism, power distance, uncertainty avoidance, and performance orientation—we find that cultural factors alter the overall probability of voluntary turnover and influence the degree of curvilinearity in the performance–turnover relationship. Our findings have implications for research on the performance–turnover relationship, turnover research, and practice.

It has been theorized (Jackofsky, 1984) and repeatedly replicated (e.g., Jackofsky, Ferris, & Breckenridge, 1986; Salamin & Hom, 2005; Sturman & Trevor, 2001; Trevor, Gerhart, & Boudreau, 1997; Williams & Livingstone, 1994) that the relationship between job performance and turnover is curvilinear in nature. In particular, the relationship between job performance and the probability of turnover has been shown to follow a U shape, so that turnover is more likely among both low and high performers than among average performers. This finding represents an important advancement in the turnover literature, as it challenged conventional wisdom of a negative linear relationship between performance and turnover (Salamin & Hom, 2005) and has markedly different practical implications for organizations interested in retaining top talent.

A limitation of this research stream, though, is its lack of consideration of context (cf. Johns, 2006). Although research on the job performance–turnover relationship has considered some contextual factors that moderate this relationship (e.g., Allen & Griffeth, 2001; Lee, Gerhart, Weller, & Trevor, 2008; Salamin & Hom, 2005; Schwab, 1991; Trevor et al., 1997), progress in this area has been limited by theoretical development and empirical testing largely being conducted within a single cultural environment. Most turnover research in general and almost all of the prior studies on the job performance–turnover relationship in particular have been carried out in the United States (for an

exception in the latter case, see Salamin & Hom, 2005). With U.S. employees representing less than 5% of the global workforce, it is no surprise that researchers have repeatedly called for investigating in other cultures the efficacy of human resource theories that have heretofore been tested only on U.S. employees (e.g., Aycan, Kanungo, & Sinha, 1999; Chiang & Birtch, 2007; Chiu, Luk, & Tang, 2002; Erez, 1994; Fey, Morgulis-Yakushev, Park, & Björkman, 2009; Miller, Hom, & Gomez-Mejia, 2001; Ng, Sorensen, & Yim, 2009; Ramesh & Gelfand, 2010; Salamin & Hom, 2005). Researchers have argued that turnover theories reflect strong Anglo-American biases and should be broadened to incorporate contextual factors such as national culture (Maertz, Stevens, & Campion, 2003; Miller et al., 2001; Ramesh & Gelfand, 2010).

Understanding the generalizability of managerial theory requires an understanding of national culture's effects (Robert, Probst, Martocchio, Drasgow, & Lawler, 2000). There is growing evidence that the relationship between attitudes and behaviors is moderated by culture (e.g., Farh, Hackett, & Liang, 2007; Lam, Schaubroeck, & Aryee, 2002; Ng, Sorensen, & Yim, 2009; Ramesh & Gelfand, 2010). If these relationships vary, we need to question the generalizability of theoretical proposals that are based on the attitude–behavior linkages from U.S.-focal studies. Given that, even within the United States, variability in organizational culture moderates the relationship between job performance and turnover (Sheridan, 1992), it is a notable theoretical and practical gap that research has not considered how the greater cultural variability experienced across countries might moderate this relationship.

Two important steps have been taken that begin to fill this gap. Ramesh and Gelfand (2010) examined the role of job embeddedness in an individualistic culture (the United States) compared to a collectivist culture (India). Their findings confirm the generalizable effect of job embeddedness in that it helps predict turnover in the different cultures even after controlling for a host of other potential factors. At the same time, their study showed that the magnitude of the effects of many variables did vary across the two cultures. Ramesh and Gelfand (2010) concluded that "although turnover theories may be universally applicable, their application needs to be tailored to particular cultural contexts to make them more generalizable and practically relevant" (p. 821).

Salamin and Hom (2005) investigated the performance–turnover relationship in Switzerland. They too found evidence for generalizability that replicated the curvilinear relationship between performance and turnover found in prior research. However, this work is only a partial test of culture's roles, given that Switzerland and the United States are similar in many cultural respects (Hofstede, 2001; House, Javidan, Hanges, & Dorfman, 2002; Salamin & Hom, 2005). Thus, although Salamin and Hom's work is an important replication of the nonlinear relationship between performance and turnover in

another culture, the performance–turnover literature is still at a state where, as far as we know, "those strategies that are effective in one country may falter when applied in another country" (Salamin & Hom, 2005, p. 1214).

Our goal in this paper is to extend and test theory on the job performance–turnover relationship by examining the generalizability of the nonlinearity hypothesis across cultures and predicting national culture's direct and moderating roles. This has two benefits for theoretical development. First, by testing the generalizability of the theory in this way, we can better understand employee behavior in different countries. Second, by considering how national culture influences the relationships that link performance to turnover, we can clarify and extend theory. Just as Ramesh and Gelfand (2010) argued for job embeddedness, we argue that though the basic attitude– behavior relationships underlying performance– turnover theory are generalizable and trend in the same direction across cultures, the details of the route taken differ significantly. With data from 24 countries, we test the multinational generalizability of a curvilinear performance–turnover relationship. We hypothesize that there are reasons to expect some generalizability of the theory across cultural contexts. Yet, at the same time, we also expect that there is not one specific functional form; rather, the exact nature of this form differs across countries, and cultural variables can help explain these differences.

Generalizability and Variability of Performance Turnover Theory

The Moderating Effects of Job Performance

Jackofsky (1984) integrated job performance into March and Simon's (1958) model of voluntary turnover by suggesting a curvilinear performance–turnover relationship, such that both low performers and high performers are more likely than average performers to leave. The most recent and sophisticated tests of this nonlinearity have supported this perspective (Salamin & Hom, 2005; Trevor et al., 1997). In general, scholars have argued that job performance affects employee turnover because of its influence on an individual's likelihood of being hired for a job, receiving various rewards, and maintaining a job (Dreher, 1982; Jackofsky, 1984; Maertz & Campion, 1998), outcomes that in turn affect both ease and desirability of voluntary turnover. The argument of a curvilinear performance– turnover relationship is based on the following reasoning: (a) high performers are more attractive to alternative employers and thereby more likely to be hired elsewhere, creating greater ease of movement; (b) high performers whose pay is not commensurable with their contribution have a greater desirability of movement as these individuals seek more appropriate rewards or recognition for their accomplishments; (c) low performers are less likely to believe they will be able to maintain their jobs

and thus have a greater desirability of turnover than do average performers; and (d) low performers may resent lower reward levels in companies that do link performance to rewards, have low job satisfaction, and desire a job with a more appropriate fit with their knowledge, skills, abilities, and attitudes, thus leading to a greater desirability of turnover.

A weakness of the performance–turnover model, though, is that its theoretical development is dominated by at least an implicit Western cultural bias (Maertz et al., 2003; Miller et al., 2001). Generalizability of a relationship between performance and turnover in other cultures is largely untested and even unquestioned. Yet the mechanisms through which the theory ties performance to ease and desirability of movement are based on inherent U.S. cultural views of performance, equity, and turnover. Given the critical theoretical and practical differences among there being no relationship, a negative linear relationship, and a curvilinear relationship between performance and turnover, the lack of international research represents a critical gap in our understanding of turnover (Maertz et al., 2003; Ramesh & Gelfand, 2010).

Reasons for the Generalizability of the Theory

Since early organizational behavior theory, academics have argued that people use work to fulfill needs (Maslow, 1954; McClelland, Atkinson, Clark, & Lowell, 1953; Murray, 1938). The physiological needs—to eat, to find shelter, and so on—are clearly felt by all people regardless of culture. More abstract needs are also universal. The need for affiliation (Maslow, 1954; Murray, 1938), for example, appears within the individualism/collectivism dimension of culture models (Hofstede, 1980), and need for achievement is a component of the performance-orientation dimension (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Although some may think a low score on a construct indicates an absence of the construct, that is not the case. Individualists do seek group affiliations, but those affiliations are not as central to their self-definition; nor are these affiliations as determinantal of personal behavior as are group affiliations in collectivist societies (Adler & Gunderson, 2008). McClelland's (1961) cross-national study of need for achievement found significant differences in the strength of the achievement motive across countries, but there was some interest in achievement in all cultures. Recent tests of cultural theory support the existence of similar needs across cultures, though the intensity of those needs varies (e.g., Chiang & Birtch, 2005; House et al., 2004; Sheldon, Elliot, Kim, & Kasser, 2001).

