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**THE EFFECTS OF MULTIPLE ORGANIZATIONAL CLIMATES ON
ORGANIZATIONAL, CUSTOMER-RATED, AND INDIVIDUAL OUTCOMES:
A MULTI-CULTURAL ANALYSIS**

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Psychology

by

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ABSTRACT

Due to recent rekindled interest in the influences of organizational context, researchers and organizations have begun to realize the importance and predictive power of organizational climate in all aspects of organizational life. However, though multiple climates exist simultaneously in organizations, most climate research has focused only on one type of climate in a given study. This study examines how six different organizational climates (support, growth, justice, senior leadership, immediate supervisor, and innovative service) affect organizational and individual outcome variables (organizational financial performance, organizational productivity, guest satisfaction, turnover and OCBs), how these climate dimensions interact, and how national culture influences climate-outcome relationships. The study analyzes data collected from a multi-national organization in the hospitality industry comprising 151,656 individuals in 43 countries. Self-reported organizational climate data were examined in relation to hotel level indices of financial performance, productivity, turnover and guest satisfaction scores, as well as self-reported OCBs. Results suggest that innovative service climate was positively related to guest satisfaction but not to financial performance. However, ancillary results suggest that the interaction between innovative service and leadership climate is associated with higher financial performance and guest satisfaction outcomes. Furthermore, results show that the presence of justice and growth climates were associated with lower hourly employee turnover while justice and support climates were found to be positively associated with OCBs. The findings, however, failed to show any significant moderating influences of national culture dimensions on the organizational climate-outcome relationships. Suggestions for future research on how climate types function in organizations are discussed as well as practical implications of the research.

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Chapter 1

Introduction

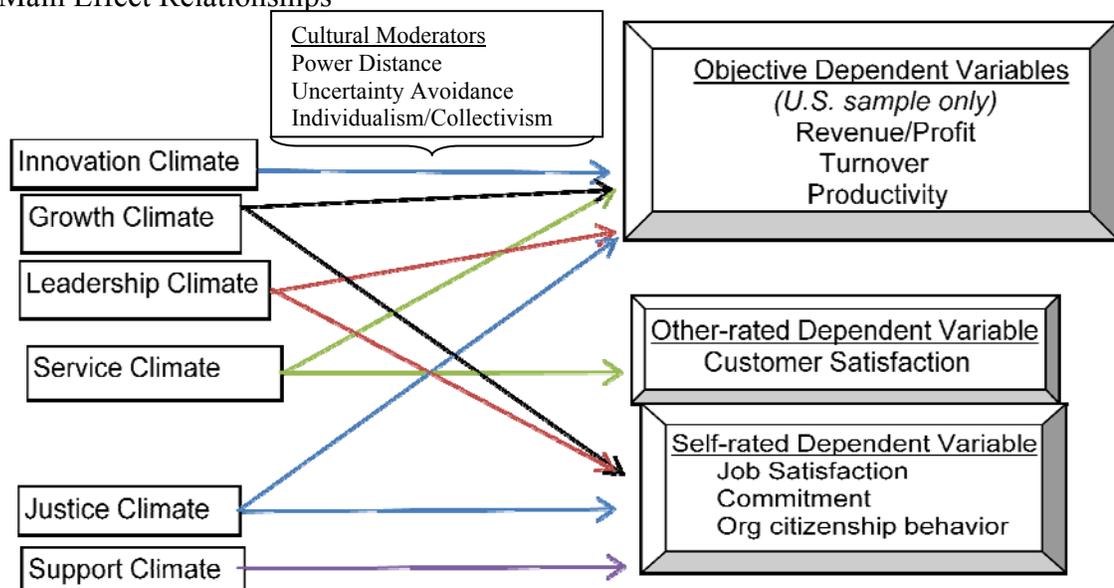
Due to recent rekindled interest in the influences of organizational context (Johns, 2006), researchers and organizations alike have begun to realize that “work climates touch nearly every aspect of organizational life” (Kuenzi & Schminke, 2009, p. 635). The concept of organizational climate, which has been in existence since the 1960s, refers to employees’ collective perceptions about the organization’s formal and informal practices and policies (Reichers & Schneider, 1990). Since organizational climate has been linked to a multitude of valuable organizational outcomes (e.g. organizational performance, sales performance, organizational citizenship behaviors, employee commitment), both researchers and practitioners are interested in discovering additional beneficial effects of this phenomenon (King, Chermont, West, Dawson, & Hebl, 2007; Kuenzi & Schminke, 2009; Richardson & Vandenberg, 2005; Salanova, Agut, & Peiro, 2005; Thomas, Bliese, & Jex, 2005).

Due to the renewed interest in organizational climate, now is “truly an exciting time to be a climate researcher” (Kuenzi & Schminke, 2009, p. 709). In addition, James, Choi, Ko, McNeil, Minton, Wright, and Kim (2008) note that organizational climate is the only domain that can simultaneously examine perceptions about jobs, groups, leaders, and organizational attributes, thereby illustrating the importance of studying climate and its endless predictive possibilities. However, even though the desire to better grasp and apply this phenomenon is growing, there is still much we do not understand about the organizational climate construct and its links to valuable consequences. While we know that climate matters, how it actually operates is much

more complicated (i.e. influences of mediators/moderators, climates' influences on one other, cross cultural variation in climate effects) (Kuenzi & Schminke, 2009).

In an attempt to address these calls for answering climate-related research questions, the proposed study has multiple purposes. First, this study looks at the interrelationships among various types of climates (innovation, service, support, leadership, growth, and justice). Second, the way in which multiple climate dimensions differentially impact multiple organizational outcomes (organizational financial outcomes, customer-rated satisfaction, self-rated commitment, satisfaction, and OCBs) are investigated. Third, this study examines the moderating influence of national culture (i.e. power distance, individualism/collectivism, uncertainty avoidance) on climate dimensions and their outcomes. Finally, several of the rarely researched climate types, such as growth climate, leadership climate, and support climate, are examined in this study as well as how they vary across cultures. These proposed relationships will be examined in a large multinational corporation (MNC) across numerous cultures in order for the moderating effects of national culture to be tested. Figure 1 summarizes the categories of variables that are examined in this study.

Figure 1. Main Effect Relationships



Theoretical Contributions

The purposes of the study listed above each contribute uniquely to the climate literature and the following section indicates how each goal of the study adds to the conceptual understanding of organizational climate . First, organizations are comprised of multiple climates and one organization can have, for example, a climate for innovation, a climate for customer service, and a support climate acting simultaneously, depending on the specific goals and practices of each organization (Reichers & Schneider, 1990). Therefore, it makes little sense to simply study one climate in a vacuum when a multitude of different climates are at play and have the potential to affect organizational outcomes in different and unique ways. However, most empirical research that examines organizational climate typically looks at only one type of climate per study (Kuenzi & Schminke, 2009; Reichers & Schneider, 1990). Therefore, researchers should investigate how climates relate to each other and how they differentially affect certain outcomes. In their comprehensive review of the climate literature, Kuenzi and Schminke (2009) concluded that “multi-climate models should be developed, specifying the interactive effects of concurrent climates on relevant outcome criteria” (p. 710). For that reason, one of this study’s most important contributions to theory is that it examines how different climates (innovation, service, support, leadership, justice, growth) influence one another.

Another contribution of the current study is examining how separate climates differentially influence outcomes assessed by three sources: objective outcomes (i.e. organizational financial performance, organizational level productivity, turnover), customer-reported outcomes (i.e. customer satisfaction), and self-reported outcomes (i.e. satisfaction, commitment, organizational citizenship behavior). Currently, there is little research on how climate relates to organizational performance or objective organizational outcomes, which is a

link of utmost interest to both scientists and practitioners (Baer & Frese, 2003; Borucki & Burke, 1999; King et al., 2007; Koene, Vogelhaar, & Soeters, 2002; Kuenzi & Schminke, 2009; Liao & Rupp, 2005).

Another contribution of this study to the literature is the focus on cultural dimensions as moderators of the climate –outcome relationship. In today’s global economy, many organizations are becoming multi-national or are working to maintain locations abroad (Cascio, 2003). The way in which these overseas locations are run varies widely (Ashkanasy & Jackson, 2001; Myloni, Harzing & Mirza, 2007; Pudelko & Harzing, 2008). For example, companies can employ an ethnocentric approach, which allows for the culture of the parent company to be dominant overseas. Alternatively, companies can follow a polycentric method, in which the cultural values of the local company are accepted, or instead employ a regiocentric perspective, which blends the cultural values of the local and parent companies (Ashkanasy & Jackson, 2001). However, every MNC is different in how they handle cultural clashes in each location, and applying an inappropriate cultural approach can be detrimental for the local organization and its employees. Specifically, Yang, Mossholder, and Peng (2007) emphasize that “an incongruent combination of contextual characteristics may inhibit potentially positive influences on individuals,” (p. 689). Because not all climates will have the same consequences in cultures different from the United States, it is important to understand how national culture will interact with organizational climate.

The review by Kuenzi and Schminke (2009) noted the paucity of research that looks at climate links cross-culturally as well as the scarcity of research on how moderators, in general, influence climate relationships. Furthermore, several researchers have called for more multilevel research that examines cultural dimensions beyond the popular individualism/collectivism

dimension (Kirkman, Lowe & Gibson, 2006; Yang, et al., 2007). Therefore, in addition to individualism/collectivism, this study addresses this gap in the literature by exploring uncertainty avoidance and power distance as moderators of the climate-outcome relationship.

The final contribution focuses on climate types that are rarely examined and have only started to receive research attention in the past several years. These climate types include growth climate, leadership climate, and support climate. Since various types of climates can be valuable to organizations and organizations have multiple climate operating at the same time (Kuenzi & Schminke, 2009), expanding the climate literature to focus on climate types that have not been given enough research attention thus far is helpful to the expansion of the growing field. Furthermore, it is important to study constructs at different levels of analysis (Kozlowski & Klein, 2000), and while we know that growth (e.g. Lee & Bruvold, 2003), leadership (e.g. Niehoff, Enz & Grover, 1990), and support (e.g. Peelle, 2007) perceptions have been studied at the individual level, it is time to expand these constructs to the climate level. Therefore, this study examines these three rarely-studied climate types to add to our understanding of how they impact individual, organizational and customer-rated outcomes as well as how they vary across cultures.

Practical Contributions

This study also makes important contributions to practice in addition to theoretical contributions. Several decades of empirical research has established that organizational climate can be a powerful tool for organizations in achieving desired outcomes, such as organizational citizenship behaviors (OCBs; Richardson & Vandenberg, 2005), organizational performance (Baer & Frese, 2003), group efficacy (Chen & Bliese, 2002), service performance (Borucki & Burke, 1999), employee retention (Gentry, Kuhnert, Mondore, & Page, 2007), organizational

commitment (Thomas et al., 2005), and many others. Therefore, organizations are interested in climate research due to its predictive power and direct organizational relevance. Examining the link between multiple climates and differential outcomes can help organizations tailor climate interventions to achieve specific desired consequences. For example, organizations can help to improve outcomes such as customer satisfaction or employee commitment by fostering the appropriate organizational climates examined in this study that are found to be linked to the outcomes of interest. The results of this research will be able to help inform such decisions.

This research can also help organizations develop sensitivity to how national culture impacts organizational climate and its outcomes, which is especially useful for multi-national organizations (Van der Vegt, Van de Vliert, & Huang, 2005). Developing similar organizational climates in different cultural contexts can have very different consequences and can sometimes backfire. For example, a climate for autonomy usually leads to innovation in countries such as the U.S., but has been shown to lead to less innovation in highly power distant Taiwan (Jung, Chow, & Wu, 2003), most likely due to employees being accustomed to higher management having the authority and decision making power. Organizations can use the results from this study to avoid potential pitfalls, such as trying to develop a climate that is inconsistent with the national culture of the employees. Managers should be cognizant of such potential incongruity and ensure that organization-wide policies and practices fit with subsystem social values (Yang et al., 2007). Therefore, examining how the beneficial effects of organizational climate initiatives behave in cultural contexts would be extremely beneficial to multinational organizations.

This paper is organized in the following manner. First, the literature on organizational climate is reviewed, both general climate and the specific types of climates of interest in this study. Then, after discussing research on national cultural dimensions, hypotheses predicting the

relationships between the climate variables, cultural moderators, and three types of outcome variables are presented. Finally, the methodology section outlines the process by which these predictions are tested in an organizational sample.

Organizational Climate

Conceptualization. While the construct of organizational climate has been around since the 1960s, researchers first took a more empirical approach to this variable before discussing its meaning and conceptualization, thereby leaving the construct ambiguous and theoretically unsound (Reichers & Schneider, 1990). Although its conceptualization still remains fairly broad, researchers have agreed that climate encompasses the shared perceptions of the “way things are around here” (Reichers & Schneider, 1990, p.22). In other words, organizational climate includes the collective perceptions of employees about the organization’s formal and informal practices, policies, and procedures. Furthermore, organizational climate is an indicator of the organization’s goals and methods of goal attainment and is usually conceptualized to have a specific referent. That is, an organization has a climate “for something,” whether it be for safety, innovation, or any other possible goal. This more targeted definition of climate was suggested in 1975 by Schneider, in an attempt to move away from the messy definitional issues of a global climate construct and instead focus on a more specific strategic organizational goal and/or outcome. Regardless of the climate conceptualization, however, most researchers agree that climate is of utmost importance to organizations due to its influence on a wide variety of valuable outcomes, ranging from job satisfaction to financial performance (James et al., 2008; Kuenzi & Schminke, 2009; Li & Cropanzano, 2009).

It should also be noted that organizational climate and organizational culture are two concepts often discussed together and sometimes used interchangeably (Denison, 1990; Hofstede,

Bond, & Luk, 1993), even though they derive from different literatures. Organizational culture refers to an organization's deeply rooted values and shared meanings about what is important (Schein, 1990). Thus, while culture is usually defined at a more abstract level, climate can be thought of as a manifestation of organizational culture (Reichers & Schneider, 1990). In other words, if an organization highly values creativity and being competitive in an evolving market (culture), a climate for innovation may likely be present as well, which would create a workplace that is open to change and is encouraging of new ideas in order to achieve the creativity goal that the organizational values. However, even though a relationship exists between climate and culture, this study is exclusively focused on organizational climate, which is more tangible due to its focus on specific policies and practices that the organization has in place in order to achieve its desired goals. The following section provides a review of the climate literature.

Global Climate. While many of its important links still have yet to be established, the climate construct has been in existence for several decades and hence, we know a good deal about how both global conceptualizations of climate and specific facet climate types relate to outcomes of interest (Kuenzi & Schminke, 2009). For example, the influence of climate on individual performance and other individual outcomes yielded two meta-analyses (Carr, Schmidt, Ford, & DeShon, 2003; Parker, Baltes, Young, Huff, Altmann, Lacost & Roberts, 2003). In particular, Parker and colleagues (2003) utilized one of the early proposed climate classifications by Jones and James (1979): role stress and lack of harmony, job challenge and autonomy, leadership facilitation and support, and work group cooperation, friendliness, and warmth. In this meta-analysis, positive relationships were found between the various psychological climate dimensions and job satisfaction, job involvement, commitment, motivation, psychological well-being and, to a lesser degree, employee performance.

In a similar meta-analytic study, Carr and colleagues (2003), utilized a more recent climate taxonomy by Ostroff (1993), which groups climates into higher order dimensions of affective, cognitive, and instrumental categories. Affective, cognitive, and instrumental climate dimensions predicted the individual level outcomes of job performance, psychological well-being, and withdrawal, and job satisfaction and organizational commitment mediated these relationships. Finally, Gelade and Ivery (2003) found that global organizational climate mediated the relationship between several human resource management factors and unit performance.

Facet Climate

Antecedents. There have been several studies examining the antecedents of climate in an attempt to understand how climates emerge and develop. For instance, Colquitt, Noe and Jackson (2002) found that two important antecedents of team procedural justice climate (defined as collective perceptions about the fairness of how work outcome distributions are determined) were team size (negative relationship) and team collectivism (positive relationship). Furthermore, de Jong, de Ruyter, and Lemmink (2004) found that team tenure was a negative predictor of service climate in self-managed teams. Leadership variables have also been of recent interest as climate predictors, and research has found that leadership characteristics influence support for innovation (Jung et al., 2003), procedural justice climate (Ehrhart, 2004; Walumbwa, Wu & Orwa, 2008), and safety climate (Zohar & Luria, 2004). Also, Klein, Conn, and Sorra (2001) reported that an organization's financial resource availability and managerial support for technology implementation positively predicted organizational implementation climate (i.e. emphasis on innovation implementation).

In conclusion, we do not know as much about climate antecedents as we do about their outcomes, nor do we know much about the interrelationships among climates. The current study addresses this paucity of research by examining how separate climates interact with one another.

Mediators and Moderators. Several studies have addressed mediators and moderators of organizational climate relationships. In general, it appears that the topic of climate is more complex than was originally thought and, thus, research is beginning to attempt to uncover the ways in which climate functions in organizations by taking an increasing interest in its mediators and moderators (Kuenzi & Schminke, 2009). For instance, Schneider, Ehrhart, Mayer, Saltz, and Niles-Jolly (2005) found organizational citizenship behaviors to mediate the relationship between safety climate and customer satisfaction. In addition, Chen and Bliese (2002) found that the relationship between upper level leadership climate and self-efficacy was fully explained by role clarity.

Furthermore, the climate construct as a mediator has been commonly examined as a mechanism through which leader-related variables such as leadership types influence outcomes such as organizational citizenship behaviors (Ehrhart, 2004) and injury rates (Zohar, 2002). Service climate has also been examined as a mediator between work engagement and organizational resources and their relationship with employee performance and customer loyalty (Salanova, et al., 2005).

In terms of moderators, several studies have examined climate strength (i.e. the intensity of collective agreement regarding the climate). For example, Gonzales-Roma, Peiro, and Tordera (2002) found that innovation climate strength moderated the impact of work units' innovation climate perceptions on average satisfaction and commitment such that stronger climates made

this relationship more robust. They also found a similar result for the moderating effect of goal orientation climate strength on the relationship between goal orientation climate level and commitment. Other moderators such as cognitive moral development interacting with ethical climate to influence job attitudes have also been examined (Ambrose, Arnaud & Schminke, 2008). Finally, Yang and colleagues (2007) examined power distance as a moderator for the relationship between justice climate and organizational citizenship behaviors and commitment. This study was one of the few attempts to understand climate in a cultural context, and the current study attempts to add to this presently sparse literature by examining national culture dimension moderators.

Finally, the climate variable itself has been utilized as a moderator in several studies. As a moderator, innovation climate, for example, has been found to attenuate the negative relationship between work demands and organizational performance (Jung et al., 2003; King et al., 2007). Another study examining climate as a moderator found that positive safety climate in groups made the relationship between leader-member exchange and safety citizenship role definitions stronger (Hofmann, Morgeson, & Gerras, 2003).

Taken together, these findings shed light on the fact that organizational climates can help to make valuable relationships in the organization stronger and help to facilitate many processes by which organizational practices and characteristics influence desirable outcomes, such as performance (Kuenzi & Schminke, 2009). However, there are still many unexplored relationships that would help us better understand the complexity of the climate construct (Kuenzi & Schminke, 2009).

Consequences. There have also been a multitude of studies focusing on climate and its effects (e.g. DeJoy, Schaffer, Wilson, Vandenberg, & Butts, 2004; McKay, Avery, & Morris, 2008; Zohar & Luria, 2004). Looking at individual level outcomes, research studies have found that climates for participation (Tesluck, Vance & Mathieu, 1999) and justice (Liao & Rupp, 2005) positively predict job satisfaction and organizational commitment. In addition, climate for involvement has been found to reduce absenteeism and increase organizational citizenship behaviors (Richardson & Vandenberg, 2005), while climate for diversity support was found to lead to better sales performance (McKay et al., 2008). Overall, it appears that the links between facet climate and individual-level attitudes and behaviors are fairly well established, relative to higher levels of analysis.

There has been less research about organizational climate relationships with group and organizational level outcomes, but this is a growing area of interest for researchers (Kuenzi & Schminke, 2009). Seibert, Silver, and Randolph (2004) found that empowerment climate was positively related to work unit performance, and Gelade and Young (2005) reported a positive influence of service climate on sales performance. Baer and Frese (2003) also found that climates for initiative and psychological safety were positively related to organizational financial performance. Overall, while climate has more often been linked in the literature to employee attitudes and outcomes such as withdrawal and organizational citizenship behaviors, its influence on performance, especially at higher levels of analysis, has to be further examined (Kuenzi & Schminke, 2009). The current study furthers this research area by examining the relationships between multiple organizational climates and organizational financial performance.

Measurement and Levels of Analysis

Due to the broad conceptualization of organizational climate and the fact that there are so many different facets of it, measurement of this construct can be problematic. A multitude of organizational climate scales exist, and researchers often create their own scales in order to tailor the questions to the highly specific facet they are examining. However, regardless of what facet of climate is of interest, it is crucial that measures ask about specific policies, practices, and procedures as indicators of the elements in the environment that constitute climate (Kuenzi & Schminke, 2009).

One of the defining aspects of organizational climate is that it is a collective perspective of a group of individuals, which requires the aggregation of psychological climates, which are meanings that individuals assign to their environment (James et al., 2008). In order to aggregate psychological climate scores, however, one must first demonstrate that a shared meaning exists. If agreement in climate perceptions does not exist, the absence of organizational climate is demonstrated (James, et al., 2008).

Several composition models have been discussed in order to aggregate individual climate perceptions to the collective level (Chan, 1998; James et al., 2008). According to Chan (1998), “composition models specify the functional relationships among phenomena or constructs at different levels of analysis (e.g., individual level, team level, organizational level) that reference essentially the same content but that are qualitatively different at different levels” (p.234). Therefore, climate at the individual level of analysis (psychological climate) is distinct from climate at higher levels of analysis (organizational climate).

Chan (1998) described the following composition models. Additive models refer to the representation of a high level construct with a summation of lower level units. This model does not take the variance among units into account and is achieved by simply calculating the sum or average of the lower level scores. Direct consensus models represent the higher level construct through the consensus of the lower level units. Therefore, this model requires that agreement between lower level units be demonstrated prior to aggregating the scores to the higher level construct. Referent shift models represent lower level constructs formed by consensus as being theoretically different from the original low level unit, such that when answering survey items, the individual is asked to focus on the aggregate (e.g. “people in my organization are satisfied”). Similar to direct consensus, within-group agreement is also necessary for this model, but agreement is assessed for the new referent in question, such that participants present their views about how they perceive others in an organization to behave rather than how they personally behave. Finally, dispersion models represent the higher level constructs by the variance of the low level units. Direct consensus seems to be the most appropriate composition model for calculating climate level due to the conceptualization of organizational climate as *shared* perceptions (James et al., 2008). Therefore, the model in which agreement is taken into account before aggregation is the best way of operationalizing this variable at the higher level (James et al., 2008). Furthermore, if one wants to examine climate strength (the degree to which individuals perceive the same climate, i.e. the degree of shared perception), within unit variability in climate perceptions (the dispersion model) is used rather than direct consensus.

While the section above presented a general overview of the climate literature, the following section discusses in further detail conceptualizations and research findings related to

the specific climate facets of focus in this study: innovation climate, growth climate, leadership climate, support climate, service climate, and justice climate.

Innovation Climate

Innovation Climate Conceptualization. Due to the constantly changing nature of the workplace today (Luthans, Wahl, & Steinhaus, 1992), a climate type of particular interest to researchers and organizations has been climate for innovation, also referred to as creativity climate (Ismail, 2005), change climate, or climate for updating (Kozlowski & Hults, 1987). However, even though there is some inconsistency in terminology, the definition accompanying the various terms remains quite similar. Specifically, innovation climate refers to collective cognitively-based perceptions that the organization values open communication, challenging job assignments, tolerates risk and instability, and generally encourages and promotes openness, change, and the generation and implementation of new and unique ideas (Amabile, 1983; Howell & Avolio, 1993; Ismail, 2005; Schneider, Gunnarson, & Niles-Jolly, 1994; Van der Vegt et al., 2005). Innovation has become an increasingly important topic for organizations in most industries and in order to be “successful in an increasingly competitive and global environment, organizations must be simultaneously excellent in service and innovations” (Schneider et al., 1994). While innovation climate has proven to be one of the more popular climate types in the literature, a recent paper by King and colleagues (2007) notes that research on this type of climate is still quite limited, especially in relation to objective outcomes such as organizational performance. Furthermore, the authors note that “organizations that actively gather new ideas, provide practical support in their implementation, and use feedback about their consequences will be more efficient, productive and flexible to the changing needs and contexts of customers and clients” (p. 634), making it a climate variable of great importance for organizations.

Innovation Climate Antecedents. Several studies have examined innovation climate antecedents and contextual influences. A study by Ismail (2005) found that the challenge factor of creative climate (i.e. intrinsic motivation to make creative contributions) was the most relevant climate predictor of innovation. Kozlowski and Hults (1987) found that organizations that undergo the most significant technological innovation also tend to exhibit more positive updating climates (i.e. collective perceptions about the extent to which organizations inhibit or facilitate technological updating). They also found that organizations with more technologically complex subunits, less emphasis on formal rules and procedures, and greater opportunities for internal rewards had more positive updating climates (Kozlowski & Hults, 1987).

A study by Koene and colleagues (2002) examined innovation climate as an outcome variable and found that leadership characterized by charisma and consideration led to a stronger innovation climate. This relationship was stronger for smaller store locations rather than large ones. In addition, Van der Vegt and colleagues (2005) found that the benefits of demographic diversity on innovation climate are bounded by power distance. Specifically, in cultures with high power distance, tenure and functional background diversity (but not age and gender diversity) were negatively related to innovative climate.

Innovation Climate Moderators. One influential study that examined the innovation climate –performance link determined that when innovation was not accompanied by an appropriate climate, it can have detrimental effects on firm financial performance (Baer & Frese, 2003). However, when climates for initiative or psychological safety are present in the company, then innovation can reach its full potential and positively contribute to desired organizational outcomes.

Innovation Climate Consequences. Several studies have also examined how innovation climate influences various outcomes. For example, in a sample of healthcare industry employees, climate for innovation was found to be a significant predictor of organizational performance (King et al., 2007). However, it should be noted that the measure of organizational performance was based on survey questions rather than objective financial data. King and colleagues (2007) additionally showed that climate for innovation helped to alleviate the negative effects of work demands. Kozlowski and Hults (1987) further found that perceptions of updating climate (i.e. collective perceptions about the extent to which organizations inhibit or facilitate technological updating) were positively related to individual ratings of organizational commitment, growth satisfaction, and continuing education activity. Therefore, innovation climate has the potential to positively influence both organizational and individual level outcomes. In addition, West and Anderson (1996) found that support for innovation in teams was a main predictor of actual team innovation. Therefore, climates for innovation are effective predictors of positive outcomes at several levels of analysis.

Summary and Future Directions. While we now know about several valuable findings involving antecedents and outcomes of innovation climate, many questions have yet to be explored. Specifically, the question of how innovation climate influences organizational performance needs further support (King et al., 2007), which is an area that this study examines. In addition, more work is needed on how innovation climate interacts with other climate types, which will also be examined here. Furthermore, Baer and Frese (2003) suggest expanding the climate for innovation research to other cultures to test the generalizability of the results they found with a German sample. This study addresses this suggestion by examining the effects of innovation climate in 43 countries.

Growth Climate

Growth Climate Conceptualization. Growth climate has been defined as the extent to which employees perceive the organization to have an “emphasis on personal growth and development on the job and emphasis on skill improvement” (Ostroff, 1993, p.62). Furthermore, Van Dam, Oreg, and Schyns (2008) defined development climate as the extent to which the organization and its leaders promote and maintain the growth of its members and encourage organizational and individual learning. Finally, Meyer and Smith (2000) defined career development climate as the organization’s value of employee development and advancement. Based on these similar definitions but different terminology, it is clear why the existing literature on this type of climate is messy, difficult to assess collectively, and perhaps why it has been largely ignored in the literature. Because of their similar definitions, the terms *growth climate* and *development climate* will be henceforth used interchangeably. While many studies have previously examined the opportunities provided by the organization for employee development and the consequences of that provision (e.g. Kuvaas & Dysvik, 2009a; Lee & Bruvold, 2003; Maurer & Lippstreu, 2008), the treatment of this phenomenon as a type of climate (i.e. aggregated employee perceptions) has been very rare.

Growth Climate Consequences. Despite conducting one of the few studies to examine and explicitly define the growth climate variable, Ostroff (1993) did not focus on growth climate in isolation, but rather on the aggregation of several types of climates and how they match between personal orientation and aggregate school climate. The study results indicate that the personal orientation – school climate interaction did not explain more variance in the outcomes (satisfaction, commitment, involvement in work, stress, performance, adjustment in work,

turnover, and absenteeism) above the main effects alone. Therefore, growth climate is one of several climate types related to numerous positive individual outcomes.

Furthermore, Van Dam and colleagues (2008) examined how LMX and development climate influence employee attitudes toward organizational change. Using a sample from a housing corporation in the Netherlands, the authors found that participants with high quality LMX and high development climate perceptions indicated receiving more opportunities to participate in organizational change, and reported more trust in management and less personal resistance to change. The authors concluded that organizational change will happen more smoothly in organizations that succeed in fostering high development climate and better LMX relationships.

In addition, Armstrong-Stassen and Schlosser (2008) investigated the relationship between individual orientation towards career development, organizational development climate perceptions and organizational commitment attitudes among older workers (50 – 70 years old). They found that when older workers had an orientation for development and there was a higher organizational development climate, participants reported more organizational commitment and intended to remain with the organization. The authors concluded that it is crucial to provide older employees with a supportive development environment in order to maintain and expand their skills and increase their commitment attitudes. Finally, Meyer & Smith (2000) grouped career development climate into a category of HR practices and found that the perceived organizational practice of career development was the best predictor of reported organizational commitment.

Summary and Future Directions. The research on growth/development climate is disjointed and lacks a common terminology and operationalization. It appears that most of the

studies examining this variable investigated its influences on personal outcomes and attitudes, such as commitment, whereas organizational outcomes as well as mediators and moderators of growth climate are rarely investigated. Although literature does exist on employee development (e.g. Kuvaas & Dysvik, 2009a; Lee & Bruvold, 2003; Maurer & Lippstreu, 2008), the key focus of this study is development climate (a.k.a. the collective perceptions of development opportunities and values). Consequently, this study addresses many of the gaps in the growth/development climate literature and further explores how this construct functions in an organizational environment. Specifically, this study examines how growth climate relates to organizational outcomes, to other climate types, and how it varies across cultures.