Although some of the logic behind the curvilinear nature of the performance–turnover relationship is based on labor market attributes (e.g., the relative ease with which high performers find

alternative employment), much of it is based on the drive to satisfy needs. High performers who need to achieve are likely to leave jobs they believe are hindering achievement in favor of jobs with more promising paths. Low performers are leaving jobs in part due to fear of firing, which threatens fulfillment of physiological needs due to loss of salary but also threatens the need for affiliation due to severing of the work-group relationship. The logic of performance– turnover therefore aligns with the universal drive for need fulfillment through work.

Further, international research has found that human resource practices that threaten or support those needs—thus creating the pressures leading to the curvilinear performance–turnover relationship— exist in a wide range of countries. Pay-for performance systems, which reward the top and penalize the bottom, have been studied in culturally divergent countries, such as China (Buck, Liu, & Skovoroda, 2008; Du & Choi, 2010), India (Kingdon & Teal, 2007), Italy (Origo, 2009), Japan (Beatty, McCune, & Beatty, 1988; Hatvany & Pucik, 1981), Rwanda (Kalk, Paul, & Grabosch, 2010), and Spain (Bayo-Moriones, Galdon-Sanchez, & Martinez-de-Morentin, 2010). The spread of U.S.-based multinational corporations has also brought pay-for-performance norms around the world, as at the corporation studied by DeVoe and Iyengar (2004) that used the system in Argentina, Brazil, Mexico, Philippines, Taiwan, and the United States.

Evidence from diverse cultures indicates that employees around the world respond similarly (although not identically) to the pressures created by those human resource systems. Compensation satisfaction relates to turnover intentions and actual turnover in societies as dissimilar as Pakistan (Butt, 2008), Belgium (Vandenberghe & Tremblay, 2008), and Eritrea (Ghebregiorgis & Karsten, 2007). Job satisfaction predicts turnover in collectivist India (Ramesh & Gelfand, 2010). In the same vein, employees who feel a lack of career progression are more likely to turnover both in individualistic New Zealand and in collectivist Singapore (Hunter, Tan, & Tan, 2008).

In sum, evidence shows that the universal dynamic of need fulfillment through work is consistent with the logic of the performance– turnover relationships considered by March and Simon (1958) and Jackofsky (1984). Further, human resource practices found in diverse countries suggest that high and low performers worldwide are subject to the pressures that Jackofsky posits lead to relatively high turnover rates in both of those groups. Finally, evidence suggests that individuals respond similarly to those pressures across diverse cultures. Given that, we predict that the basic premise of the performance–turnover curvilinearity theory should generalize across cultures. Stated formally:

Hypothesis 1: There exists a nonlinear (a U-shaped) relationship between performance and the probability of turnover that generalizes across countries.

Variability in the Performance–Turnover Relationship

As Ramesh and Gelfand (2010) have shown, although a broad theoretical model may transfer across countries, specific relationships within the model may change due to culture. In this case, the change in the nature of the performance–turnover relationship may arise due to cultural effects that change the link between performance and intention to turnover and the link between intention to turnover and actual turnover.

In terms of the performance–intention to turnover link, employees in collectivist cultures feel stronger organizational identification and commitment (Baker, Carson, & Carson, 2009; Clugston, Howell, & Dorfman, 2000), and those with strong organizational commitment are less likely to exit even when they are dissatisfied with their work (Hom, Katerberg, & Hulin, 1979; Porter, Steers, Mowday, & Boulian, 1974). Consistent with this view, employees in firms that stressed interpersonal relationships (i.e., firms with more collective cultures) stayed longer than those in firms with a more individually oriented culture (Sheridan, 1992). As noted above, New Zealanders and Singaporeans both left their organizations when they felt an absence of career progression, but individualistic New Zealanders were more likely to turnover (Hunter et al., 2008).

Dissatisfied employees may also be less likely to switch jobs in certain contexts because the expected return to turnover is lower. In high-uncertainty-avoidance countries, for example, companies often use seniority rather than performance to determine promotion (Fischer, 2008). As a result, employees are less likely to leave jobs in which they feel undervalued because they will not be promoted more rapidly in a new job.

Culture also affects ease of movement across organizations, which should affect voluntary turnover choices. Chen, Hui, and Sego (1998), for example, found that the link between turnover intention and turnover is weaker (but still positive) in countries where social norms oppose voluntary turnover. Cultures that do not support turnover, such as the collectivist cultures of East Asia, also have more limited labor market institutions, making it more difficult for employees to find information about alternative employment (Werbel, Song, & Yan, 2008).

In short, although the first hypothesis predicts that the nonlinear relationship between performance and turnover should generalize across countries, cross-cultural research suggests that the precise functional form of this relationship will not be uniform across countries. Differences in the salience of relevant job attributes, corporate human resource policies, societal attitudes, and labor market conditions all affect how likely dissatisfied employees are to choose to leave their organizations voluntarily. We therefore predict:

Hypothesis 2: The nature of the nonlinear relationship between performance and the probability of turnover will vary across countries.

The Moderating Effects of National Culture

Our second hypothesis provides a basis for considering variability in the performance–turnover relationship across countries[1], but extending theory on the subject requires developing an understanding of which characteristics lead to the hypothesized variation and the form in which this variation should appear. Culture may affect the functional form both by having an overall influence on the probability of turnover (i.e., main effects on the probability of turnover) and by changing the nature of the performance–turnover curve (i.e., moderating effects on the linear and/or quadratic relationship between performance and turnover).

To test the effects of culture on turnover and the performance– turnover relationship, we have chosen to employ four cultural constructs identified by Hofstede (1980) and then refined and extended by House et al. (2004). Although there was initial excitement about Hofstede's (1980) dimensions because of their intuitive appeal, researchers (e.g., Hofstede & Bond, 1988; House et al., 2004) realized that these dimensions could be further refined by a construct-driven (as opposed to exploratory) survey approach. We thus use the core constructs of Hofstede's (1980) dimensions but in their refined version (House et al., 2004): in-group collectivism (a refinement of the Hofstede individualism– collectivism dimension), power distance, uncertainty avoidance, and performance orientation (a refinement of a component of the Hofstede masculinity–femininity dimension).

Although there is a continuing debate as to the best culture model for cross-cultural studies (e.g., Hofstede, 2006; Javidan, House, Dorfman, Hanges, & Sully de Luque, 2006) and there are other useful cultural constructs (cf. McSweeney, 2002; Schwartz & Bilsky, 1990; Smith, 2002; Smith & Schwartz, 1997; Triandis, Leung, Villareal, & Clark, 1985; Tsui, Nifadkar, & Ou, 2007), the Hofstede-based constructs have particular validity here because they were developed in the work context and with survey questions specifically focused on characteristics of work. This is critical for our theory testing because research has shown that people embody multiple cultural personalities, each of which is expressed under specific contextual conditions (Deshpandé & Stayman, 1994; Ralston, Cunniff, & Gustafson, 1995), and we wanted to capture the cultural norms expressed by employees in a work context. Hofstede's (1980)

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[1] The first two hypotheses are analogous to a random coefficients regression model (Hofmann, 1997; Raudenbush & Bryk, 2002), in that we are specifically considering if the hypothesized relationship exists (i.e., if the intercepts and slopes create the hypothesized curvilinear form) and if there is significant cross-country variance in these terms.

measures and the refinements by House et al. (2004) were also designed to be used for country-level analyses. The use of country-level cultural variables fits with our theoretical approach and heeds the call for cross-level theoretical development and testing (Tsui et al., 2007). Additionally, these cultural dimensions have frequently been used in theoretical tests of management theories in other cultures (e.g., Atwater, Wang, Smither, & Fleenor, 2009; Chiang, 2005; Chiang & Birtch, 2007; Ng, Sorensen, & Yim, 2009), and so we can draw upon this body of literature to hypothesize about the effects of culture on the performance– turnover relationship.

In-Group Collectivism

In-group collectivism is a refinement of Hofstede's (1980) individualism– collectivism scale. The scale addresses cultural norms regarding self-definition and the nature of the relationship between individuals and the social groups in which they participate (Hofstede, 1980). In individualist cultures, the private self predominates: people value autonomy, independence, and individual achievement, and they consider personal goals to be most important (Gelfand, Bhawuk, Nishii, & Bechtold, 2004). In collectivistic cultures, society emphasizes values such as belonging, conformity, preserving public image, and harmony (Gelfand et al., 2004). Collectivists therefore assign greater weight to group goals than personal ones (Greenwald, 1982), exhibit greater group loyalty, form a greater affective attachment to their organizations, and respond more to group expectations (Gelfand et al., 2004).

Maertz (2004) and Hofstede (1980) argued that employees in collectivist cultures have a stronger psychological (implicit) contract with their employers, corresponding to the employees' preference for belonging versus individualists' desire for autonomy. Collectivists derive pleasure simply from being part of a group and feeling social support. They therefore tend to avoid being separated from others and prefer to maintain relationships even when those are at odds with their personal interests (Sinha & Verma, 1994). Hunter et al. (2008) indeed found that workers in a collectivist society were less willing to leave employers despite personal dissatisfaction.

In addition, collectivists are less likely to turnover because they recognize that exit would affect the lives of family and friends (Maertz & Campion, 2004; Maertz et al., 2003), and such disruption is less acceptable in their cultural context. Maertz (2004) found that the perceived desires and expectations of family and friends better predicted turnover intentions for collectivists than did measures of employees' personal attitudes.[2] When behavior was anonymous (i.e., the social group could not observe

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[2] The findings from Maertz et al. (2003) suggest that turnover could actually be higher in collectivist societies, because when one person leaves, the entire group leaves. Thus, if the collectivism leads to loyalty to one's work group rather than one's organization, one is more likely to observe discrete events of high turnover. However, the

participants' behavior), Yamagishi (1988) found that collectivists would exit when dissatisfied, but turnover behavior in most work settings is not anonymous. The limited external labor markets in collectivist cultures (Jo, 1995; Werbel et al., 2008) further limit the ease of turnover.

The aforementioned effects work via their impact on desirability and ease of turnover—lowering desirability due to social interests and pressures and ease of turnover due to societal workforce structures—and so should lead to a main effect on the general probability of turnover. We thus expect employees from in-group collectivism cultures to be less likely to leave their organizations regardless of performance level than are employees in low in-group collectivism (i.e., individualistic) cultures.

Hypothesis 3: The probability of voluntary turnover is lower in collectivist cultures than in individualist cultures (i.e., there is a negative relationship between the in-group collectivism and the probability of voluntary turnover).

Despite Yamagishi's (1988) evidence that collectivists sometimes feel dissatisfaction in task environments, the nature of collectivist societies suggests that dissatisfaction is less likely to arise due to performance differentials because employees value those rewards less. Huang and Van de Vliert (2004), for example, found that job level is related to satisfaction in individualist societies but not in collectivist ones. Collectivists also prefer rewards to be distributed among group members rather than to be individually targeted (Leung & Bond, 1984; Ramamoorthy & Carroll, 1998; Yamaguchi, 1994). As a result, the extent to which high-performance employees in collectivist cultures view turnover as a desirable move that would generate higher rewards should be weaker than for such employees in individualistic cultures. Because collectivist societies diminish the use and salience of individual performance signals (Pucik, 1984), high performers are less able to distinguish and market themselves to other employers. As well, low-performance employees in collectivist cultures are less likely to be singled out for penalties or be compelled to remove themselves from the group (i.e., the organization; Yamaguchi, 1994). They are therefore also less likely to see voluntary turnover as a necessary mechanism for avoiding penalties or involuntary turnover.

In sum, due both to lower desirability and to ease of movement in collectivist societies, although low and high performance will still have some effect on the probability of turnover, the salience of both

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Maertz et al. (2003) study examined low-skilled employees in the Mexican maquiladora system, where transferability between jobs is simple, high, and expected. As we describe later, our sample of higher skilled workers in white-collar positions is very different from workers in the maquiladora system (and other systems that are characterized by low levels of human capital and low wages).

low and high performance will be weaker than in the individualistic cultures where Jackofsky's (1984) propositions have been proposed and tested. That leads to:

Hypothesis 4: The U-shaped performance–turnover relationship is weaker (i.e., there is less curvilinearity) in collectivist cultures than in individualist cultures.

Power Distance

The cultural dimension of power distance indicates a culture's average level of acceptance and expectation of unequal power distribution in a society (Hofstede, 1980). Cultures with high power distance tend to prescribe a vertical subordinate–supervisor relationship along with a set of detailed expectations that are imposed on both parties (Carl, Gupta, & Javidan, 2004), including the understanding that high-power individuals may use their power for personal benefit (Hofstede, 1980). In low-power-distance societies, people believe that power should be relatively equally distributed. If an individual has more power derived from an organizational position, that power should be used only to benefit the organization and not the individual (Hofstede, 1980).

As a result of those assumptions, there is typically a very high return to seniority in organizations in high-power-distance societies. Research in such societies has shown high salary and benefits differentials (Huang & Van de Vliert, 2003; Tosi & Greckhamer, 2004), substantially more autonomy for senior employees (Earley & Erez, 1997), more opportunities for promotion (Maertz et al., 2003), and a high proportion of variable pay to total compensation (Tosi & Greckhamer, 2004). By eliminating accrued seniority, switching employers carries a significant penalty. This low desirability of exit is reinforced in high-power-distance societies because employees feel a greater attachment and loyalty to authority figures and are less likely to break those ties (Cohen, 2006; Fischer & Mansell, 2009). When we examine turnover at the unit level across cultures, we therefore expect lower rates of turnover when power distance is high. That leads to the following hypothesis:

Hypothesis 5: The probability of voluntary turnover is lower in high-power-distance cultures than in low-power-distance cultures (i.e., there is a negative relationship between power distance and the probability of voluntary turnover).

We also expect that the effects of performance in high-power-distance cultures will be less salient than in low-power-distance cultures. In high-power-distance societies, promotion is often based on factors other than performance, such as membership in a special social class, family, or political network (Earley & Erez, 1997), as well as seniority. As a result, employees would less often expect a high professional return to performance per se. Consequently, inadequate returns for high performance do

not generate the same level of dissatisfaction leading to turnover that would be seen in low-power-distance societies. For example, Kim and Leung (2007) showed that perceptions of fairness had a stronger effect on turnover intentions for low-power-distance Americans than for high-power-distance Koreans and Chinese. Because both high- and low-performing employees in high-power-distance societies are less likely to become as dissatisfied when rewards are inconsistent with what they believe they deserve, a key reason for them to desire to move is substantially reduced. As a result, while high and low performance will still have some effect on turnover, the magnitude of effects associated with job performance should be smaller. Thus, we hypothesize:

Hypothesis 6: The performance–turnover relationship is weaker (i.e., there is less curvilinearity) in high-power-distance cultures than in low-power-distance cultures.

Uncertainty Avoidance

Uncertainty avoidance has an intuitive link to turnover because it refers to a population's willingness to accept uncertainty. People from high-uncertainty-avoidance cultures feel threatened by the unknown and try to avoid ambiguous situations (Hofstede, 1980). Given that turnover decisions inherently involve uncertainty— such as for the new work environment (cf. Bauer, Bodner, & Tucker, 2007), relationships with coworkers and supervisors, and advancement opportunities (Allen, 2004; Allen, Weeks, & Moffitt, 2005)—high-uncertainty-avoidant individuals would see voluntary turnover as less desirable and, so, be less likely to pursue that choice (Maertz, 2004).

Research has confirmed that members of risk-averse societies exhibit greater continuance commitment to their organization, supervisor, and work group (Clugston et al., 2000) and display greater organizational identification (Baker et al., 2009), both of which decrease desirability of voluntary turnover and likely reduce its frequency in general. Because cultures high in uncertainty avoidance tend to hold "persistence" as a moral value and see job hopping as a sign of moral deficiency or weak character (Maertz, 2004), turnover should be less desirable. Similarly, the ease of turnover should decrease because employers may want to avoid employees they perceive to be morally deficient or weak. We therefore predict:

Hypothesis 7: The probability of turnover is lower in high uncertainty avoidance cultures than in low-uncertainty avoidance cultures (i.e., there is a negative relationship between uncertainty avoidance and the probability of voluntary turnover).

Uncertainty avoidance should also moderate the curvilinearity in the job performance–turnover relationship. Corporations in high-uncertainty-avoidance societies tend to rely on seniority rather than

performance information for promotion decisions because seniority can be determined unambiguously (Fischer, 2008). As a result, we get an effect similar to that with high-power-distance societies in reducing the return to turnover for low and for high performers because job switchers lose their seniority-based benefits.