Leadership Climate

Leadership Climate Conceptualization. Leadership climate, like growth climate, has been given limited attention in the literature even though numerous leadership variables can be conceptualized as being part of leadership climate. Chen and Bliese (2002) defined leadership climate as “group members’ perceptions of the extent to which the leaders of their group provide task-related direction as well as socioemotional support to subordinates” (p. 549). The authors emphasize that past approaches in the literature (e.g., Griffin & Mathieu, 1997) have indeed treated leadership as a group-level climate variable, although not always calling it such. Furthermore, Gavin and Hofmann (2002) also argued that since employees in an organization are exposed to common leaders, it makes conceptual sense that the similar leadership environment perceptions would manifest themselves into a common leadership climate. Furthermore, since leader behaviors are typically witnessed by all or most of the group in question, members are provided with a common referent for assessing leadership climate. Gavin and Hofmann’s (2002)

analysis showed that based on scale scores, group members tended to agree about leadership climate, and aggregating to the higher climate level was justified.

To further support the concept of leadership climate, Bliese and Halverson (2002) used a random group resampling technique (RGR) in order to test if leadership climate was a true group level phenomenon and not just a by-product of the aggregation process. They found that the variable was indeed an actual group level phenomenon, thus encouraging other researchers to conceptualize it in this way as well. Overall, leadership climate has been shown to be a legitimate collective phenomenon, albeit a seldom studied one.

Leadership Climate as a Moderator

Gavin and Hofmann (2002) found that supportive leadership climate moderated the relationship between the perceived significance of work tasks and psychological hostility (i.e., those who perceive low task significance should be less hostile when leadership climate is highly supportive). Furthermore, Chen, Kanfer, Kirkman, Allen and Rosen (2007) discovered that leadership climate moderated the relationship between LMX and individual level empowerment, such that leadership climate made the relationship stronger. These results also remained even after controlling for perceived organizational support, further emphasizing the importance that the climate created by the leader can have on individual employees and teams.

In addition, using a military sample, Thomas and colleagues (2005) demonstrated that midlevel management support climate helped to attenuate the negative relationship between interpersonal conflict and continuance commitment. Similarly, Cole & Bedeian (2007) examined leadership climate strength and how it moderates the relationship between emotional exhaustion and organizational commitment. They found that consensus about transformational leadership

climate moderated the emotional exhaustion-organizational commitment relationship such that group members' consensus about transformational leadership was only beneficial to commitment when emotional exhaustion was low. On the other hand, high emotional exhaustion decreased commitment levels regardless of climate consensus about transformational leadership.

Leadership Climate Consequences. Chen and Bliese (2002) showed that leadership climate is a strong predictor of collective group efficacy. Furthermore, they found that role clarity mediated the relationship between high level leadership climate and self efficacy, and that psychological strain mediated the relationship between lower level leadership climate and self efficacy. In addition, Gavin and Hofmann (2002) discovered that supportive leadership climate directly led to lower average reported psychological hostility. Furthermore, Chen and colleagues (2007) found that leadership climate was positively related to team level empowerment. Gentry and colleagues (2007) examined how supervisor support climate affected the retention of their part time worker sample. Their results demonstrated that supervisory support climate positively predicted retention levels of part time employees, as was hypothesized. Also, Ruiz-Moreno, García-Morales, and Llorens-Montes (2008) found that organizations that have strong climates for managerial support and cohesion also experienced more perceived support for innovation, especially when the organization had sufficient resources. Finally, Thomas and colleagues (2005) showed that supervisory support climate positively related to organizational commitment for both affective commitment (emotional attachment to the organization) and continuance commitment (awareness of the costs of leaving the organization).

Summary and Future Research. In summary, research results support the relevance of leadership as a climate variable but much empirical work remains to be done in order to understand how leadership climate functions in relation to antecedents and outcomes. The

current study attempts to address these research gaps by considering how leadership climate relates to several types of outcomes as well as how it operates in the context of other relevant climate variables and across cultures.

Service Climate

Service Climate Conceptualization. Generally speaking, service climate refers to employees' shared perceptions about the extent to which organizations emphasize and value excellent service to customers (Salanova et al., 2005; Schneider, White, & Paul, 1998). Furthermore, service climate is established by practices and procedures such as rewarding the delivery of excellent service (Johnson, 1996) and generating goals and plans for service delivery improvement as well as increasing customer service quality training for employees (Schneider & Bowen, 1995). Due to the increasing focus on service in many organizations today (Cascio, 2003), service climate is understandably an important and widely studied climate factor (Salvaggio, Schneider, Nishii, Mayer, Ramesh, & Lyon, 2007; Schneider et al., 1998). One of the reasons why organizations prioritize customer service to such a high extent is that it costs about five times as much to obtain a new customer than it does to keep an existing one (Schneider et al., 1998). Therefore, promoting good customer service will help retain customers and keep them loyal and satisfied. Thus, fostering a positive service climate should be of great importance to organizations.

Service Climate Antecedents. One study found that the worth that managers place on service was a significant predictor of service climate, indicating that managers can have a significant influence on collective service climate perceptions held by employees in the organization (Borucki & Burke, 1999). Furthermore, Salanova and colleagues (2005) discovered that organizational resources and employee engagement led to higher service climate perceptions.

Service climate can also be an important factor in teams. For example, De Jong and colleagues (2004) found that tolerance of self-management (i.e. individuals' comfort with autonomy and independent decision making) was positively related to team service climate. Therefore, it would appear that allowing for autonomy and initiative can lead to higher perceptions of customer service importance.

Service Climate Moderators. Some studies have focused on the factors that moderate the effects of service climate on outcomes. Dietz, Pugh and Wiley (2004), for example, found that higher customer contact strengthened the relationship between service climate and customer attitudes. In other words, as the frequency of customer contact increased, so did the positive effects of service climate. In addition, Hui, Chiu, Yu, Cheng, and Tse (2007) examined how leadership effectiveness and service climate work simultaneously to influence employee service quality output. Results suggested that when both leadership effectiveness and service climate were lower, employee service quality was also lower. However, when one of these factors was lower, the other seemed to compensate. For example, when service climate was lower, effective leadership was still able to positively influence employee service output. However, in favorable service climates, effective leadership did not enhance customer service but was actually found to be detrimental to service output. These results suggest that the effects of service climate may be more complex than they appear.

Service Climate Consequences. Since service is such an important, and sometimes *the* most vital, means of making a profit for organizations, it is not surprising that many studies examining this climate have tried to link it to organizational and service performance. For instance, Borucki and Burke (1999) found that service climate predicted service performance, which in turn predicted organizational financial performance. Furthermore, Salanova and

colleagues (2005) discovered that higher service climate perceptions predicted customer-rated employee service performance and customer loyalty. According to Schneider and colleagues (1998), service climate is a main determinant of customer perceptions of service quality. However, Liao and Chuang (2004) found that while employee service performance due to service climate positively predicted customer satisfaction and customer loyalty, it did not predict evaluations of overall service quality.

Summary and Future Research. Taken together, research findings indicate that service climate is worth investigating, especially in today's service economy and because of its relationship to organizational outcomes valued by the service industry. However, the effects it has on organizational outcomes may be complex and the examination of various mediators and moderators of service climate is a necessary next step. It has also been noted that when examining organizational performance in the service industry, customer satisfaction is the best criterion (Johnson, 1996). Taking these future directions into account, this study examines service climate in relation to customer satisfaction as well as how this climate variable interacts with several other types of climates and across cultural dimensions.

Support Climate

Support Climate Conceptualization. Social support climate, a modified collective construct of perceived organizational or peer support, is defined as "the shared perception that coworkers in a given work unit can be expected to provide both emotional and instrumental support" (Bacharach, Bamberger, & Vashdi, 2005; p.623). In other words, employees perceive that help seeking and help giving is the norm in the work unit (Bacharach et al., 2005). Furthermore, Gentry and colleagues (2007) noted that while social support can come from various sources, many employees seek support from leaders and coworkers, and this support has

been found to lead to employee well-being and better work performance. Support climate has therefore been examined using both supervisor (e.g. Gentry et al., 2007) and coworker referents (e.g. Bacharach et al., 2005). However, since leadership climate already encompasses supervisor support, support climate for the purposes of this study, will exclude support climate that is created by leadership and focus more on support climate created by colleagues and other organizational members. Gentry and colleagues (2007) argue that it is important to understand how the collective perceptions of support climate influence outcomes, making it necessary to study support as a climate variable.

Support Climate Antecedents. While the examination of support climate antecedents has been scarce, one study by Tordera, Gonzales-Roma, and Peiro (2008) found that the quality of leader-member exchange positively predicted support climate.

Support Climate Consequences. Bacharach and colleagues (2005) cite various studies examining the general concept of coworker support and its relationship to outcomes such as enhanced self-esteem and professional identity (Thomas, 1993), and reduced occupational stress (Fried & Tiegs, 1993). This study also showed that in demographically diverse groups, the presence of support climate was related to a higher number of supportive relationships with racially dissimilar peers (Bacharach et al., 2005). In addition, Tordera and colleagues (2008) found that support climate led to lower role overload for employees. Therefore, fostering a supportive climate can be an effective tool for increasing employee well-being and healthy work relationships. Furthermore, several studies examined the effects of support climate on employee attitudes and retention. For instance, Luthans and colleagues (1992) discovered that those who perceived their organizational climate to be warm and supportive also reported higher organizational commitment.

Summary and Future Research. While research on support climate has made a promising start, there is still a long way to go in order to understand the role of this climate variable and how it functions in organizations. Most of the existing research on this climate variable has been quite recent but has demonstrated significant and interesting findings. The present study extends this research in order to address support climate in relation to organizational and individual outcomes, as well as its interaction with other climate variables.

Justice Climate

Justice Climate Conceptualization. In the past, justice has been conceptualized almost exclusively as an individual-level construct, but recent research has started examining it as a collective phenomenon. The term “justice climate” was first coined in 2000 by Naumann and Bennett, who defined it as a group-level cognition about how the group as a whole is treated by others. Specifically, it refers to the quality of treatment of employees or team members by an external agent, such as an authority figure (Li & Cropanzano, 2009). Through information sharing and interaction, employees in groups can come to a collective perception of justice. There are generally three distinct justice dimensions identified in the literature that have been translated into justice climate components: distributive, procedural, and interactional (Colquitt, 2001). Distributive justice climate refers to the collective perceived fairness of the outcomes distributed among employees in an organization (e.g. pay, vacation days). Procedural justice climate indicates the collective perceived fairness of the way in which these outcomes are determined (e.g. how pay raises are allocated). Interactional justice is divided into two components: interpersonal and informational justice. Informational justice climate is defined as the collective perceived fairness of the explanations provided by authority for why and how

decisions are made, and interpersonal justice climate refers to the perceptions of the personal treatment provided to recipients in terms of sensitivity, dignity, and respect (Liao & Rupp, 2005).

Justice Climate Antecedents. Several researchers have examined justice climate perception antecedents, especially ones related to leader characteristics and behaviors. For example, Mayer, Nishii, Schneider, and Goldstein (2007), in a sample of grocery store employees and managers, found that leader personality had significant effects on justice climate. Specifically, they found that agreeableness in leaders was positively related to procedural, interpersonal and informational justice climate, while leader neuroticism was negatively related to all three justice climates. Conscientiousness in leaders led to higher procedural climate perceptions. Ehrhart (2004) examined the influence of effective leadership on climate perceptions and found that the considerate treatment of subordinate needs and working for the good of subordinates, led to more positive justice climate perceptions, which consequently led to a greater number of unit-level organizational citizenship behaviors.

Furthermore, in a sample from the banking industry, contingent leader behavior led to increased procedural justice climate perceptions and climate perception strength (Walumbwa et al., 2008). Also, the authors found that perceived supervisor support was correlated significantly with procedural justice climate. Another study that examined justice climate antecedents found that perceptions of work group cohesion positively contributed to the development of a procedural justice climate (Naumann & Bennett, 2000).

Justice Climate Moderators. In an attempt to study justice climate as a moderator, Mayer and colleagues (2007) found that collective justice climate perceptions moderated the

relationship between individual justice perceptions and job satisfaction and organizational commitment such that the relationships were stronger when justice climate was high.

Justice Climate Mediators. A study by Walumbwa and colleagues (2008) investigated the mediating effects of group level procedural justice climate perceptions and justice climate strength on the relationship between contingent reward leader behavior and the outcomes of OCBs, satisfaction with one's supervisor, and organizational commitment. Contingent reward leader behavior involves clarifying goals and how to achieve them and then providing material and/or psychological rewards to subordinates based on contractual obligation fulfillment. There was a full mediating effect of procedural justice climate on the relationship between contingent reward leadership and the outcomes of supervisor satisfaction and organizational commitment. A partial mediation of the same nature was observed for organizational citizenship behavior outcomes. In addition, Ansari, Hung and Aafaqi (2007) found that procedural justice climate mediated the relationship between the professional respect component of LMX and organizational commitment.

Justice Climate Consequences. Another set of studies examined the role of justice climate on various group and individual outcomes. For example, Naumann and Bennett (2000) showed that procedural justice climate was positively related to individual helping behavior in a team, which consequently led to better team performance. In addition, group helping behavior was found to mediate the relationship between procedural justice climate and perceived work group performance (supervisor rated) but not financial performance (workgroup net profitability) (Naumann & Bennett, 2002). Procedural justice climate was also discovered to have a positive effect on collective group citizenship behavior at the group level (Chen, Lam, Naumann & Schaubroeck, 2005). Similarly, Lin, Tang, Li, Wu, and Lin (2007) showed that procedural

justice climate positively related to team helping behavior, but this relationship was mediated by cooperative team norms.

In addition, Moliner, Martinez-Tur, Peiro, Ramos, and Cropanzano (2005) examined the effects of justice climate on employee health and discovered that interactional justice climate level was negatively related to levels of burnout experienced. This result indicated that the absence of collective perceived fairness can have negative consequences for employee health and well-being. Furthermore, Tangirala and Ramanujam (2008) conducted a study investigating how procedural justice climate related to employee silence (i.e. the intentional withholding of valuable work-related information from other group members). Their study looked at a sample of frontline nurses and found that employee silence was decreased when procedural justice climate was high. The authors concluded that justice climate can create a context conducive to speaking up about critical issues.

Ansari and colleagues (2007) found that procedural justice climate was positively related to organizational commitment, and was negatively related to turnover intentions. Finally, Liao and Rupp (2005) studied several justice climate types (procedural, interpersonal, informational) with two foci each (supervisor and organization) and found that organization-focused procedural justice climate positively predicted organizational commitment and organizational citizenship behaviors, and organization-focused informational justice climate predicted organizational citizenship behaviors only. Furthermore, supervisor-focused procedural and interpersonal justice climates were both related to supervisory commitment and satisfaction.

Summary and Future Research. The literature review presented above illustrates the emergent nature of justice climate as more researchers have taken an interest in the variable at

the collective level. Since its emergence in 2000, justice climate has been examined as an outcome, antecedent, mediator, and moderator, and its importance has been well-established in the literature. However, there is still much that we do not understand about this new addition to the climate literature, such as how it relates to other organizational climates and how it varies in different cultures (Li & Cropanzano, 2009), which are topics this study addresses. Furthermore, suggested future research directions include further examining justice climate effects on outcomes such as performance and turnover (Liao & Rupp, 2005), on which this study also focuses.