Perhaps most important, because high-uncertainty-avoidant societies tend to shy away from gathering or considering information that would seem ambiguous in favor of verifiable data such as seniority (Fischer, 2008), it is difficult for high performers to distinguish themselves from average employees when seeking other jobs. As well, low performers are less likely to be "caught" and punished simply because many attributes of poor performance are difficult to verify. Because high performers are less likely to gain a return from movement and low performers are less likely to face a penalty, both groups should be less likely to turnover.

Evidence supporting this conclusion can be found in the one non-U.S. study of the performance–turnover relationship (Salamin & Hom, 2005). Curvilinear relationships have been found both in the United States (Trevor et al., 1997) and in Switzerland (Salamin & Hom, 2005), but the degree of nonlinearity was less than in the Swiss than the U.S. case. Although the United States and Switzerland share many cultural characteristics, they are most divergent on uncertainty avoidance. Thus:

Hypothesis 8: The performance–turnover relationship is weaker (i.e., there is less curvilinearity) in high-uncertainty avoidance cultures than in low-uncertainty-avoidance cultures.

Performance Orientation

Performance orientation (House et al., 2004) reflects the extent to which a culture encourages and rewards innovation, high standards, and performance improvement. Individuals in high-performance- orientation societies are typically results driven and care about achieving signals of professional success (e.g., title, salary, performance ratings), and those in low-performance-oriented societies are more focused on social outcomes, such as relationships and loyalty (Hofstede, 2001; Javidan, 2004; Newburry & Yakova, 2006).

Research has shown, somewhat counterintuitively, that performance goal orientation is not correlated with performance (Phillips & Gully, 1997; VandeWalle, Brown, Cron, & Slocum, 1999). So, the distribution of actual performance should be similar across countries despite differences in performance orientation, though employees' response to performance signals may change. For instance, in low-performance-oriented societies, the more limited salience of title, salary, and achievement should decrease high-performing employees' interest in moving to achieve better job prospects, Jackofsky's

(1984) primary reason for voluntary turnover. In Finland (a low-performance-orientation country), for example, turnover intention was not related to the structure of pay (Böckerman & Ilmakunnas, 2009). Hines (1973) found that managers and professionals in New Zealand who exhibited high need for achievement, a construct closely related to performance orientation, exhibited higher turnover as they actively sought opportunities for success. The average desire for movement, then, should be higher for employees within high-achievement-oriented societies.

Hypothesis 9: The probability of voluntary turnover is higher in high-performance-orientation cultures than in low-performance- orientation cultures (i.e., there is a positive relationship between performance orientation and the probability of voluntary turnover).

Although we expect an overall effect from performance orientation on the average probability of turnover, we also predict that the degree of curvilinearity in the performance–turnover relationship will vary across countries depending on the level of performance orientation. Tests of the curvilinearity of the performance– turnover relationship, conducted in the United States and Switzerland, are from samples in high-performance-orientation countries. In these cultures, in which individuals are typically results driven (Hofstede, 2001; Javidan, 2004; Newburry & Yakova, 2006), a high performer is going to be much more sensitive to failures of rewards and recognition. Thus we expect, on average, higher desirability of movement for high performers. A culture high in performance orientation will also place a greater value on successful employee performance; the ease of mobility will thus be greater for high performers in these cultures, as in the relatively extensive external labor markets in countries such as the United States (Werbel et al., 2008). Similarly, low performers should have a greater desire to move jobs to find a better fit with their capabilities and, so, find socially desirable success. In a study of turnover in Silicon Valley, Delisser (1986) found that the most likely voluntary "leavers" were high-achievement-oriented individuals who had received bad performance evaluations and therefore left in search of higher rewards (e.g., reporting that they could find better jobs or were leaving for higher paying jobs).

In contrast, effects associated with job performance should be less prominent when performance orientation is low. Because those employees do not particularly value professional success, a major driver for voluntary turnover posited by Jackofsky (1984)—to seek greater career success— should be less relevant both for high performers and for low performers. As well, ease of movement is likely lower, as low-performance-oriented societies are less likely to create and emphasize mechanisms

(e.g., networking opportunities, placement firms) that help employees move to achieve success. We therefore expect:

Hypothesis 10: The performance–turnover relationship is greater (i.e., there is more curvilinearity) in high-performance-orientation cultures than in low-performance-orientation cultures.

Method

Sample

Our data were obtained from the personnel records of a large, diversified service-oriented organization, headquartered in the United States but with employees spread over (at the time of the data collection) 27 countries. The company provides travel-related services directly to businesses and through e-commerce in over 150 countries. The personnel records at the end of years 2003 and 2004 provided us the information on employees' overall performance rating, salary, gender, tenure, country, turnover, and turnover type (voluntary or involuntary). Employees were all in white-collar positions, including various technical, service, and managerial roles. The final data set included 3,211 employees from 24 countries. These employees had been with the organization for an average of 7.07 years, and 54% of the employees were men.

Measures

Employee performance

Employee performance was measured by the overall rating provided by the supervisor for the employee's annual performance assessment at the end of 2003. The overall performance rating was summarized with a single score ranging from 1 to 4. The lowest rating of 1 signifies performance was "below expectations"; a score of 2 means performance "met expectations"; 3 indicates "exceeded expectations"; and 4 represents that employee's performance "significantly exceeded expectations."

To examine the curvilinear relationship between performance and turnover, we include both linear and quadratic performance terms as predictors in our model. However, performance and performance squared are highly correlated when based on raw scores and even somewhat correlated when mean-centered. Our concern is not so much mulicollinearity (which mean centering would address); rather, and more important, we are interested in separating out both linear and quadratic effects so as to better understand the functional form of the hypothesized performance– turnover relationship across countries. Therefore, we transformed the data both on linear and quadratic

performance into orthogonal polynomials so that we could separate linear from quadratic effects (Ployhart & Hakel, 1998; Rovine & von Eye, 1991; Sturman, 2007).

Voluntary turnover

Employees who voluntarily left the job at the end of 2004 were coded 1, and those who stayed were coded 0. Employees who left the company involuntarily (e.g., due to poor performance, business divestiture, or location closure) were not included in the analyses. Note that this practice is consistent with our theoretical approach, because we are interested in the processes leading to employees' turnover decisions. If we were to include low performers who are involuntarily terminated, we would likely provide stronger support for a curvilinear hypothesis— and to provide some information about the human resource systems within the organization— but this approach would provide no information about why individuals of varying performance levels choose to leave their firm (Allen & Griffeth, 1999). Thus, we focus on predicting voluntary turnover, as have prior studies in this area (e.g., Jackofsky, 1984; Salamin & Hom, 2005; Trevor et al., 1997).

Cultural dimensions

The scores on the four cultural dimensions— uncertainty avoidance, power distance, collectivism, and performance orientation—were based on the data reported by House et al. (2004). Although we had data on employees from 27 countries, information on cultural dimensions was available from only 24 of those countries. Table 1 presents the sample sizes and cultural dimensions for each country used in our analyses. Note that although our study includes data from 24 countries, employees from the United States clearly dominate the analyses. This large sample for a single country should not affect testing at the second level of analysis (Raudenbush & Bryk, 2002); but, to provide a comprehensive test of our hypotheses, we performed supplemental analyses excluding the data from the United States ($N_{Level\ 1}$ = 1,182; $N_{Level\ 2}$ = 23).

Control variables

We used salary, tenure, and gender as control variables due to their potential effects on turnover as well as their possible links with the predictors in the model, such as individual performance (e.g., Sturman, 2003). We took the logarithm of salary to reduce its skew and, therefore, reduce the leverage associated with individuals with higher levels of pay.

<center>Analyses</center>

The hierarchical linear modeling (HLM) statistical program was used to conduct the analyses. This approach heeds the call from Tsui et al. (2007), who urged scholars to build cross-level models and to use HLM-like procedures (Hofmann, 1997; Raudenbush & Bryk, 2002) when a study focuses on cross-national differences in individual outcomes.