Climate Interactions with Other Climate Types

While examining climate interactions shows some promising preliminary results, this research has been confined to only a very few types of climate (Kuenzi & Schminke, 2009). For example, DeJoy and colleagues (2004) discovered that communication climate and organizational climate for support of safety (global climate factor) predicted safety climate (specific safety programs and policies). Furthermore, in a rare attempt to use a specific climate as a moderator for another climate, Spell and Arnold (2007) found that distributive and procedural justice climates interact with each other to influence employee mental health (anxiety and depression). In another study relating to justice climate interactions, Bashshur and colleagues (2008) (as cited in Li & Cropanzano, 2009) examined the interaction between justice climate that stems from the supervisor and justice climate that is created by the organization as a whole. The authors found that when both the organization and the supervisor produce fairness climates, the result is increased citizenship behavior from the employees, fewer counterproductive work behaviors, and more favorable work attitudes. However, when there is a mismatch between

supervisor justice climate and organizational justice climate, employee attitudes become less positive.

Finally, Tracey and Tews (2005) presented a validation study of a measure of training climate that was described in terms very similar to a mixture of support climate and growth climate. In addition to finding support for the validity of their measure, they also found that training climate as they defined it, led to the development of service climate.

While these studies illustrate that climate interactions can have beneficial results, the fact that most climate researchers only focus on one type of climate in each study (Kuenzi & Schminke, 2009) severely limits the possibilities of examining more complicated climate interrelationships. Therefore, this study examines how several types of climates interact with each other to influence individual, customer rated, and organizational outcomes and thus demonstrate that climate relationships are more complicated than much of the previous climate literature has suggested.

Cross-Cultural Research

Today's increasingly global economy makes the incorporation of cultural influences absolutely essential (Cascio, 2003). In other words, "culture is now widely recognized as an important, if not crucial, variable to be integrated in theory and research on all aspects of human behavior" (Matsumoto & Yoo, 2006; p.234). Gelfand, Leslie, and Fehr (2008) further argue that in order to move forward as a science, industrial-organizational psychology must adopt a global perspective. The influences of cultural contexts have been featured much more prominently in the psychology literature since Bass and Barrett's call for the internationalization of organizational psychology in 1976. Nevertheless, we still have a limited understanding about

when culture matters and how cultural and non-cultural factors act together in order to influence organizational behavior (Gelfand, et al., 2008). The current study will therefore attempt to address this information deficiency by incorporating culture as a moderator of the relationships between organizational climates and organization, customer, and individual outcomes.

Hofstede's cultural framework is currently the most prevalent in the academic literature (Kirkman, et al., 2006; Ng, Sorensen, & Yim, 2009) and is discussed in the following section.

Hofstede's Culture Taxonomy

One of the most prominent voices in cross-cultural research has been Geert Hofstede, whose five-dimension model has been extensively adopted in numerous fields and disciplines as a valid and reliable taxonomy of culture (Hofstede, 1998; Matsumoto & Yoo, 2006; Ngai, Heung, Wong & Chan, 2007; Smith, 2006). Gelfand and colleagues (2008) described Hofstede's model as an "additive culture model," meaning that it calculates individuals' values in a culture and then averages them for each culture and each dimension. Hofstede's work is still heavily used in cross-cultural research today and is the most widely cited and most influential model of culture to date, yielding thousands of studies in various fields (Kirkman et al., 2006).

Hofstede (1980) defined culture as "the collective programming of the mind, which distinguishes the members of one human group from another" (p.25). His original study to classify cultural dimensions analyzed data from IBM corporation employees in 40 different countries (later extended to 50 countries). The findings yielded a solution consisting of four independent cultural factors, namely power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. A fifth dimension, long/short-term orientation, was added later to create a five-factor taxonomy. Each country in Hofstede's sample

therefore had five indices, one for each cultural dimension. The following section provides a description of each of Hofstede's dimensions (Hofstede, 2001).

The first dimension, power distance, refers to the extent to which a society accepts power inequality between its members in areas such as wealth, prestige or social status. Power distance is usually described as the perceived power inequality between two individuals in the same social system (e.g., an organization) and the extent to which this inequality is accepted, understood, and endorsed. Cultures high in power distance are characterized by the fear of expressing disagreement or voicing opinions to those of higher status, an unwillingness to question authority, less participation in decision making, more autocratic leadership, and strict social or organizational hierarchies. This dimension is defined from below, rather than from above, meaning that those in lower power status positions are the ones in the best position to provide information about societal inequalities (Hofstede, 2001; Kirkman et al., 2006).

The second dimension is uncertainty avoidance, which is defined as a society's general tolerance or intolerance of ambiguity. Individuals in cultures high in uncertainty avoidance tend to feel uncomfortable, threatened, and anxious when faced with unstructured or unpredictable situations and therefore employ strict rules, regulations, beliefs, and institutions in order to minimize any potential uncertainty. These societies attempt to create stability wherever possible and usually avoid deviant ideas and/or behaviors that can lead to ambiguous results. Factors relating to uncertainty avoidance scores are rule orientation, employment stability, job stress, and resistance to change.

The third cultural dimension, individualism-collectivism, is the most widely studied dimension in the cross-cultural literature (Kirkman et al., 2006). Individualism refers to societies

in which members tend to take care of themselves and their immediate families only, while collectivist cultures are built around much tighter social networks consisting of in-groups (e.g. extended families, organizations) and out-groups. Individuals offer their loyalty to their in-groups in exchange for care and protection. The self-concept in individualistic societies is “I” whereas the self-concept is “we” in collectivist societies (Hofstede, 2001). Cultures high in individualism are characterized by freedom and autonomy for individuals, more privacy, less conformity, and personal challenge and growth. On the other hand, societies high in collectivism are characterized by higher conformity, less confrontation and conflict, collective decision making and group oriented training, job tasks, and incentives.

Hofstede’s other two dimensions are masculinity/femininity and short/long-term orientation. The masculinity dimension is defined as the extent to which a society values money, success and assertiveness (masculine cultures) rather than valuing quality of life and care for others (feminine cultures). Gender roles in masculine cultures are separate, distinct, and consistent with gender role stereotypes, while gender roles in feminine countries overlap, allowing males and females to have more similar gender roles. The fifth dimension was added to the framework in 1988 by Hofstede and Bond. Long-term oriented cultures are defined as having future-oriented values such as persistence and thrift, while short-term oriented cultures focus on the present and past and therefore value tradition and social obligations. These two dimensions are not examined in this study due to their limited relevance to the conceptual framework and research questions. Therefore, the current study focuses on power distance, uncertainty avoidance, and individualism/collectivism.

Criticism and Support for Hofstede's Model

Hofstede's model of culture has been embraced as well as criticized. Five main critiques from various sources have been offered and defended by Hofstede (1998; 2001). The first critique states that surveys are not the correct way of measuring cultural differences, to which Hofstede responds that surveys are just one way to collect cultural data but not necessarily the only way. The second critique states that nations are not the same as cultures and nations as a whole may not account for sub-cultural differences. Hofstede responds that nations are usually the only available units for comparison in cross-cultural research. The third critique is that data from one company (IBM) cannot provide sufficient information about a nation as a whole because it may not be representative of all its people. Hofstede responds that functionally equivalent samples are good for measuring cultural differences while keeping everything else constant. The fourth critique is that the IBM data are outdated and no longer apply to modern culture. Hofstede's response is that all the dimensions have been well validated, and recent replications have shown that all dimensions still hold true since cultures are based on deep-rooted values that do not change so quickly. Finally, the fifth critique is that the five dimensions are not sufficient to summarize complex cultures, and Hofstede's response is to encourage other researchers to come up with valid alternative models that can do a better job at classifying cultures.

Hofstede's dimensions were shown to be stable over time, with the personal goals and beliefs questions comprising the cultural dimensions displaying adequate test-retest reliability (median $\rho = .77$). Test-retest reliability data were collected four years apart and items that did not demonstrate sufficient stability were dropped. The scores for respondents from seven IBM professions from the remaining reliable items were averaged across the two data collection times

to form the country dimension scores. Hofstede (2001) also notes that the reliability of the cultural dimensions can be inferred from validation evidence regarding how the dimensions correlate with dimensions calculated using other cross-cultural datasets. For example, supporting the validity and comprehensiveness of his model, six major, large-scale replications of Hofstede's work (e.g. Helmreich & Merritt, 1998; Hoppe, 1990; as cited in Hofstede, 2001) all show convergence with the original framework and show that the correlations of country coefficients with the original coefficients have not decreased over time, signifying that Hofstede's scores are tapping resilient aspects of national culture differences (Hofstede, 2001; Hofstede & McCrae, 2004). In addition, Hofstede notes that over 35 studies using data from five or more countries have been published, which show significant relationships between at least one of his dimensions and a multitude of various outcome variables (Hofstede, 2001).

Hofstede and Bond (1984) argued that different studies examining the same cultural environments should be expected to show convergence. Since Hofstede's work covers over 50 countries, it should therefore show some convergence with other cultural frameworks using the same countries. The authors compared Hofstede's dimensions with those developed in a study using data from nine countries (Ng, Hossain, Ball, Bond, Hayashi, Lim, O'Driscoll, Sinha & Yang, 1982). The study by Ng and colleagues determined 40 cultural values, which were compiled into 5 factors. Comparison results showed four correlated dimensions between the two studies. That is, each of Hofstede's four dimensions (only four were developed at the time) were found to have a counterpart in the five factors from the study by Ng and colleagues. There was also significant conceptual convergence between the two frameworks (e.g. Hofstede's power distance was related to Ng's factors of "politeness" and "obedience").

Furthermore, Huang and Van de Vliert (2004) originally used a combined individualism/collectivism score for each country in their study by combining Hofstede's index, country divorce rates, and Triandis' individualism/collectivism country ranking. However, when they analyzed the data again using Hofstede's index only, they obtained the same results, indicating that Hofstede's index alone is a good enough indicator to stand on its own.

Not only was Hofstede a pioneer in cultural research, but his work has been widely adopted, replicated, and extended over time (Hofstede, 1998; Hofstede & McCrae, 2004; Smith, 2006), making it the framework of choice for the current study. While there are other viable culture frameworks available (especially the GLOBE project; House, Hanges, Javidan, Dorfman & Gupta, 2004), Hofstede's work is more appropriate for this study because it better predicts behavioral frequencies and illustrates overall national characteristics. On the other hand, the GLOBE dimensions are not as parsimonious and are better for studying aspects of intergroup and international relations (Smith, 2006), which are not as applicable for the current study. The following section reviews some of the relevant studies adopting Hofstede's model, along with other culture measures.

Cross-cultural Research Findings

There have been numerous studies focusing on the influences of cultural dimensions on a multitude of proposed variable relationships (e.g., Lam, Chen & Schaubroeck, 2002; Rogers & Spitzmueller, 2009). However, the methodology used by researchers has varied widely, from using country as a proxy for cultural differences (e.g., Pal & Saksvik, 2008), to asking participants about their cultural values at the individual level (e.g., Francesco & Chen, 2004), to using Hofstede's dimensions as a cultural context moderator (e.g., Huang & Van de Vliert, 2006).

Each of these three types of methodologies and the studies that have utilized them will be discussed below.

Country as a Proxy for Individual Differences. Of these various methods, one of the most straightforward ways of examining cultural effects is by looking at country differences. This is achieved by collecting data from two or more countries and examining the differences between them. In this method, there are no cultural dimension scores collected so differences found between country samples in the results are assumed to be due to country differences with no explanation of actual cultural value differences.

One study that used this method examined country differences in emotional display rules among Canadian, American, and Japanese university students (Safdar, Friedlmeier, Matsumoto, Yoo, Kwantes, Kakai, & Shigemasu, 2009). They discovered that Japanese participants reported that expressing powerful emotions (i.e., anger, contempt, and disgust) and positive emotions was less appropriate than did Canadian and American participants. Hofstede's framework was used to explain these cultural findings in that those in individualistic cultures like the U.S. find emotional display more acceptable, especially when expressing displeasure. However, even though the study used cultural dimensions as an explanatory framework, no actual cultural dimension scores were collected in this study.

Similarly, Pal and Saksvik (2008) examined the effects of work-family conflict and job characteristics on job stress in Norway and India among doctors and nurses. Country-based differences for doctors and nurses included that none of the predictor variables were related to job stress for Norwegian doctors but for Norwegian nurses, work-family conflict, high job demands and inflexible work hours led to higher job stress. On the other hand, low job control

predicted higher job stress for Indian doctors, while Indian nurses with more family-work conflict and low social support experienced high job stress. Another study tested differences between Asian and non-Asian hotel guest complaint behavior (Ngai et al., 2007) and found that Asian hotel guests are less likely to complain in hotels for fear of losing face and are less familiar with the ways in which to voice complaints when compared with non-Asian hotel guests. The authors conclude that these results are consistent with Hofstede's grouping of Asian cultures into high power distance, high uncertainty avoidance and high collectivism dimensions, but once again, no cultural dimensions were actually measured.

While the positive aspect of using country as a proxy for cultural differences is its simplicity, the fact that this approach does not require collecting or incorporating actual cultural data is its biggest weakness. When studies compare data across several countries and attribute results to cultural differences, we do not know whether the differences were caused by, for example, power distance or uncertainty avoidance, or any other cultural characteristic because this was never measured (Huang & Van de Vliert, 2003). The authors of the studies above use cultural dimensions as explanations for their results with no statistical support (e.g., Ngai et al., 2007). Therefore, this methodological approach for cross-cultural research relies heavily on assumptions that the differences found are actually due to cultural values, but offers no empirical evidence to rule out alternative explanations (Huang & Van de Vliert, 2003).

Measuring Cultural Values at the Individual Level. Other studies have adopted the methodology of measuring culture at the individual level by asking participants to fill out various questionnaires about their cultural values (e.g., Patterson, Cowley, & Prasongsukarn, 2006). While some of these studies used individual level measures designed by researchers other than Hofstede, the conceptual framework used to explain results was nevertheless heavily based on

his work. Other researchers have provided participants with measures taken from Hofstede's original questionnaires that were meant to be examined at the country level.

For instance, Rogers & Spitzmueller (2009) examined how culture moderated the relationship between goal orientation and training outcomes. Engineers in a multi-national corporation (MNC) in nine countries were asked to complete a subset of items from Hofstede's (1980) individualism/collectivism measure, but responses were kept at the individual level. Results indicated that collectivism was a significant predictor of training intentions and motivation to learn, while individualism was not a significant predictor. Francesco and Chen (2004) also measured individualism/collectivism at the individual level (using a scale by Singelis, Triandis, Bhawuk, & Gelfand, 1995) to test how this cultural dimension moderates the organizational commitment – job performance relationship in China. The relationship between commitment and performance was found to be weaker for collectivist participants. This was argued to be most likely due to collectivists' predisposed feelings of obligation to the organization, which subsequently led to less variation in their job performance scores.

Another study examined fairness perception differences across cultures in the U.S., Korea, Japan, and China and how these perceptions affect job satisfaction (Kim & Leung, 2007). This study used a power distance framework and asked respondents to complete a power distance scale (Brockner, Ackerman, Greenberg, Gelfand, Francesco, & Chen, 2001). Results showed that job satisfaction and turnover intentions were related more strongly to organizational injustice perceptions for the American participants than for the East Asian ones. Results were consistent with this rationale in that the country with low power distance (U.S.) had stronger negative reactions to organizational injustice. Finally, Patterson and colleagues (2006) also measured Hofstede's dimensions at the individual level in a lab study in Thailand and Australia and found

that those with high power distance orientation were more likely to perceive justice when a person of high status offered them an apology, but for low power distance participants, the status of the person giving the apology did not matter. Those with a collectivist orientation were also more satisfied when the organization took the initiative to rectify a service problem. Furthermore, those high in uncertainty avoidance perceived more justice when the organization outlined the steps it would take to correct the problem.

While the studies discussed above have been published in spite of their methodology of measuring cultural values at the individual level, this method remains controversial and has been heavily criticized. Specifically, Huang and Van de Vliert (2003) argue that researchers should not be testing nations as moderators at the individual level by assigning each participant a Hofstede index score based on their country or by asking participants to complete the dimension measures and analyzing them at the individual level. They state that while this is often done in the literature (as seen in the studies previously discussed in this section), it produces the wrong level of measurement for such research questions. A measure meant for, and applied to the country level, like Hofstede's cultural indices, should not be assumed to work for the individual level. Cultural dimensions at the individual level may therefore have different meanings from those dimensions based on aggregations at the country level of analysis (Huang & Van de Vliert, 2003). This is a point also repeatedly made by Hofstede himself in response to researchers using his framework incorrectly (Hofstede, 1998; Hofstede, 2002). Also, country level variables likely have limited explanatory power when applied to individuals. Therefore, this method of cross-cultural research is less than optimal for understanding how culture influences relationships of interest.

Using Hofstede's Dimensions as a Cultural Moderator. The final set of studies discussed here has employed the cross-level approach, which involves the integration of country-level with individual-level analysis (Huang & Van de Vliert, 2003). This method is best used for examining how cultures or countries act as moderators for empirical relationships at lower levels of analysis (i.e., nation-as-moderator effect). The authors argue that in order to test the nation-as-moderator phenomenon, one must assign or measure culture context variables at the country level for each country in the sample and use this country-level score to test for moderated relationships. This process requires the use of multi-level modeling, with individuals being nested in cultural contexts. In fact, many previous studies have successfully used this technique of testing cultural differences with Hofstede's scores (e.g., Kirkman, et al., 2006; Ng et al., 2009; Huang & Van de Vliert, 2006), and the current study's methodology does the same.

One example of such a study discovered that the relationship between participative decision-making and individual performance was higher for those high in individualism, while the participative decision-making and group performance relationship was higher for those high in collectivism (Lam et al., 2002). Moreover, Lam, Schaubroeck, and Aryee, (2002) also found that power distance moderated the relationship between justice perceptions and work outcomes such that those lower in power distance experienced more positive relationships between justice perceptions and job satisfaction and performance.

In addition, Huang and Van de Vliert (2006) examined the effects of job formalization and management communication on trust in management. Using survey data from 46 countries and Hofstede's index as a measure of individualism/collectivism, they found that in collectivist cultures, job formalization did not affect open employee-manager communication. However, in individualistic countries, high job formalization led to much lower open communication than in

less formalized jobs. Another study by Huang and Van de Vliert (2004) examined the relationships between job level (blue or white collar) and job satisfaction across 39 countries, and found that lower level jobs do not necessarily lead to lower job satisfaction in collectivist cultures but they do in individualistic cultures. In addition, in individualistic cultures, the positive relationship between job level and job satisfaction was stronger for jobs that allowed the employee to use his/her skills and abilities.

Another study focusing on culture and job satisfaction found that the effect size of the job satisfaction – job performance relationship was stronger in cultures of high individualism (using both Hofstede and GLOBE indicators), and low uncertainty avoidance (Hofstede's index only) (Ng et al., 2009). However, no moderating culture effects were found for power distance or masculinity when using task performance as the outcome. On the other hand, when considering contextual performance as the outcome, moderating effects were found for individualism, power distance, and masculinity (Hofstede's index).

Huang, Van de Vliert, and Van der Vegt (2005) examined how Hofstede's power distance indices across 24 countries influenced organizational silence (i.e. employee withholding their opinions intentionally) and how voice-encouraging procedures (e.g. quality management meetings, team building programs, etc) and participative climate work to decrease organizational silence. Results indicated that in low power distance cultures, having a formalized employee involvement program and/or a participative organizational climate (defined as the extent to which ideas, suggestions, and opinions are endorsed) encouraged employees to speak up. In high power distance cultures, however, both participative procedures and climate must be present in order to facilitate the voicing of ideas. Furthermore, a study by Euwema, Wendt, and van Emmerik (2007) examined how culture across 60 countries moderated the relationship between

leadership and group OCBs. Results showed that in cultures high in individualism, the relationship between directive leadership (i.e., leadership that is task oriented and includes close supervision and controlling actions) and OCBs was more negative and the relationship between supportive leadership (i.e. leadership focused on group needs and harmonic relationships) and OCBs was less positive than in collectivist cultures.

Finally, Hofstede and McCrae (2004) found several differences in how participants from various cultures responded to the Big 5 personality measure. In particular, neuroticism was higher in cultures of high uncertainty avoidance and masculinity and extraversion scores were higher in cultures characterized by high individualism. Also, participants in cultures that are high in masculinity and low in power distance rated themselves higher on the trait of openness to experience.

The cross cultural research method of using cultural dimension indices as moderators of individual level relationships has been demonstrated by the studies discussed above to be the superior method for such multi-level research questions. It addresses the weaknesses of the previous two methods because it actually incorporates measures of cultural dimensions rather than simply looking at differences between countries. Furthermore, it keeps the index scores at the country level and incorporates this data into a multi-level analysis. Since these cultural dimension scores are meant to represent national values, and not those of individuals, using the index scores in this manner is most appropriate. In addition, since the multilevel modeling suggested by Huang and Van de Vliert (2003) requires a minimum of 25 countries, this study is the perfect specimen for this type of methodology due to the fact that the sample includes 43 countries, which is well over the minimum. Therefore, this study adopted the cross-level

methodology and incorporate culture dimension scores at the national level in order to test the moderating effects of culture.

The research discussed above sheds light on the fact that the cultural context is, in many cases, an important and powerful moderator to many relationships. While much of the research conducted today uses samples only from the United States, the fact that many organizations now operate on an international level means that research should address how phenomena function in other cultures (Gelfand et al., 2008). The above section has demonstrated evidence that using a cross-level approach with country-level dimensions as measures of culture is the favored methodology for cross-cultural research. Also, the research discussed shows that Hofstede's framework consistently produces interesting and significant findings that are consistent with his original conceptualizations of culture, regardless of the research questions or methodology. Furthermore, the review by Kirkman and colleagues (2006) urges researchers to further examine culture as a moderator as well as to incorporate dimensions beyond individualism-collectivism, which is still the most widely used dimension today. Therefore, this study uses Hofstede's framework in a cross-level approach methodology because of the strengths of this method and incorporate three out of the five cultural dimensions.

Cultural Moderators in Organizational Climate Studies

While the study of organizational climates across cultures has been somewhat limited thus far, several studies have attempted to initiate this trend. Burke, Chan-Serafin, Salvador, Smith and Sarpy (2008) note that the linkage between national culture and organizational climate is intuitive, but that this connection has been largely ignored in the literature until recently. The

following studies have all been published within the last five years, indicating that the integration of climate and national culture variables is a new and up and coming path for climate research.

One study that examined this interaction looked at how power distance influences the effects of procedural justice climate and notes that research on the connections between power distance and procedural justice climate at the group level are long overdue (Yang et al., 2007). The study used data from Taiwanese work groups in which the authors measured power distance at the individual level. Results indicated that procedural justice climate leads to higher commitment and OCBs, especially when power distance is low. The authors argued that this result can be explained by the notion that high power distance may constrain authority-related interaction, even in high procedural justice climates. In other words, incongruent combinations of contextual characteristics (i.e., high procedural justice climate and high power distance) may inhibit positive potential effects of these variables. The current study will replicate and extend this research by examining power distance, uncertainty avoidance, and individualism/collectivism at the country level and across 43 countries in relation to the same individual level outcomes of commitment and OCBs, with the addition of job satisfaction. As discussed in the previous section, the use of multi-level methods for cultural moderator research questions is more appropriate than the individual level data collection done in this study and thus, the current study employs the more appropriate methodology.

Van der Vegt and colleagues (2005) also examined power distance as a moderator, but measured it at the country level across 24 countries. The index used in this study was a combined total of Hofstede's scores and power distance indices developed by Van de Vliert and Smith (2004). The study examined the effects of power distance and demographic diversity on innovation climate. Results indicated that in high power distance countries, tenure and functional

background diversity (but not age and gender diversity) were negatively related to innovative climate. This leads to the conclusion that since members in diverse groups based on tenure and background have differential access to power, high power distance silences the possible disputes and discussions that would allow for more creativity and innovation to emerge. Therefore, managers in multinational corporations should take extra care to consider the cultural environment when trying to foster an innovative climate with a diverse workforce. This study extends the research done by Van der Vegt and colleagues (2005) to include other cultural context moderators (uncertainty avoidance and individualism/collectivism), as well as incorporate individual level outcomes for innovation climate.

Huff and Kelley (2005) examined how the individualism/collectivism dimension influences climates of trust (i.e., climates that enhance teamwork, leadership, and goal setting) across seven countries. The authors, however, split the sample into individualist countries (the U.S.) and collectivist countries (six Asian nations), thereby using country as a proxy variable for cultural context. Results indicated that the U.S. sample demonstrated higher trust climate and customer orientation than the Asian nations. The current study extends Huff and Kelley's (2005) research by measuring the cultural dimensions of interest using Hofstede's indices rather than using country as a proxy for the dimensions. It also directly tests customer service climate rather than customer orientation and also examines the outcome variable of customer satisfaction, which is an important outcome for organizations in the service industry (Johnson, 1996).

A study by Garrett, Buisson, and Yap (2006) compared how culture influences new product development in New Zealand and Singapore. They examined the role of power distance, masculinity, and uncertainty avoidance in relation to interfunctional climate (extent to which members perceive that management supports informal communication systems, and enhanced

trust and support for the new product development). Cultural dimensions were measured by aggregating individual participant scores on Hofstede's Value Survey Module for each of the two countries and the other variables of interest, including climate, were collected via interviews. The study found that interfunctional climate was stronger in New Zealand than in Singapore and that the higher femininity of the New Zealand culture allowed for greater collaborative efforts and higher trust and support perceptions. The current study further extends this research by examining other types of climates relevant to Hofstede's cultural dimensions, along with using a quantitative rather than qualitative methodology. Due to the notion that climate variables should display perceptual agreement among organizational members (James et al., 2008), a quantitative approach is more appropriate in order to be able to statistically show this agreement.

Finally, Burke and colleagues (2008) examined the effects of safety climate and uncertainty avoidance on transfer of safety training to accident and injury rates in the work place. The authors used a meta-analytic strategy and analyzed data from 95 studies which represented 14 countries. Hofstede's uncertainty avoidance index was assigned to each country in the database. Safety climate was coded by raters for each primary study in the meta-analysis. The results indicated that in cultures of high uncertainty avoidance, the effectiveness of safety training on safety outcomes (e.g., accident reduction) decreases, a finding that was contrary to expectations. Furthermore, safety climate had a positive moderating effect on the relationship between safety training transfer and safety-related outcomes, making the relationship more positive. The effect size of the culture moderation was also stronger than the organizational climate moderation relationship. However, the study never examined the actual interaction between the national culture and climate variables, making it impossible to understand how they interact with each other. Therefore, the current study addresses this weakness by examining how

the climate and culture variables interact with each other to influence individual level outcomes and customer satisfaction.

Overall, the studies that have investigated the climate-national culture link are few in number and do not encompass many other potential climate-culture interactions that would help extend our currently limited understanding of the functioning of organizational climates overseas (Huff & Kelley, 2005; Van der Vegt et al., 2005; Yang et al., 2007) . It appears that while several studies have contributed to the literature on the interaction of climate and national culture, much work still remains to be done in this area, such as examining more climate types across more cultural dimensions as well as examining the climate-culture interaction in relation to many more types of outcomes. This is especially important today due to the increasing number of multinational corporations (Cascio, 2003), in which managers must take national culture into account when implementing policies and practices. Therefore, the current study adds to this new, but growing, avenue of research and examines how multiple organizational climate dimensions interact with the cultural dimensions of individualism/collectivism, uncertainty avoidance, and power distance.

Context

The context for the current study is a multinational hotel chain. Since the customers in question are hotel guests, *customer satisfaction* will also be referred to as *guest satisfaction*, and these terms will be used interchangeably. Furthermore, since the context for the study is a service industry, it should also be noted that performance is based on delivering service to hotel guests.

Hypothesis Development

Main Effect Relationships

A complete list of hypotheses is presented in Appendix C.

Organizational Financial Performance. Since financial performance is of great interest to organizations, it is important to investigate which factors lead to increased profit and revenue. Previous literature has demonstrated that climates for initiative and psychological safety positively and directly influence firm financial performance (Baer & Frese, 2003). These climates are types of innovation climate, which are tested in this study (i.e., collective perceptions about an organization's encouragement of creating and using new ideas). Similarly, it has also been found that climate for innovation significantly predicted survey rated (i.e. not objective) organizational performance (King et al., 2007). The current study extends these findings by examining the innovation climate-financial performance relationship with objective financial outcomes.

This relationship between innovation climate and organizational performance may not be equally strong for all job levels. Specifically, it is proposed that this relationship is stronger for the portion of the sample holding high level jobs. The reasoning behind this prediction is that those with higher level jobs hold more decision latitude in organizations and therefore are more likely to influence organizational performance. Those in upper level jobs are also sometimes considered to be innovation champions due to their prominent role in organizational innovation (Elenkov & Manev, 2005). Thus, it has been previously discovered that support for innovation and climate for innovation were positive predictors of actual innovation practices among top manager teams (West & Anderson, 1996). Therefore, since top managers have more resources at their disposal and more power to make decisions and changes in the organization, the new

innovations and ideas they come up with have greater opportunities to become innovative practices (Howell & Avolio, 1993; Howell & Higgins, 1990) and thereby increase organizational financial performance.

H1: The positive relationship between innovation climate and organizational financial performance will be stronger for manager level employees than for hourly employees.

Furthermore, service climate also has the potential to impact organizational financial performance (Borucki & Burke, 1999) due to the fact that service organizations make their revenue through providing customer experiences. An organization that emphasizes excellent customer service should be able to better obtain customers and cater to their needs, thus improving financial performance. Since research on service climate and organizational financial performance has been mixed (Borucki & Burke, 1999), this study will further examine the link between these two variables in an attempt to further support this proposed relationship. Therefore, it is predicted that service climate will be positively related to organizational financial performance.

H2: Service climate will be positively related to organizational financial performance.

Guest Satisfaction. Service climate should be the climate type most directly related to customer satisfaction because encouraging excellent customer service through organizational practices would improve service performance, which therefore would also improve customer satisfaction and loyalty. It has also been empirically demonstrating that service climate leads to better service performance by employees as well as better customer ratings (Salanova et al., 2005). The current study also examines this relationship because more research is needed to confirm the direct relationship between service climate and guest satisfaction. Therefore, it is predicted that service climate will be positively related to guest satisfaction.

H3: Service climate will be positively related to guest satisfaction.

Organizational Citizenship Behavior. Fair treatment has been found to be the strongest contributor to perceived organizational support (POS) because fairness of treatment and resource distribution indicates a concern for employees' welfare (Rhoades & Eisenberger, 2002). Therefore, POS can provide valuable insight into how justice climate might function in organizations. Specifically, POS theory indicates that employees develop global beliefs concerning the extent to which the organization values their contributions and cares about their well being (Eisenberger, Huntington, Hutchison, & Sowa, 1986), which is often shown in the form of fair and just treatment. Due to the reciprocity norm which stems from reactions to organizational support and just treatment, employees feel an obligation to help the organization reach its goals if they perceive that they are valued and cared for (Rhoades & Eisenberger, 2002).