Table 1
Countries in Sample

Country	N	Collectivism	Power distance	Uncertainty avoidance	Performance orientation
Australia	116	4.17	4.74	4.39	3.65
Brazil	11	5.18	5.33	3.60	4.04
Canada	45	4.26	4.82	4.58	4.49
China	16	5.80	5.04	4.94	4.45
Denmark	41	3.53	3.89	5.22	4.22
France	37	4.37	5.28	4.43	4.11
Germany	168	4.02	5.25	5.22	4.25
Hong Kong	39	5.32	4.96	4.32	4.80
Ireland	36	5.14	5.15	4.30	4.36
Italy	219	4.94	5.43	3.79	3.58
Malaysia	10	4.87	5.17	4.78	4.34
Mexico	12	5.71	5.22	4.18	4.10
Netherland	17	3.70	4.11	4.70	4.32
Philippines	12	4.78	5.44	3.89	4.47
Portugal	26	5.51	5.44	3.91	3.60
Russia	12	3.89	5.52	2.88	3.39
Singapore	29	5.64	4.99	5.31	4.90
Spain	18	5.45	5.52	3.97	4.01
Sweden	10	3.66	4.85	5.53	3.72
Switzerland	31	3.97	4.90	5.37	4.94
Taiwan	14	5.59	5.18	4.34	4.56
United Kingdom	253	4.08	5.15	4.65	4.08
United States	2,029	4.25	4.88	4.15	4.49
Venezuela	15	5.53	5.40	3.44	3.32

We employed a two-level HLM analysis. The first level of analysis (Level 1) represented the individual level and specifically modeled how the individual-level variables (e.g., gender, tenure, salary, and performance) affect the probability of voluntary turnover. The second level of analysis (Level 2) represented the country level and is where we model the effects of the cultural dimensions. Because turnover is a dichotomous outcome, we employed the nonlinear features of HLM, in particular, the Bernoulli model. Thus, our analyses are analogous to logistic regression (Raudenbush & Bryk, 2002).

Before we create the specific models, we must give a priori consideration to the issue of random effects in our analyses. In particular, we must decide which variables should include an error term at the second level of analysis (i.e., and therefore be modeled as random effects at the country level) and which ones should not (i.e., and therefore be modeled as fixed effects). In all, our hypotheses relate to the general probability of turnover, the relationship between performance (linear and quadratic terms) and turnover, and the generalizability of these factors across countries. As such, random effects should

be associated with the main effect on turnover (i.e., the intercept), as well as the coefficients for linear and quadratic performance. Any further moderators to these effects are modeled as fixed effects.[3]

To check our hypotheses, we created a series of models of increasing complexity. The first model is designed to test the generalizability of the nonlinear hypothesis, without explicitly examining the specific contextual factors. The model thus contains the intercept as a random effect, the three control variables, and the two performance terms (linear and quadratic) as random effects. Thus, the first Level 1 model is:

$$\text{Prob}(\text{turnover}_{ij}) = \beta_{0_j} + \beta_1(\ln \text{salary}_{ij}) + \beta_2(\text{tenure}_{ij}) + \beta_3(\text{gender}_{ij}) + \beta_{4_j}(\text{performance}_{ij}) + \beta_{5_j}(\text{performance}_{ij}{}^2) + \varepsilon$$

Because we are looking at how effects vary across countries, all Level 1 variables are group mean centered (Enders & Tofighi, 2007; Hofmann & Gavin, 1998). The Level 2 equations are:

$$\beta_{0_j} = y_{00} + u_{0_j}$$
$$\beta_{4_j} = y_{40} + u_{4_j}$$
$$\beta_{5_j} = y_{50} + u_{5_j}$$

Our next step, which involves the same Level 1 model expressed in Equation 1, adds the four cultural variables as Level 2 predictors of the intercept (i.e., as group-level main effects). Thus, Equation 2 is replaced by:

$$\beta_{0_j} = y_{00} + y_{01}(\text{Collectivism}_j) + y_{02}(\text{Power Distance}_j) + y_{03}(\text{Uncertainty Avoidance}_j)$$
$$+ y_{04}(\text{Performance Orientation}_j) + u_{0_j}$$

The third and final step of the model includes the cultural variables as Level 2 moderators of the two Level 1 performance coefficients (_4j and _5j), thus replacing Equations 3 and 4 with:

$$\beta_{4_j} = y_{40} + y_{41}(\text{Collectivism}_j) + y_{42}(\text{Power Distance}_j) + y_{43}(\text{Uncertainty Avoidance}_j)$$
$$+ y_{44}(\text{Performance Orientation}_j) + u_{5_j}$$

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[3] A reviewer noted that there may be reasons to expect random effects for the control variables. This point is interesting and worthy of future research but is beyond the scope of this paper. Including *t* random effects requires *t(t _ 1)/2* parameters in the tau matrix (Raudenbush & Bryk, 2002). Although 24 countries is remarkable for microlevel international research, the limits of our sample size make adding additional random effects (let alone three) methodologically questionable. Furthermore, failure to use random effects when they should have been employed may decrease the standard error of the specific Level 1 coefficient but will not affect the estimation of other terms in the model (Raudenbush & Bryk, 2002). Thus, it is possible that the significance for our control variables may be inappropriate due to our failure to model random effects, but this concern does not affect the accuracy of our hypothesis testing.

$$\beta_{5_j} = y_{50} + y_{51}(\text{Collectivism}_j) + y_{52}(\text{Power Distance}_j) + y_{53}(\text{Uncertainty Avoidance}_j) + y_{54}(\text{Performance Orientation}_j) + u_{5j}$$

Note that for Equations 5, 6, and 7, cultural dimensions are all group mean centered because they are continuous variables.

Support for our hypotheses should be exhibited in the following ways. Support for Hypothesis 1 should be in the form of a significant negative Level 2 intercept for β_{4j} and a significant positive intercept for β_{5j}. This would indicate that, overall, there is the predicted curvilinear relationship between performance and turnover. Support for Hypothesis 2 should be exhibited by significant variance components for the random effects of β_{4j} and β_{5j}, thus indicating that the nature of this relationship does vary across countries.

Support for the hypotheses predicting main effects (i.e., higher or lower overall turnover as a result of culture) should be exhibited by significant Level 2 effects on the Level 1 intercept term. In particular, we expect significant negative effects for collectivism (H3: $y_{01} < 0$), power distance (H5: $y_{02} < 0$), and uncertainty avoidance (H7: $y_{03} < 0$)), as well as a significant positive effect for performance orientation (H9: $y_{04} > 0$).

The remaining hypotheses involve culture moderating the degree of curvilinearity in the performance–turnover relationship. Because the U-shaped relationship between performance and turnover should be exhibited through a significant negative linear effect and a significant positive quadratic effect, a decrease in the degree of curvilinearity should be exhibited by a reduction in the magnitude of one or both of these coefficients. Thus, we hypothesized less curvilinearity for collectivism (H4: $y_{41} > 0$ and/or $y_{51} < 0$), power distance (H6: $y_{42} > 0$ and/or $y_{52} < 0$), and uncertainty avoidance (H8: $y_{43} > 0$ and/or $y_{53} < 0$). We hypothesized greater curvilinearity for performance orientation (H10: $y_{44} < 0$ and/or $y_{54} > 0$).

A difficulty in our analyses, though, is that our approach does not disentangle cross-level interactions from between-group interactions (Enders & Tofighi, 2007; Hofmann & Gavin, 1998). Although there are methods to address this concern, they present a number of practical challenges, particularly for international research in which the number of countries in the sample is a limiting factor. To separate between-level and cross-level interactions in a methodologically appropriate manner, we would need to include substantially more interaction terms in the prediction of the intercept (cf. Hofmann & Gavin, 1998). So, although having data from 24 countries is notable for international research, this is not sufficiently large to allow such a model to be fit. Therefore, we ran supplemental analyses using one cultural dimension at a time. In these analyses, the intercept term had the necessary

controls to separate the cross-level and between-group variance as methodologically required. Thus, for the supplemental analysis examining collectivism, the Level 2 equation is as follows:

$$\beta_{0j} = y_{00} + y_{01}(\text{Collectivism}_j) + y_{02}(\text{Performance}_j) + y_{03}(\text{Performance}_j{}^2) + y_{04}(\text{Performance}_j) \times (\text{Collectivism}_j) + y_{05}(\text{Performance}_j{}^2) \times (\text{Collectivism}_j) + u_{0j}$$

$$\beta_{4j} = y_{40} + y_{41}(\text{Collectivism}_j) + u_{4j}$$

$$\beta_{5j} = y_{50} + y_{51}(\text{Collectivism}_j) + u_{5j}$$

Results

Table 2 reports the means, standard deviations, and correlations for all the variables in our study. We observed a negative linear relationship between performance and voluntary turnover ($r = -.11, p < .0001$). In addition, all three control variables were significant, with salary level and tenure showing negative linear relationships with turnover ($rs = -.24, p < .0001$) and women being more likely than men to leave voluntarily ($r = .04, p < .05$).