Justice climate, and consequently the perceptions of being treated well, therefore leads to numerous positive outcomes. For example, individuals who feel that they are being treated fairly and feel valued are more likely to give back to the organization and its individuals by engaging in more OCBs (Lee & Allen, 2002). In light of this rationale, several studies have indeed discovered that the presence of a justice climate leads to increased citizenship behaviors at the group level (Chen et al., 2005; Liao & Rupp, 2005; Naumann & Bennett, 2000). Therefore, this study extends this finding to the organizational level in an attempt to broaden this research area.

H4: Justice climate will be positively related to organizational citizenship behaviors.

Similarly, organizations that have supportive climates can provide a multitude of positive benefits to employees, such as feelings of lower role overload (Tordera et al., 2008). Having a caring and supportive environment that encourages employees to support one another enables employees to feel less pressured and overworked (Tordera et al., 2008). Therefore, a supportive

climate may increase organizational citizenship behaviors because employees will not feel too overburdened by their work tasks and can devote more time to extra-role behavior. In addition, based on the reciprocity norm (Rhoades & Eisenberger, 2002), if an employee is receiving constant support from others in the organization, there is a greater likelihood that he/she will want to go beyond task responsibilities to help those who are supportive through citizenship behaviors. Since previous evidence has shown that organizational perceived support indeed leads to higher OCBs (Peelle, 2007; Randall, Cropanzano, Bormann, & Birjulin, 1999), this should also be the case for collective perceptions of a supportive environment fostered by coworkers (i.e. support climate). Therefore, this study extends previous findings by examining the perceived support – OCB relationship from a climate perspective.

H5: Support climate will be positively related to organizational citizenship behaviors

Productivity. According to the reciprocity norm (Rhoades & Eisenberger, 2002), employees would be more willing to engage in better performance if they are treated well, supported by, and encouraged to do good work by their supervisors (Rhoades & Eisenberger, 2002). Therefore, leadership climate is expected to positively influence employee performance. However, since immediate supervisors have a stronger influence on daily performance and have much more frequent contact with the employees, it is more likely that the climate created by immediate supervisors will be more effective in increasing productivity levels as compared to the climate created by upper level management.

H6: Immediate supervisor leadership climate will be positively related to organization level productivity.

Turnover. Those who hold perceptions of organizational equity and support have been previously found to be less likely to engage in withdrawal behavior (Peelle, 2007; Randall et al.,

1999). A social exchange perspective suggests that withdrawal and turnover behaviors might be proactive attempts by employees to restore equity (Johns, 2001). Therefore, according to this perspective, if equity is collectively perceived through the presence of a justice climate, employees should be less likely to leave the organization because they will not have a need to restore equity if it is already provided to them. In support of this rationale, it has previously been established that justice climate perceptions were linked to lower turnover intentions (Ansari et al., 2007). However, this finding can be extended to turnover behaviors as well, since turnover intentions have been found to be very strong predictors of actual turnover (Tett & Meyer, 1993). Therefore, it is predicted that justice climate perceptions will be negatively related to actual turnover.

H7: Justice climate will be negatively related to turnover

Furthermore, if employees feel that the organization is invested in keeping their skills up to date and helping them grow, they should be less likely to want to leave the organization. Thus, development climate perceptions have been found to lead to lower intentions to turnover among older workers (Armstrong-Stassen & Schlosser, 2008), but this relationship should also apply to employees of all ages. Since intentions to turnover are the best predictors of actual turnover (Tett & Meyer, 1993), growth climate perceptions should also lead to lower objective turnover. Therefore, the finding regarding growth climate and turnover is extended in this study with a sample of all ages rather than just those over 50 and with a measure of turnover behavior rather than turnover intentions.

H8: Growth climate will be negatively related to turnover behavior

Job Satisfaction and Organizational Commitment. Since procedural justice affirms an individual's perception of his/her status within a group, and thereby strengthens that individual's

identification with and attachment to the group, having a justice climate should directly influence attitudes such as commitment and satisfaction (Simons & Roberson, 2003). Thus, justice climate perceptions have been linked to higher organizational commitment in empirical research (Ansari et al., 2007). This finding can also be extended to job satisfaction since organizational commitment and job satisfaction are highly correlated (Meyer, Stanley, Herscovitch, & Topolystsky, 2002) and those who experience higher commitment due to collectively perceived fair treatment should also experience more satisfaction as well. Therefore, it should be expected that justice climate will be positively related to both job satisfaction and organizational commitment.

H9: Justice climate will be positively related to job satisfaction

H10: Justice climate will be positively related to organizational commitment

The presence of a climate that encourages and supports employee development (i.e. growth climate) can have many potential positive benefits. Specifically, an organization that fosters a growth climate will enable employees to feel that the organization is invested in their skills and helping them grow. Therefore, an atmosphere that shows investment in employees should lead to more positive employee attitudes and greater feelings of attachment to the organization in the form of higher organizational commitment (Maurer & Lippstreu, 2008). In fact, development climate has been linked several times to increased organizational commitment (Armstrong-Stassen & Schlosser, 2008; Meyer & Smith, 2000; Ostroff, 1993). This study attempts to replicate this finding due to the sparse state of growth climate research.

H11: Growth climate will be positively related to organizational commitment.

Growth climate also has the potential to influence job satisfaction since having organizational encouragement to develop and rise to challenges can be a positive experience for

many employees that leads to positive job attitudes (Benson, Finegold, & Mohrman, 2004; Lee & Bruvold, 2003). There is already some evidence that growth climate positively influences job satisfaction (Ostroff, 1993), but since growth climate was not the focus of the Ostroff study and was lumped into a composite climate framework of “cognitive facet climate”, this finding needs to be further examined.

H12. Growth climate will be positively related to job satisfaction.

Furthermore, a supportive climate is likely to produce positive attitudes in employees as well because they are aware that they are not in a competitive environment and can ask for help if needed (Bacharach et al., 2005). Therefore, a collectively perceived environment which encourages the exchange of supportive behavior from members of the organization is likely to promote higher organizational commitment and job satisfaction (Luthans et al., 1992; Randall et al., 1999). While the relationship between support climate and job attitudes has been empirically demonstrated for organizational commitment (Luthans et al., 1992), this finding should also extend to job satisfaction, especially since there is a high intercorrelation between organizational commitment and job satisfaction perceptions (Meyer et al., 2002). Having a supportive climate should make employees feel cared for and know that they can ask for help when needed, which should therefore lead to higher organizational commitment and job satisfaction.

H13: Support climate will be positively related to organizational commitment.

H14: Support climate will be positively related to job satisfaction.

Finally, even though leadership climate is a very rarely studied climate variable that has only started to be given attention in the past few years, the limited leadership climate findings in the existing literature as well as other leadership facets at the individual level can be utilized to inform the following proposed relationships. For instance, Thomas and colleagues (2005)

discovered that supervisory support climate positively predicted organizational commitment. This finding seems logical in that when there is a collectively perceived presence of leadership support (leader values employees and wants them to succeed), employees will feel more committed to both their leader and their organization. Leadership climate will also likely lead to increased job satisfaction, since employee perceptions about leader and organizational support has been linked to positive job attitudes such as both commitment and satisfaction (Rhoades & Eisenberger, 2002). Therefore, in an attempt to add to and extend this emerging literature on leadership climate, this study examines the relation between leadership climate and commitment and satisfaction attitudes.

However, the relationship between the outcome variables and leadership climate may also depend on the level of leadership in question, that is, whether the climate comes from the immediate supervisor or upper level management. Since both immediate supervisor climate and upper level management climate are measured in this study, it is possible to conceptually differentiate the types of specific effects that these two climates may have on outcome variables. For example, since upper level management is more associated with the organization as a whole, it is more likely that the climate perceived when upper level management encourages communication exchange and values the input of employees will lead to increased organizational commitment (Postmes, Tanis, & de Wit, 2001). Furthermore, it has also been found that top leadership acts of employee inclusion and recognition are positively related to employee commitment attitudes (Wayne, Shore, Bommer & Tetrick, 2002). In addition, empirical research has shown that several top leadership behaviors (such as vision sharing, supportiveness, and visibility) have a greater influence on commitment than on satisfaction, with leadership support having the biggest impact on commitment attitudes (Niehoff et al., 1990). While these leadership

behaviors were not examined as a leadership climate construct, the collective perception of similar senior leadership actions such as employee inclusion and recognition should also lead to higher employee commitment. On the other hand, since the immediate supervisor has a greater effect on the day to day tasks of employees and how employees perform their jobs, positive leadership climate perceptions based on immediate supervisor behavior should lead to higher job satisfaction. Therefore, this research extends previous findings regarding leadership and job attitudes by focusing on the leadership climate perceptions and how they differentially relate to individual outcomes.

H15: Upper level leadership climate will be positively related to organizational commitment.

H16: Immediate supervisor leadership climate will be positively related to job satisfaction.

Climate Interactions

Organizational Financial Performance. Having supportive leadership climate from the upper level management has a strong potential to influence overall organizational financial performance, especially when there is also a climate for innovation present. Specifically, when there is a climate for innovation, employees are encouraged to come up with and develop ideas. When upper level management also encourages open communication and listens to employee feedback through effective and supportive leadership climate, good innovative ideas can be heard by higher level executives and put into practice, leading to higher revenue for the organization. In addition, it has been noted that both task and relationship leader support behaviors are an integral part of the innovation-supportive environment (Amabile, Schatzel, Moneta & Kramer, 2004). Further supporting this argument, it has been shown that upper level leadership has a substantial impact on organizational strategies and processes that affect

innovation (Kisfalvi & Pitcher, 2003). Therefore, a combination of both a high innovation climate and a more positive upper level leadership climate should lead to beneficial financial results for the organization as a whole.

H17: The relationship between upper level leadership climate and organizational financial performance will be moderated by innovation climate, such that upper level leadership climate will have a stronger effect on organizational financial performance when innovation climate is stronger than weaker.

Like innovation climate, growth climate also has the potential to positively influence organizational financial performance. While innovation climate promotes the production and implementation of new ideas, growth climate encourages the development of professional skills that can help employees better conceptualize and carry out such innovative ideas. Amabile's (1983) widely recognized work on creativity argues that several components are needed for innovation to occur in organizations: domain relevant skills/expertise, creative thinking skills, and motivation. Innovation climate and growth climate address two of these three components, creative thinking and expertise, respectively, thereby making it more likely that good innovations are implemented. In other words, growth climate encourages the development of professional skills that can help in the innovation process and that consequently should lead to better financial performance for the organization.

Furthermore, previous research has found that perceptions of a high development climate were linked to receiving more opportunities to participate in organizational change and less personal resistance to change (Van Dam et al., 2008). Therefore, those who belong to organizations with high growth/development climates should have more opportunities and ability to engage in the innovation that helps organizations become more profitable. This should be especially true when organizations have both a high growth climate and a high innovation

climate, creating an environment where new ideas are encouraged and so is the development of the skills needed to implement them. If a growth climate and innovation climate exist simultaneously, then an innovation climate would provide an outlet for employees' newly developed skills and abilities. Therefore having these two climates complementing each other would likely lead to increased organizational financial performance.

H18: The relationship between innovation climate and organizational financial performance will be moderated by growth climate, such that innovation climate will have a stronger effect on organizational financial performance when growth climate is stronger than weaker.

Guest Satisfaction. It has previously been argued that service industries need to strike a balance with innovative tendencies in order to improve their ability to anticipate the emergent needs of their clients (Merlo, Bell, Menguc, & Whitwell, 2006). The authors note that “creative ideas provide the seed for all innovation, while customer orientation helps to channel innovative activity toward the provision of superior customer value” (Merlo et al., 2006, p.14). Since service organizations need to go above and beyond to provide superior customer experiences to beat their competitors, having a climate that encourages innovation can enable employees to think of ways to provide such unique and superior experiences.

However, an innovation climate alone may not necessarily influence guest satisfaction since there are other avenues within an organization to implement innovations, such as internal organizational procedures. Since climate has the power to provide employees with avenues of focus and direction (Merlo et al., 2006; Schneider et al., 1994), having a service climate accompanying an innovation climate can help to channel the innovation toward service performance. Therefore, the innovation climate - guest satisfaction relationship should be stronger if there is a strong service climate to accompany it, because a service climate would be

more likely to focus employee innovative efforts towards providing better and more unique customer experiences (Merlo et al., 2006).

H19: The relationship between innovation climate and guest satisfaction will be moderated by service climate, such that innovation climate will have a stronger effect on guest satisfaction when service climate is stronger than weaker.

Similarly, just as service climate is proposed to provide the outlet for employee innovation toward customer service, service climate can have similar benefits for growth climate. In other words, when employees are encouraged to develop their skills by the organization and a strong service climate exists in the organization as well, employees would be more likely to develop or utilize their enhanced skills for the purposes of enhanced service performance, which consequently would lead to higher guest satisfaction ratings. Thus, while service climate alone is proposed to have a positive influence on guest satisfaction, growth climate has the potential to strengthen this influence by encouraging employees to build the skills they need for customer interactions. It has previously been found that growth climate (part of a training climate composite) was positively related to service climate development (Tracey & Tews, 2005). Therefore, there is reason to believe that these two types of climate are empirically related, especially in a service industry. The current study extends the finding regarding the growth climate-service climate relationship by examining how this interaction influences customer satisfaction.

H20: The relationship between service climate and guest satisfaction will be moderated by growth climate, such that service climate will have a stronger effect on guest satisfaction when growth climate is stronger than weaker.

Productivity. Growth climate should also encourage employees to expand their skills in such a way as to increase their productivity and perform their jobs more efficiently. Therefore, if

a growth climate effectively influences employee skill development, it should in turn positively affect their efficiency and productivity, as is generally the case with employee development strategies (Ellinger, Elmadag, & Ellinger, 2007). It has also been argued in the literature that employee development efforts should result in employees working harder due to their desire to give back to the organization that values their development (Lee & Bruvold, 2003).

However, there is also empirical evidence that perceptions of employee development alone are not enough to directly impact performance and that a motivation component is needed in order for development perceptions to turn into performance results (Kuvaas & Dysvik, 2009b). While Kuvaas and Dysvik (2009b) examined internal motivation as the key component to the development perception – performance relationship, extrinsic motivation may also serve as a catalyst for better performance (Tyagi, 1985). Since it has been argued that effective leaders often strive to create motivating environments through behaviors such as giving praise, rewards, and recognition (Isaac, Zerbe, & Pitt, 2001), having a positive leadership climate in an organization where it is collectively felt that leadership is supportive and gives recognition for good performance can easily serve the purpose of motivating employees to perform better. While growth climate perceptions can enable employees to be more productive because they are developing new and useful skills for their jobs, leadership climate can further encourage employees to apply these skills to produce more efficient work performance. Therefore, this study examines how motivation in the form of positive leadership climate moderates the relationship between growth climate and productivity.

H21: The relationship between growth climate and organizational level productivity will be moderated by leadership climate, such that growth climate will have a stronger effect on organizational level productivity when leadership climate is stronger than weaker.

Cultural Moderators

The following hypotheses focus on the interaction between organizational climate and national culture. In particular, these predictions address the potential incongruences that can occur when certain practices associated with organizational climates either compliment or conflict with the values of the overarching national culture of the local company. Since it has been argued that organization climate/culture can be viewed as a subculture within the broader framework of national culture (Hatch, 2006), and national culture values still have a strong influence in the work place, organizational climate practices can sometimes compete with these values. Therefore, the following section focuses on how power distance, individualism/collectivism, and uncertainty avoidance influence organizational climate practices and their outcomes.

Guest Satisfaction. Innovation climate, like most climates, has been previously found to vary across national cultures. For instance, it has been noted that members in diverse groups have differential access to power and that high power distance silences the potential discussions and disagreements that would foster more creativity and innovation (Van der Vegt et al., 2005). Those with less power are therefore less likely to want to volunteer innovative ideas in front of those with more power. Further supporting this notion, it has been demonstrated that those in highly power distant cultures were generally less willing to voice concerns to supervisors to avoid conflict with authority (Huang et al., 2005). In addition, it has been empirically shown that in a high power distance cultures, providing greater autonomy to employees actually led to less innovation (Jung et al., 2003). The authors argue that since high power distance typically brings with it strict directions from leadership, having autonomy in such an environment can be confusing to employees. Overall, these empirical findings indicate that in cultures of high power

distance, those with less power respond less positively to autonomy and are more hesitant to voice their opinions. Thus, it appears that the interaction between a climate for innovation and a national culture of high power distance may be incompatible.

In order to examine how this organizational climate – national culture interaction influences outcomes of interest, this study will determine how the relationship between innovation climate and guest satisfaction depends upon power distance. If a high innovation climate encourages employees to provide unique guest experiences based on their own ideas but a power distant culture does not allow them to feel safe enough to innovate, the innovation climate would have little effect on the guest satisfaction outcome. This would result in an incongruent combination of contextual characteristics (Yang et al., 2007) in which climate for innovation would encourage thinking outside the box for service performance while high power distance would discourage implementation of new ideas. Furthermore, the effects of high power distance would be more relevant for those with lower level jobs because power distance is defined from below (Hofstede, 2001) and is therefore felt more strongly at the lower job levels.

H22: For those with low level jobs, the relationship between innovation climate and guest satisfaction will be moderated by power distance such that in cultures of high power distance, this relationship will be less positive.

Another cultural dimension that would likely have an effect on the relationship between innovation climate and guest satisfaction is uncertainty avoidance. Similar to power distance being a deterrent for employees looking to take advantage of a high innovation climate, uncertainty avoidance provides a similar contextual incongruence. Specifically, employees who are part of an organization where innovation climate is high, but part of a national culture where uncertainty avoidance is also high may become torn about how to process these competing ideologies. Therefore, an innovation organizational climate created in a national culture where

individuals do not tend to pursue risks or the unknown (which is likely the case in uncertainty avoidant cultures) would not be as effective if the employees are unsure about what consequences their innovative customer service would bring and therefore would be less likely to try to pursue innovative service performance to increase guest satisfaction. However, cultures in which uncertainty avoidance is low are accustomed to and comfortable with dealing with the unknown (Hofstede, 2001) and should therefore find it easier to take advantage of an innovative climate and the uncertainty that it may bring regarding customer reactions and subsequent satisfaction.

H23: The relationship between innovation climate and guest satisfaction will be moderated by uncertainty avoidance such that in cultures of low uncertainty avoidance, this relationship will be more positive.

Job Satisfaction, Organizational Commitment, and Organizational Citizenship Behavior.

There has been some empirical evidence to suggest that justice perceptions differ across cultures, particularly when it comes to power distance (e.g. Kim & Leung, 2007; Yang et al., 2007). The main reason for these differences is that those in high power distance cultures by definition already accept some type of inequality in various life settings, including in their organizations (Hofstede, 2001). Therefore, being accustomed to some form of inequality makes individuals less sensitive to an organizational climate that is also unfair (Kim & Leung, 2007). On the other hand, those from low power distance cultures tend to expect more even distributions of power (Hofstede, 2001), so an organization that does not value justice should be more difficult to accept and consequently, to be satisfied with. Furthermore, those in low power distance cultures and in organizations with low justice climate should also be less likely to be committed to the organization due to their stronger perceptions of poor and unfair treatment. Finally, low power distance employees who are more sensitive to unjust climates and are less satisfied with the

environment in the organization (Kim & Leung, 2007), would be less likely to want to help the organization and its members by performing extrarole behavior in the form of OCBs.

Supporting these notions, empirical evidence has demonstrated that in cultures with low power distance, justice climate led to higher commitment and OCBs (Yang et al., 2007), and higher job satisfaction and performance (Lam et al., 2002). Furthermore, it has been shown that those with low power distance backgrounds had stronger negative reactions to organizational injustice and that these reactions negatively affected job satisfaction (Kim & Leung, 2007). However, while these studies have addressed valuable questions regarding the moderating role of power distance in the justice climate-outcome relationships, they used data from very few cultures, either comparing only a few countries to each other (Kim & Leung, 2007) or measuring power distance at the individual level within one country (Yang et al., 2007). In order to extend these findings to many more nations with a much broader range of power distance levels, this study examines how power distance moderates the relationships between justice climate and job satisfaction, organizational commitment, and OCBs.

H24: The relationship between justice climate and job satisfaction will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.

H25: The relationship between justice climate and organizational commitment will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.

H26: The relationship between justice climate and OCBs will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.

Furthermore, reactions to leadership has also been found to vary across cultures (e.g. Dorfman, Howell, Hibino, Lee, Tate, Bautista, 1997; Elenkov & Manev, 2005; Euwema et al., 2007). For instance, power distance can strongly affect the way that subordinates and leaders interact because of the hierarchical nature of highly power distant cultures as well as an accepted

level of inequality (Hofstede, 2001). Therefore, due to the clearly defined boundaries of power in highly power distant cultures, employees may not be able to take full advantage of the benefits of a leadership climate that is open and supportive. In other words, if there is a supportive leadership climate and those in highly power distant cultures do not feel comfortable utilizing the support because they are not accustomed to having such open and supportive relationships with leadership, the supportive leadership climate may be less effective and therefore not yield the positive benefits of commitment and satisfaction as it is predicted to in low power distance cultures.

H27: The positive relationship between leadership climate and job satisfaction will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.

H28: The positive relationship between leadership climate and organizational commitment will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.

Previous research has suggested that innovation climate can lead to individual level attitudinal outcomes. For example, Gonzales-Roma and colleagues (2002) found that when innovation climate was strong, it led to increased satisfaction and commitment. However, this may not be the case for people of all cultures. For instance, having the potential cognitive dissonance associated with both a strong innovation climate and a high uncertainty avoidant culture may decrease one's job satisfaction. As previously noted, being in an organization where one is encouraged to take risks and exchange new ideas may not be a comfortable environment for those who are part of a culture where uncertain situations are generally met with uneasiness and therefore, may cause their job satisfaction attitudes to suffer. However, for those in cultures of low uncertainty avoidance, having an innovation climate can be a very positive factor. Those who are part of cultures of low uncertainty avoidance are much more comfortable with the

unknown (Hofstede, 2001) and therefore having a climate that encourages exploring the unknown would likely be more welcomed and utilized.

H29: The relationship between innovation climate and job satisfaction will be moderated by uncertainty avoidance, such that this relationship will be positive in low uncertainty avoidance cultures and negative in high uncertainty avoidance cultures.

Growth climate should also have a positive influence on job satisfaction, especially in individualistic cultures. If those high in individualism value developing their personal skills so that they can stand out and get ahead (Hofstede, 2001), then it can be reasoned that getting such opportunities and encouragement from their organization's policies and practices (via the growth climate) would make individualistic employees more satisfied with their jobs. On the other hand, since those in collectivist cultures are less focused on developing themselves personally to get ahead (but rather to perform well for their organization), growth climate should not have as much of an influence on job satisfaction.

H30: The relationship between growth climate and job satisfaction will be moderated by individualism/collectivism, such that in cultures of high individualism, this relationship will be more positive.

Chapter 2

Method

Company Context

The data in this study were drawn from a 2010 annual survey administered in a multinational corporation which examined employee attitudes towards the organization and their jobs. The corporation is part of the hotel industry and currently employs over 150,000 individuals. Data were collected from the company's 1008 hotel properties located in 43 countries. The full list of countries represented in the sample as well as the languages into which the survey instruments were translated are presented in Appendix A and Appendix B, respectively. All participants completed the survey instruments as part of an annual data collection initiative by the company, which was started in 2006.

Participants

The following sample characteristics represent the participants who completed the 2010 questionnaire. Study participants consisted of 151,656 employees. The age distribution of the participants was as follows: 5% of participants were under 25, 11% were between ages 25 and 34, 10% were between 35 and 44, 10% were between 45 and 54, 5% were between 55 and 64, and 1% were above 65 years of age. The remainder of participants (58%) did not identify their age. In addition, 27% of the participants were female, 23% were male, and the remaining 50% did not specify a gender. Furthermore, 89% of the sample held non-managerial positions, while 11% held manager level positions.

Procedure

This study utilized data obtained from a multinational corporation as part of their annual data collection procedures. The scales in the questionnaire have been used in the annual survey for four years and were created by the corporation to collect data based on their internal needs. One scale was added to the company-wide questionnaire for the purposes of this study (innovation climate).

Questionnaires were administered to participants in an electronic format. The hotels' directors of human resources set up rooms at each hotel location containing computer terminals for participants to use. Each participant was given a random access code when they arrived in order to access the questionnaire. Participants were then guided through the login and survey completion process by the director of human resources. No personal identifying information was collected so that participants could be guaranteed anonymity. Furthermore, human resource representatives monitored the response rate as surveys were being completed and mobilized employees when needed in order to ensure an adequate response rate. The overall response rate was approximately 85%.

Since the questionnaire was administered in numerous countries, items were translated to the native languages of the participants. The organization works with a third party translation company in order to create translated forms of the survey. Once the third party company finishes translating the items to all desired languages, organizational representatives from each hotel location review and edit the translations and then send them back to the third party company for additional reviews. Both parties make edits to the translations until a final agreement is reached.

Measures

Due to the proprietary nature of the measures that were utilized in this study, the exact wording of sample items is not permissible to reveal in this document. Therefore, example items in this section are stated broadly in terms of their content without revealing the exact nature of the items.

Climate Types

Innovation Climate. Innovation climate was measured with a five item scale adapted from the Team Climate Inventory (TCI; Anderson & West, 1998). This is the only new scale to be added to the annual survey for the wave of data collection that was utilized in this study. The five items were taken from the eight item subscale of *support for innovation* in the TCI. The wording of the items was adapted in order to better cater to the sample in this study, such as making sure that all items are at or below the eighth grade reading level. Participants indicated the extent to which they personally agree or disagree with the series of statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree). An example item relates to employees taking time to develop new ideas.

Growth Climate. Growth climate was measured with six items adapted from an 11-item scale by Bezuijen (2005) and from a 15-item training climate scale by Tracey and Tews (2005). Participants were asked to indicate their level of personal agreement with the six statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree). An example item relates to having career developmental opportunities.

Leadership Climate. Leadership climate was measured with nine items adapted from two scales on effective leader behaviors (Hui et al., 2007; Morgeson, Derue, & Karam, 2010). This

measure included a subscale relating to senior level leadership climate and a subscale relating to immediate supervisor climate. The senior level management subscale contained four items and the immediate supervisor subscale contained five items. Participants asked to indicate the extent to which they personally agree or disagree with the series of statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree). An example item in the senior management subscale relates to listening to employee suggestions. An example item in the immediate supervisor subscale relates to giving employees recognition for good performance.

Support Climate. Support climate was measured with a three item scale. Items were based on a four item peer support scale developed by Haynes, Wall, Bolden, Stride and Rick (1999). Participants indicated the extent to which they personally agree or disagree with the series of statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree). An example item relates to colleagues being supportive of employee feelings.

Service Climate. Service climate was measured with two items based on a seven item service climate measure developed by De Jong and colleagues (2005). An example item relates to striving to provide excellent guest experiences. Participants were asked to indicate their level of personal agreement with the two statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree).

Justice Climate. The five item justice climate measure was adapted from Colquitt's (2001) distributive justice four item subscale and from a six item Niehoff and Moorman (1993) justice climate scale. Participants indicated the extent to which they personally agree or disagree with the series of statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree). An example item relates to the supervisor's fair treatment of employees.

Self-Rated Outcomes

Job satisfaction. Job satisfaction was measured with two items adapted from the Job Satisfaction Survey by Spector (1985). An example item relates to enjoying one's work. Participants indicated the extent to which they personally agree or disagree with the series of statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree).

Organizational Commitment. The three item organizational commitment measure that will be used in this study was adapted from a 15 item organizational commitment measure (OCQ) by Mowday, Steers and Porter (1979). Participants were asked to indicate their level of personal agreement with the three statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree). An example item relates to being proud to work for the organization.

Organizational Citizenship Behavior. OCBs was measured with three items adapted from the 16-item OCB loyalty subscale of a scale created by Van Dyne, Graham, and Dienesch (1994). Participants were asked to indicate the extent to which they personally agree or disagree with the series of statements on a scale of 1 to 5 (1=strongly disagree to 5=strongly agree). An example item relates to employees contributing more than is expected in their job descriptions.

Guest Rated Outcomes

Guest satisfaction. Guest satisfaction was measured using a three item guest feedback survey, with items reflecting satisfaction with staff service, overall satisfaction, and problems experienced during the stay. Participants indicated the extent to which they were satisfied with the staff service and their overall experience on a scale from 1 to 6 (1=highly unsatisfied to 6=highly satisfied). The problems experienced item asked whether guests experienced problems during their stay, to which they were asked to respond either "yes" or "no". A blank text box was included for the guests to write about what types of problems they had experienced, if any. The

guest satisfaction measure used in this study was the ratio of the number of guests who were highly satisfied with the service divided by the total number of guest responses. Therefore, the guest satisfaction index measured the proportion of satisfied guests to total guests. Data for Quarter 1 and Quarter 2 were available and were both used in the study.

Organizational Outcomes

Organization financial performance. Financial performance was measured by indices provided by the organization of total revenue of each hotel, as well as total labor costs for each hotel. The labor cost indices were divided by the total revenue for each hotel to create a measure similar to profit. However, since having a smaller proportion of labor costs to total revenue was indicative of better financial performance (making result interpretation more difficult), the indices were reverse coded so that higher ratios represented better financial performance. These types of financial performance indices have been previously used successfully in the literature (e.g. Johnston, Reed, Lawrence, & Onken, 2007; Koene et al., 2002). The data from this measure was only available for the U.S. sample.

Productivity. Productivity was measured by an index provided by the organization of labor hours worked per occupied hotel room. Since using a smaller number to represent higher productivity makes the interpretation of results confusing, the productivity index was reverse coded, thereby letting higher scores represent higher productivity. This index was not linked to individual survey responses in order to protect participant anonymity and therefore, was averaged across employees in each hotel yielding a productivity rating for each hotel location. The data from this measure was only available for the U.S. sample.

Turnover. Turnover was measured with an index of the number of employees that left the organization divided by the total number of employees in a period of one year. This method of measuring objective turnover rates has been successfully utilized in previous studies (e.g. Maertz, Griffeth, Campbell, & Allen, 2007; Riordan, Griffith, & Weatherly, 2003). Turnover was therefore represented as a ratio. The data from this measure was only available for the U.S. sample. However, data was available for both Quarter 1 and 2 as well as for both hourly employees and managers.