Table 3 summarizes the three steps used to test our model, which focused on the curvilinear relationship between performance and turnover, culture's direct (main) effects on the probability of turnover, and the moderating effect of culture on the performance–turnover relationship. Results largely support the study's hypotheses.

Our first hypothesis proposed a curvilinear performance– turnover relationship across countries. This hypothesis was tested through a model (see Table 3, Step 1) with performance as a linear and quadratic term, both modeled as random effects. We observed the expected negative linear performance–turnover relationship ($\beta_{4j} = -0.22, p < .001$) and a significantly positive link between the quadratic performance term and turnover ($\beta_{5j} = 0.38, p < .01$). The combination of these two outcomes connotes a U-shaped curvilinear relationship found across countries, supporting Hypothesis 1. We also tested if the amount of error associated with the two performance terms at the second level of analysis was statistically significant. The coefficients had significant Level 2 variance components ($p < .05$ for the linear performance term, as well as $p < .001$ for the quadratic performance term). These findings indicate significant across-country differences in the performance– turnover relationship and thus support our argument for the importance of considering context. Hypothesis 2 is therefore fully supported.

Step 2 was constructed to further investigate how the cultural dimensions moderate the overall probability of turnover. The four cultural dimensions were included as group-level main effects. The

results show the hypothesized negative effects for collectivism ($\delta_{01} = -0.70, p < .05$, supporting H2), power distance ($\delta_{02} = -0.97, p < .01$, supporting H4), and uncertainty avoidance ($\delta_{03} = -0.75, p < .01$, supporting H6), as well as the predicted positive effect for performance orientation ($\delta_{04} = 1.59, p < .002$, supporting H8). The effects associated with the performance variables were similar to those in Step 1: The coefficients still indicated a U shape ($\beta_{4j} = -0.24, p < .001$; $\beta_{5j} = 0.34, p < .01$), and the Level 2 variance remained significant ($p < .05$ for the linear term, as well as $p < .001$ for the quadratic term).

Step 3 included all the variables of the prior model with the addition of the Level 2 cultural moderators to the two performance variables (linear and quadratic). In this step, we observed support for most of the study's hypotheses. First, supporting Hypothesis 1, we again observed the coefficients associated with the performance variables ($\beta_{4j} = -0.25, p < .001$; $\beta_{5j} = .62, p < .01$). Second, Level 2 variances for the two performance terms (H2) also remained significant ($ps < .001$). Third, we observed the hypothesized main effects for collectivism H2; $\delta_{01} = -0.28, p < .05$), uncertainty avoidance (H6; $\delta_{03} = -0.47, p < .05$), and performance orientation H8; $\delta_{01} = 1.24, p < .01$). Fourth, we found moderating effects for all four cultural dimensions on the performance– turnover relationships. In particular, statistically significant effects were found for three of the four cultural dimensions on the linear effect of performance (for collectivism, $\delta_{41} = 0.18, p < .05$; for power distance, $\delta_{42} = 0.24, p < .05$; for performance orientation, $\delta_{44} = -0.45, p < .01$) , and two effects (including the fourth cultural variable) were found on the quadratic term (for uncertainty avoidance, $\delta_{53} = -0.43, p < .05$; for power distance, $\delta_{52} = -0.94, p < .001$).

Table 2
Summary Statistics

Variable	M	SD	1	2	3	4	5	6	7	8	9
Individual level											
1. Turnover	0.19	0.39	—								
2. Performance (linear)	−0.30	1.22	−.11	—							
3. Performance (quadratic)	−0.86	0.52	.01	.41	—						
4. Gender	0.54	0.50	.04	.01	−.03	—					
5. Tenure (years)	7.07	6.34	−.24	.06	.02	.05	—				
6. ln (salary)	10.72	0.61	−.24	.14	.07	−.27	.23	—			
Country level											
7. Collectivism	4.72	0.75	−.06	−.03	−.04	.05	−.03	−.31	—		
8. Power distance	5.07	0.40	−.09	−.03	−.04	.03	−.05	−.25	.54	—	
9. Uncertainty avoidance	4.41	0.66	−.04	−.05	−.01	−.01	−.13	.06	−.31	−.58	—
10. Performance orientation	4.17	0.45	.14	.01	.03	.02	.10	.21	.08	.32	.56

Note. For individual-level variables, $n = 3,211$; for country-level variables, $n = 24$. For correlations with the individual-level variables, correlations greater than or equal to .04 are significant at $p < .05$. For the correlation among the country-level variables, correlations greater than .40 are significant at $p < .05$. SD = standard deviation; ln = log.

Table 3
Performance–Turnover Relationship

Variable	Step 1	Step 2	Step 3
For intercept			
Intercept	−2.26 (0.18)***	−2.88 (0.18)***	−2.34 (0.12)***
Collectivism		−0.70 (0.31)*	−0.28 (0.19)*
Power distance		−0.97 (0.34)**	−0.16 (0.31)
Uncertainty avoidance		−0.75 (0.29)**	−0.47 (0.24)*
Performance orientation		1.59 (0.44)***	1.24 (0.29)**
Ln salary	−1.22 (0.10)***	−1.15 (0.11)***	−1.22 (0.08)***
Tenure	−0.14 (0.01)***	−0.13 (0.02)***	−0.13 (0.02)***
Gender	−0.03 (0.11)	−0.02 (0.10)	−0.04 (0.09)
For performance (linear)			
Intercept	−0.22 (0.05)***	−0.24 (0.03)***	−0.25 (0.06)***
Collectivism			0.18 (0.11)*
Power distance			0.24 (0.10)*
Uncertainty avoidance			0.0025 (0.11)
Performance orientation			−0.45 (0.14)**
For performance (quadratic)			
Intercept	0.38 (0.11)**	0.34 (0.10)**	0.62 (0.18)**
Collectivism			0.15 (0.36)
Power distance			−0.94 (0.24)***
Uncertainty avoidance			−0.43 (0.26)*
Performance orientation			−0.16 (0.48)

Note. $N = 3,211$ at Level 1; $N = 24$ at Level 2. Standard errors for the coefficients are reported in parentheses. ln = log.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Interpreting the Level 2 cultural effects from the table, though, is difficult. In essence, we are examining main effects and interrelated two- and three-way interactions. Thus, we created plots of the relationship between performance and turnover for those high (1 standard deviation) and low (1 standard deviation) on each cultural dimension, based on the results in Step 3 and depicted in Figures 1, 2, 3, and 4. The graphs vividly depict both the hypothesized main effects and the changes in curvilinearity depending on the cultural moderator.

Results of Supplemental Analyses

As noted earlier, a number of supplemental analyses were run to help rule out alternative explanations. For example, in the supplemental analyses without the U.S. data, all of the significant effects reported above remain significant, and the effect of performance orientation on the quadratic performance term is significant ($\delta_{54} = 0.92$, $p < .05$).

The analyses designed to disentangle cross-level interactions from between-group interactions (Enders & Tofighi, 2007; Hofmann & Gavin, 1998) provided a mix of interesting findings. Logic leading to our hypotheses predicted various cross-level effects. That is, we predicted that the effects of job performance on turnover across individuals were influenced by the employee's country's culture. Although most of our hypotheses remain supported in the supplemental analyses, this logic was not
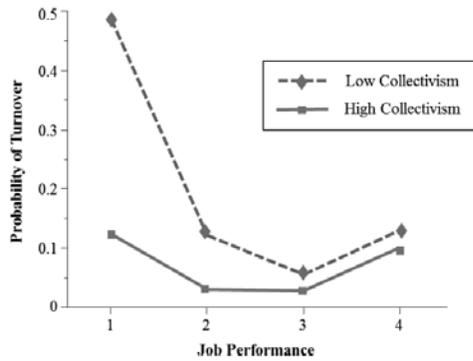
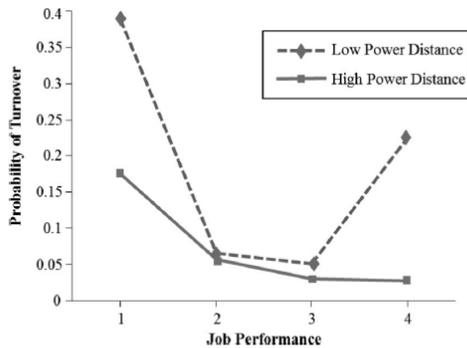*Figure 1.* Performance and turnover relationship at different levels of collectivism.

Figure 2. Performance and turnover relationship at different levels of power distance.

Figure 3. Performance and turnover relationship at different levels of uncertainty avoidance.
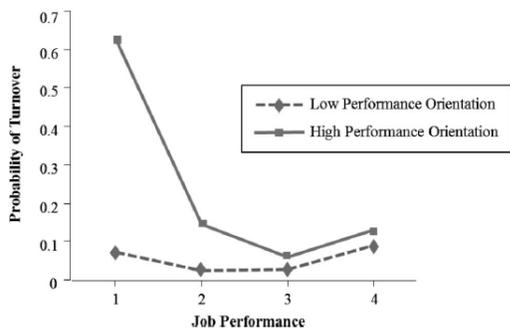

Figure 4. Performance and turnover relationship at different levels of performance orientation.

fully supported. Furthermore, there appeared also to be between-group interactions we had not predicted (see Table 4).

In all of the various supplemental analyses, the effect of the linear performance (β_{4j}) variable was consistently statistically significant in the predicted (negative) direction, the quadratic performance turn (β_{5j}) was consistently statistically significantly positive, and the variance components for the random effects associated with the intercept and both performance terms were significant in each of these analyses (ps < .05 or lower). Thus, there is strong evidence that the curvilinear relationship between job performance and turnover does generalize across countries, yet the nature of this relationship varies across counties, too.

In the model with collectivism, the results showed only a between-group interaction. That means that an individual's performance rating did not have a different effect in collectivist versus individualistic cultures. Instead, the results showed that when average performance was higher, the average rate of turnover was lower, but this group-level effect was weaker in more collectivist cultures. The alternative analyses for collectivism do not replicate the main effect or the moderating effects on the linear or quadratic performance variables.

For power distance and uncertainty avoidance, there was evidence of between-group and of cross-level interactions. The alternative analyses supported the hypothesized cross-level effect for both of these cultural dimensions. It is interesting that results also showed between-group effects. That is, the effect of the average

performance of individuals within a country had a U-shaped relationship with performance, but this effect was weaker in countries with greater power distance and uncertainty avoidance. For performance orientation, there was evidence of the hypothesized cross-level interaction on performance (H10) but not a main effect (H9).

Discussion

Our paper provides an answer to those who have called for investigating the efficacy of human resource theories in non-U.S. contexts (e.g., Aycan et al., 1999; Chiang & Birtch, 2007; Chiu et al., 2002; Erez, 1994; Fey et al., 2009; Miller et al., 2001; Ng et al., 2009; Ramesh & Gelfand, 2010; Salamin & Hom, 2005). That answer supports the idea that, despite the predominance of Western cultural influences in the development of turnover theory, different theory may not specifically be needed for other cultural contexts. Consistent with the general findings of Ramesh and Gelfand (2010), our findings replicate the idea that existing turnover theory can be used as a base and contextual variables can be considered as moderating factors.

By replicating that turnover theory "transcends Western borders" (Ramesh & Gelfand, 2010, p. 816), this paper enhances the validity and supports the generalizability of Jackofsky's (1984) theoretical curvilinear relationship between performance and turnover; at the same time, we show that any application of the theory should take into consideration cultural factors. Yet we also should state that saying performance follows a U-shaped relationship with the probability of turnover is inaccurate. The U shape is present in certain cultures, such as the United States, but not everywhere. Saying there is a U shape is thus a U.S.-centric application of the theory. It is more accurate to say that there is a generalizable nonlinear relationship between performance and turnover, characterized by a quadratic functional form that is moderated by cultural dimensions. Certainly, this is not as succinct, but it is a broadened, more accurate, multinational extension of Jackofsky's theory that this study supports.

The results also raise new questions that both have implications for theory development and present opportunities for further research. This study was driven by hypothesized attitude– behavior linkages, as indeed have all prior studies on the performance– turnover relationship. The unfolding model of turnover (Lee & Mitchell, 1994; Lee, Mitchell, Holtom, McDaniel, & Hill, 1999) suggests that there are multiple paths to employees leaving jobs. The different theorized effects of low and high performance on ease and desirability of movement suggest two different ways in which the workplace can influence employees along this path. Our results suggest that cultural variables also affect the mechanisms that operate along these paths.

Table 4

Alternative Analyses: Disentangling Cross-Level Interactions From Between-Group Interactions

Variable	Collectivism	Power distance	Uncertainty avoidance	Performance orientation
For intercept				
Intercept	−1.77 (1.52)	−1.08 (1.72)	2.27 (1.82)***	−0.70 (1.29)
Cultural dimension	−0.74 (1.48)	−10.84 (2.89)***	−7.43 (1.69)***	6.64 (5.65)
Mean performance	−6.96 (2.76)*	−23.70 (8.73)*	−16.04 (3.55)***	8.78 (9.63)
Mean performance^2	7.90 (7.81)	79.88 (16.43)***	50.25 (11.14)***	−40.63 (30.63)
Performance × Cultural Dimension	1.80 (0.60)**	4.92 (1.61)**	3.33 (0.80)***	−1.88 (2.36)
Performance^2 × Cultural Dimension	−1.95 (1.74)	−16.13 (3.21)***	−10.12 (2.25)***	9.19 (7.31)
Ln salary	−1.22 (0.09)***	−1.33 (0.08)***	−1.22 (0.08)***	−1.22 (0.09)***
Tenure	−0.14 (0.02)***	−0.14 (0.02)***	−0.13 (0.02)***	−0.14 (0.02)***
Gender	−0.03 (0.10)	−0.03 (0.09)	−0.04 (0.09)	−0.03 (0.10)
For performance (linear)				
Intercept	−0.23 (0.06)***	−0.29 (0.04)***	−0.26 (0.03)***	−0.27 (0.05)***
Cultural dimension	0.03 (0.11)	−0.04 (0.13)	0.22 (0.07)**	−0.47 (0.11)***
For performance (quadratic)				
Intercept	0.28 (0.14)*	0.35 (0.13)**	0.41 (0.14)**	0.53 (0.13)***
Cultural dimension	−0.22 (0.29)	−1.08 (0.29)***	−0.09 (0.27)	0.34 (0.28)

Note. $N = 3,211$ at Level 1; $N = 24$ at Level 2. Standard errors for the coefficients are reported in parentheses. ln = log.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Culture may even affect the presence of certain paths. One interesting finding, illustrated by our figures, is that the moderating effects of culture appear to have a greater effect on low performers than on high performers. One explanation is that this finding could be indicative of cultural effects beyond the organization. Countries with greater collectivism, higher power distance, more uncertainty avoidance, and lower performance orientation may have laws or norms that make it more difficult to fire employees. Different cultural norms could certainly affect the sort of stimuli that would constitute a "shock" in the unfolding model. A very low performance orientation, for example, may effectively eliminate the potential effect that a low performance rating would otherwise have in a different culture. Like other turnover models (e.g., Ramesh & Gelfand, 2010), the unfolding model may benefit from multinational testing.

Our findings also have a range of theoretical implications involving level-of-analysis issues in turnover research. Our study shows both cross-level and between-group interactions. Although our hypotheses were driven by cross-level logic, theory on the performance–turnover relationship should be broadened to explain between-group phenomena. Additionally, though we found significant country-level moderation, it is likely that individual differences related to the cultural variables would have further explanatory power for understanding the performance–turnover relationship. In other words, our logic and results indicate that there are several levels at which culture will likely affect turnover, and our study only begins to provide an explanation. Our finding of different sorts of multilevel effects suggests that theory should be expanded to consider not just multiple levels of analysis but also the effects that exist at these different levels.

Our empirical support strengthens our confidence in this theoretical model and provides evidence for the ease of movement and desirability of movement constructs. Yet, it would be fruitful for research to delve into the attitudes that drive the relationship between performance and turnover, as well as the specific attitudes and beliefs that explain why culture moderates this relationship. It now seems clear that we should expect a relationship between performance and turnover, the curvilinearity of that relationship, and the ways in which cultural variables moderate that relationship, but the specific decision-making mechanisms that drive these processes are largely unexplored. Thus, like others (e.g., Ramesh & Gelfand, 2010; Salamin & Hom, 2005), we call for future research to integrate these findings with other turnover theories.

Our support for the effect of cultural moderators also suggests that research should consider other contextual factors that might affect the performance–turnover relationship. In particular, compensation has been shown to moderate this relationship by helping companies to retain top talent (Salamin & Hom, 2005; Trevor et al., 1997). This paper's logic suggests that the influence of compensation should also be moderated by culture. Performance–turnover theory that includes effects for compensation should therefore be expanded to consider culture's effect. Tests of the cross-cultural effects of compensation on the performance–turnover relationship would have the same sort of theoretical and practical benefits that this paper presents.

Our study also has clear implications for theory development beyond the turnover literature. There are abundant opportunities to consider how different attitude–behavior relationships might affect other organizational theories. Are there theories that are insensitive to culture and thus have strong generalizability? What other theories generalize broadly but are moderated by cultural factors (e.g., Jackofsky, 1984)? And are there theories that simply do not generalize because their underlying relationships actually reverse in other cultures? Our research supports the idea that theories may be basically transferable with some moderation for contextual factors, but this assertion certainly needs far more testing before we can assume that the phenomenon truly generalizes to other theoretical relationships.

In sum, although calls for future research to address limitations or test theoretical implications are the norm, there are some key ways in which research can make valuable expansions to the current state of knowledge. In part, other research should employ multinational longitudinal data like those used here; as discussed above, there are vast opportunities to test across-country cultural effects on managerial theories. Although such a call may at first seem a cliché´, the growing internationalization of organizations (e.g., U.S. multinational companies employ nearly 10 million individuals in other countries;

approximately 5 million individuals in the United States work for non-U.S. multinational corporations; Bureau of Economic Analysis, 2009) combined with advances in human resource information systems make it more feasible for researchers to collect data such as those used here. The Directory of American Firms Operating in Foreign Countries (Uniworld Business Publications, 2009) contains information on 4,300 firms, with more than 125,000 branches, subsidiaries, and affiliates, operating in 194 countries. If academics heed the call for greater connections between academia and industry (e.g., Ferris, Hochwarter, Buckley, Harrell-Cook, & Frink, 1999), data such as those used here should become more common in academic research.

Practical Implications

The finding of a curvilinear relationship between performance and turnover was an important advancement in turnover research because of the very different implications between there being no relationship, a negative linear relationship, and a curvilinear relationship (Maertz et al., 2003; Salamin & Hom, 2005). Our finding that the degree of this curvilinearity varies across countries means that the practical management of turnover will have to be altered to fit with the focal cultural context. Contextual differences could affect the profitability of the same human resource practices in different situations. For example, although Sturman, Trevor, Boudreau, and Gerhart (2003) showed pay-for-performance yielded positive utility based on the U.S. environment studied in Trevor et al. (1997), the exact same pay-for-performance plan may have very different utility in a dissimilar cultural environment.

Cultural differences may require different approaches to enable organizations to strategically manage the turnover process. Companies need to consider the effort devoted to general personnel retention across countries because the effort needed likely varies with context. This study's results suggest that in countries with high collectivism, high power distance, high uncertainty avoidance, and low performance orientation, companies should focus on human resource practices that facilitate the turnover of low performers, ensure good performers are hired, and/or improve the performance of low performers. On the other hand, in a culture with low collectivism, low power distance, low uncertainty avoidance, and high performance orientation, low performers have a notably higher probability of turnover; in such cultures, organizations should focus on the retention of high performers.

Ultimately, it becomes critical to consider the costs and benefits of various retention efforts across high performers as well as the merits of different negative signals and interventions to low performers, because diverse national contexts influence the effectiveness of these procedures and

hence the return to effort made. Others have argued that research should help provide an understanding of culture's effects with regard to retention practices (e.g., Milkovich & Newman, 2005), but our study empirically shows that the need for certain retention strategies will vary. For practice, not only do different types of turnover require different types of retention strategies (Lee et al., 2008) but different cultures create different types of turnover and influence the effectiveness of different retention strategies.

Limitations

Of course, like all studies, this paper has a number of limitations. First, a key limitation is that we were examining individuals nested within countries. Thus, we represented culture at our second level of analysis, thereby considering the average level of various cultural dimensions. Although this approach is methodologically appropriate, it is important to note that individuals vary in their cultural attitudes. National cultural data, such as provided by Hofstede and the GLOBE studies, present information on the average types of beliefs held within a given country; yet, cultural attitudes vary within populations (e.g., Bloom, Milkovich, & Zupan, 1997). Measures of specific individual attitudes of the cultural variables used in this study would provide a stronger test of the cultural moderator hypotheses. Average attitudes across countries, combined with our results showing a notable number of moderating effects, lend strong support for our hypotheses that these cultural variables do indeed matter. However, it would be fruitful for future research to directly test the moderating role by examining performance, turnover, and culture—all at the first level of analysis. Likewise, it would be useful to directly assess job attitudes. The theoretical basis for this paper is that job performance has effects on turnover because of how it influences the ease and desirability of turnover. It would be valuable for future research to directly assess these two constructs and, perhaps, even other mediating attitudes like job satisfaction and justice to more directly test the antecedent components of Jackofsky's (1984) theory.

A second and related limitation is that our data come from a single organization. Because data come from a single company, the variance among the sample's different nationalities may be reduced. Subsidiaries of an overall organization face pressures for consistency because of the company's desire for consistent operating procedures and control (Rosenzweig & Singh, 1991). The company may use similar, or even the same, human resource practices across the various locations. At the same time, it is also clear that even within the same company, cultural values do vary (e.g., Hofstede, 1985). There is both theoretical work (Rosenzweig & Singh, 1991) and empirical work (Nelson & Gopalan, 2003) suggesting that organizational culture "pulls" toward cultural homogeneity while different national

cultures "pull" toward cultural heterogeneity. The use of data from a single organization thus limits the accuracy with which we could explain the various moderating and contextual factors associated with turnover and limits the precision with which we can test theoretical explanations for observed phenomena. The use of a single company's data, though, should decrease the variability of culture and thus should only have weakened potential moderating relationships that are based on national-level measures. Given that we found moderating effects, we can have a high degree of confidence that national cultural characteristics do moderate the performance–turnover relationship. Nonetheless, known differences between individual 58 STURMAN, SHAO, AND KATZ cultural values, organizational culture, and national culture highlight the importance of collecting individual-level cultural value data to directly test the moderating effects of culture.

Third, while our data set is notable in many ways—it is longitudinal, has a relatively large sample at the first level of analysis, contains data from 24 countries, and is multilevel—it is still far from perfect. Having only 2 years of data forced us to analyze voluntary turnover as a dichotomous variable. We were unable to use a survival analysis, which has many advantages over logistical like regression (cf. Hom & Kinicki, 2001; Salamin & Hom, 2005; Trevor et al., 1997). Also, though a data set including 24 countries is notable, it still limits our statistical power at our second level of analysis and prohibits us from certain methodological tests (e.g., random effects for our control variables, as well as a full test separating cross-level from between-group interactions using all cultural variables simultaneously). A related issue is that the within-country sample sizes are quite variable and, in some instances, somewhat small. The small within-country sample sizes could decrease the accuracy through which the Level 1 coefficients are estimated. Unbalanced sample sizes can potentially reduce the accuracy of standard error estimates; consequently, we estimated significance based on a t distribution rather than unit-normal distribution (Raudenbush & Bryk, 2002). Small within-group samples could also reduce the power of our estimates (Scherbaum & Ferreter, 2009), but given that we found support for our hypotheses (including the replication without the U.S. sample, the most notable outlier regarding within-country sample size), this aspect does not appear to be overly troubling.

Fourth, like the other research in this area (e.g., Salamin & Hom, 2005; Trevor et al., 1997), our study is limited in its scope. We do not consider contextual performance, and we use a subjective measure of job performance from supervisors rather than objective measures. We also do not include any attitudinal data. The entire theory behind the curvilinear relationship between performance and turnover is based on suspected attitudes drawn because of issues of fairness, marketability, job

opportunities, and so forth (Salamin & Hom, 2005; Trevor, 2001; Trevor et al., 1997). These assumptions require testing.

The limitations we note suggest that we must be cautious when interpreting the generalizability of our findings. These limitations, though, are typical of multinational research and indeed are inherently implicit in studies conducted using a single organization within a single country.

Conclusion

This study makes both theoretical and practical contributions to the turnover literature. From the theoretical perspective, the study confirms the curvilinear performance–turnover hypothesis across countries. This finding suggests greater utility (cf. Bacharach, 1989) for this theoretical perspective. At the same time, we show that theory must consider cultural context, that a theory can both generalize and vary simultaneously, and that some of that variability can be predicted and confirmed. From a practical perspective, our findings suggest that the dynamics of turnover vary substantially across cultures and that greater efficiency can be achieved in workforce management if culture is considered before retention procedures are put in place.

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