Cultural Dimensions. Hofstede's (2001) indices (ranging from 1 to 100) were used as the operationalization of power distance, uncertainty avoidance and individualism/collectivism. Each of the 54 countries represented in the sample was assigned a score for each of the three cultural dimensions. For example, the United States has indices of 91 out of 100 for individualism, 40 for power distance, and 46 for uncertainty avoidance. Compared with the world averages of 43 for individualism, 55 for power distance, and 64 for uncertainty avoidance, the U.S. is much more individualistic and has lower power distance and uncertainty avoidance than the average nation. On the other hand, China has an individualism index of 20, a power distance index of 80, and an uncertainty avoidance index of 40. These scores indicate that China is very low on individualism, very high on power distance, and lower on uncertainty avoidance compared to other nations (Hofstede, 2001). This method of assigning cultural dimension indices to countries has been successfully used in prior cross-cultural research (e.g. Euwema et al., 2007; Huang et al., 2005; Huang & Van de Vliert, 2006; Van der Vegt et al., 2005).

Chapter 3

Results

Preliminary Analyses

Factor Analyses for Climate

In order to determine the climate factor structure in the individual level sample, a series of explanatory and confirmatory factor analyses were performed. The sample was randomly split in half so that the exploratory factor analysis (EFA) results could be cross-validated with confirmatory factor analyses (CFA).

Exploratory Factor Analysis (EFA). Since the climate measures were new and not previously used in other studies in the form utilized in the current study, an EFA with a principle axis extraction method and promax rotation was conducted with all six climate variables simultaneously included (a total of 30 individual items). It was expected that the items would load on seven separate factors (leadership climate was expected to split into immediate supervisor climate and senior leadership climate). The scree plot revealed a 1-factor solution, accounting for 58% of the total variance. The intercorrelations between climate variables at the individual level ranged from $r = .452$ to $r = .773$, indicating that while significantly correlated, the climate types were still distinct. Furthermore, as will be discussed in the next section, a 1-factor climate solution demonstrated worse CFA fit than models with six or seven climate dimensions. These contradictory empirical findings, taken together with a theoretical basis for distinguishing between climate types, led to the decision to continue to explore a multidimensional factor solution for climate.

An EFA was performed with seven specified factors and simple structure was examined (Fabrigar, Wegener, MacCallum, & Strahan, 1999). In other words, high item loadings for target factors and low cross-loadings with non-target factors were desirable. The seven factor solution did not demonstrate adequate simple structure, and several items did not load on their expected factors. Next, a six factor solution was specified. This factor solution demonstrated adequate simple structure as predicted based on item content (see Table 1). However, the service climate items and two of the five innovation climate items loaded onto the same factor. While this was not expected, it makes logical sense that these two climate factors would be highly related since in the service industry, the way in which employees usually innovate is related to providing excellent customer service. Therefore, this factor was renamed as “innovative service climate” and includes two items each from the service and innovation climate scales. In addition to collapsing these two climate types, several items failed to load on the expected factors (or onto any factor at all). These items were subsequently dropped from further analysis. They include one support climate item, two growth climate items, three justice climate items, and three innovation climate items. Therefore, the resulting pool of items consisted of 21 climate items comprising six distinct climate types. Although the exact survey item content cannot be presented here due to the proprietary nature of the data, Table 1 below shows the factor loadings for each climate item named after its original factor conceptualization.

Table 1: Pattern Matrix for Exploratory Factor Analysis of Climate Dimensions

	Component					
	1	2	3	4	5	6
Support 1	.019	-.109	-.015	.069	-.043	.955
Support 2	.027	-.091	.275	-.075	.006	.776
Support 3	-.065	.465	.328	-.147	.046	.270

Growth 1	.116	.217	-.166	.382	-.076	.382
Growth 2	-.038	.053	-.130	.800	.118	.105
Growth 3	.087	.284	.099	.339	.085	.074
Growth 4	-.001	.114	.111	.681	-.005	-.017
Growth 5	.023	-.158	.433	.674	-.052	-.082
Growth 6	-.032	.211	.028	.720	.027	-.049
Senior Leadership 1	.122	.807	-.216	.019	-.013	.139
Senior Leadership 2	.100	.712	-.054	.075	-.011	.089
Senior Leadership 3	-.103	1.001	-.013	-.026	.010	-.161
Senior Leadership 4	-.004	.897	.051	.031	-.008	-.071
Immediate Supervisor 1	.935	-.033	-.075	.004	-.017	.040
Immediate Supervisor 2	.789	.005	.092	-.027	-.023	.059
Immediate Supervisor 3	.879	-.017	.040	.047	.018	-.053
Immediate Supervisor 4	.912	-.003	.003	-.042	.047	-.025
Immediate Supervisor 5	.902	.035	.014	.026	.007	-.051
Justice 1	.014	.015	-.032	.056	.909	.007
Justice 2	.022	-.040	.017	.027	.963	-.059
Justice 3	.952	-.033	.001	-.087	.019	.032
Justice 4	.188	.204	.191	.011	.154	.208
Justice 5	.466	.510	-.007	.050	-.060	-.064
Service 1	.007	-.082	.795	.082	-.004	.056
Service 2	.118	-.247	.748	.261	-.074	-.015
Innovation 1	-.068	.211	.765	-.105	.048	.048
Innovation 2	-.032	.253	.754	-.100	.020	.007
Innovation 3	.206	.572	.236	.032	-.039	-.056
Innovation 4	.029	.530	.193	.255	-.013	-.087
Innovation 5	.051	.719	.136	.077	-.023	-.050

Factor 1 = Immediate Supervisor Climate; Factor 2 = Senior Leadership Climate;
 Factor 3 = Innovative Service Climate; Factor 4 = Growth Climate; Factor 5 = Justice
 Climate; Factor 6= Support Climate

Confirmatory Factor Analysis (CFA). A CFA was conducted with the retained 21 climate items. The purpose of the CFA was to cross-validate the factor structure results obtained in the EFA. CFAs were performed with Lisrel 8.51 (Jöreskog & Sörbom, 1996). Model fit for the six factor structure was evaluated with several fit indices proposed in the literature. Specifically, χ^2 , Root-Mean-Square Error of Approximation (RMSEA; Steiger, 1990), Comparative Fit Index (CFI; Bentler & Bonnet, 1980), Non-Normed Fit Index (NNFI; Bentler & Bonnet, 1980), and standardized root-mean square residual (SRMR; Hu & Bentler, 1999) were utilized. According to Hu and Bentler (1999), the established cutoff for good or acceptable model fit for RMSEA is .08 or less, .95 or higher for CFI, .90 or higher for NNFI, and .08 or less for SRMR. For large sample sizes, the χ^2 should be used as a statistical basis for comparing the model fit (Bollen, 1989) between various models rather than as an indicator of whether or not the model fits well in general, since χ^2 tends to be inflated for large sample sizes.

The CFA results showed that the six factor model as indicated by the EFA results (Model 1; see Table 2) fits well based on all fit indices ($\chi^2(174)= 15978.92$, $p < .001$; RMSEA = .054; CFI = .97; NNFI = .97; SRMR = .027). As an additional test of the appropriateness of the six factor climate model, several other CFA models were tested for comparison purposes, including a seven factor model as originally expected (with innovation, service, immediate supervisor, and senior leader climate each representing separate factors, in addition to support, growth and justice factors; Model 2) and a one-factor CFA model (Model 3). The results of these analyses demonstrated worse model fit when compared to the six factor model. The seven factor model (Model 2; see Table 2) fit adequately but worse than the six factor model ($\chi^2(231)= 77005.38$, $p < .001$; RMSEA = .069; CFI = .95; NNFI = .94; SRMR = .043). The one factor solution (Model 3; see Table 2) showed much poorer fit ($\chi^2(189) = 308580.95$, $p < .001$; RMSEA = .15; CFI

= .81; NNFI = .79; SRMR = .062) and the RMSEA, CFI, and NNFI failed to meet the necessary cutoff for good fit. Thus, the CFA results support the retention of the six factor climate structure (Model 1) and this 21 item solution was utilized for all subsequent analyses.

Table 2: CFA model comparisons

Model	χ^2	RMSEA	NNFI	CFI	SRMR	Decision
<i>Climate Variables</i>						
Model 1	$\chi^2(174) = 15978.92$	0.054	0.97	0.97	0.027	Best fit - Chosen
Model 2	$\chi^2(231) = 77005.38$	0.069	0.94	0.95	0.043	Not chosen
Model 3	$\chi^2(189) = 308580.95$	0.15	0.79	0.81	0.062	Not chosen
<i>Individual Outcomes</i>						
Model 1	$\chi^2(20) = 15299.66$	0.10	0.94	0.96	0.034	Not chosen
Model 2	$\chi^2(17) = 13085.32$	0.10	0.94	0.96	0.032	Not chosen
Model 3	$\chi^2(0) = 0$		Perfect fit.			Best fit - Chosen

Factor Analyses for Individual Outcome Items

EFA. In addition to the EFA for climate items, an EFA was also conducted for the individual outcome items. The expected factor structure was out of eight items, three items representing an OCB factor, three items representing an organizational commitment factor, and two items representing a job satisfaction factor. The scree plot revealed a 1-factor solution, accounting for 63% of the total variance. Furthermore, an EFA specifying the predicted 3-factor solution with promax rotation did not demonstrate the expected factor loadings. While all three items of the OCB scale loaded onto the correct factor, the commitment and satisfaction items did not demonstrate the expected factor loading patterns (see Table 3 below). Furthermore, a two-factor solution was also tested, but results indicated that all but one of the eight items loaded onto the first factor. Therefore, the EFA suggested a one factor solution with only OCB items

behaving as expected. Therefore, the satisfaction and commitment scales were dropped because of failure to load onto the appropriate factors.

Table 3: Pattern Matrix for Exploratory Factor Analysis of Individual Outcomes

	Component		
	1	2	3
OCB1	.848	.120	-.154
OCB2	.505	.242	.191
OCB3	.928	-.063	.007
Commitment1	-.092	1.037	-.031
Commitment2	.443	.413	.092
Commitment3	1.011	-.139	-.047
Satisfaction1	-.109	-.010	1.042
Satisfaction2	.545	-.059	.430

Factor 1 = OCB; Factor 2 = Commitment; Factor 3 = Job Satisfaction

CFA. A CFA was also conducted for the individual outcome items, and several different models were tested. Specifically, a one-factor solution with all items was tested (Model 1), along with a three-factor solution as originally proposed (Model 2), and the one factor OCB only solution as indicated by the EFA results (Model 3). The one-factor solution as indicated by the scree plot in the EFA (Model 1; see Table 2) showed poor to adequate fit depending on the fit index ($\chi^2(20) = 15299.66, p < .001$; RMSEA = .10; CFI = .96; NNFI = .94; SRMR = .034). The three factor solution that was first proposed (Model 2; see Table 2) showed very similar results ($\chi^2(17) = 13085.32, p < .001$; RMSEA = .10; CFI = .96; NNFI = .94; SRMR = .032). However, Model 3 (see Table 2), which consisted of only the OCB scale as shown in the EFA solution

showed a saturated model with perfect fit ($\chi^2(0) = 0$). Thus, since Model 3 was the superior solution, only the three item OCB scale was subsequently used for hypothesis testing.

Factorial Invariance Analysis

EFA. Due to the fact that the sample consists of numerous countries (N=43), it is first necessary to ensure that the climate factor structure consistently holds across countries. If some countries show different factor structures, cross-country comparisons can be problematic (Ryan, Chan, Ployhart, & Slade, 1999; Steenkamp & Baumgartner, 1998; Van de Vijver & Watkins, 2006; Van de Vijver & Poortinga, 2002). It is therefore recommended that factorial invariance be demonstrated for each of the countries in the sample. In order to demonstrate invariance, Van de Vijver and Leung (1997) recommend conducting a target rotation for each country in the sample using a target country. Target rotation refers to the rotating of factor loading matrices with regard to each other. Since regular factor rotation is arbitrary (i.e. not rotated towards any particular factor solution), it can underestimate the agreement between the factor structures of the countries in question. Following the Van de Vijver and Leung recommendation, the United States sample (which demonstrated a factor structure much like the full sample EFA) was assigned as the target country toward which all other countries in the sample were rotated. Furthermore, the U.S. sample was chosen as a target since several of the hypotheses utilize only U.S. sample data and it would therefore serve as a good basis for comparison. To statistically compare the target rotated solutions with those of the U.S. factor structure, a Tucker's Phi coefficient of agreement was utilized (Van de Vijver & Leung, 1997). Tucker's Phi values over .85 are seen as acceptable to show factorial agreement (Van de Vijver & Leung, 1997). Of the 42 countries in the sample, 17 countries failed to adequately demonstrate factorial agreement with the U.S. factor structure.

That is, two or more climate factors failed to reach the .85 Tucker's Phi cutoff. Results for each country are shown on the left side in Appendix D.

CFA. To cross-validate the factorial invariance results obtained in the EFA target rotation step, a series of CFAs was performed, one for each country in the sample. The U.S. sample CFA model (6 climate factors identical to the full sample EFA structure) demonstrated good model fit ($\chi^2(174) = 22240.59$, $p < .001$; RMSEA = .057; CFI = .97; NNFI = .96; SRMR = .029). A CFA for the same six-factor structure was performed for each of the other 42 countries in the sample to test for model fit. Results are presented on the right side in Appendix D. Results indicated that out of the 42 countries in the sample, 16 countries failed to show adequate factorial agreement with the six-factor climate structure (i.e. poor fit for the six-factor model).

As shown in Appendix D, both the EFA and CFA methods revealed sufficient overlap between the countries that did not demonstrate factorial agreement with the U.S. factor structure. Thirteen countries were consequently dropped from the sample for both low EFA agreement and inadequate CFA model fit results. Countries that demonstrated factorial invariance in both the EFA and CFA analysis were retained (23 countries), as well as those that demonstrated invariance with only one of the two methods (6 countries). The resulting country sample consisted of 30 countries (29 retained countries and the U.S.).

Data Aggregation

ICC. Since testing organizational climate hypotheses requires that individuals within each hotel show agreement regarding the climate, it is necessary to demonstrate justification for aggregation of individual climate scores. In order to justify aggregation for the climate variables to the hotel level, both intra-class correlations (ICC1) and rwg were calculated for each of the

six climate scales (LeBreton & Senter, 2008). In order to calculate ICC1 values for each scale, a one-way ANOVA was conducted with hotel as the independent variable. Results for all six one-way ANOVAs were significant ($p < .001$), which indicates that there is significant variability in each climate type between hotels. Next, ICC1 values, which represent “the variance in an individual’s response that can be explained by group membership” (Castro, 2002, p. 72) were calculated for each climate type. The ICC1 values ranged from .08 to .12, with a median of .11. According to James (1982), ICC1 values in the organizational literature have a median value of .12, so the values observed in this sample are typical of those found in the literature. Furthermore, ICC1 values were also calculated separately for managerial and hourly employees since several of the hypotheses utilize these subsamples. Results for the one-way ANOVAs for both subsamples were highly significant ($p < .001$). The ICC1 values ranged from .08 to .13 (median = .11) for the hourly employee sample and from .06 to .14 (median = .10) for the manager sample, both of which showed ICCs values similar to those found in the organizational literature (James, 1982).

Rwg. In addition, *rwgs* were used to calculate within-hotel agreement with values of .70 or above used as an indicator of good agreement (Castro, 2002). Across all hotels, the average *rwg* value for support climate was .73 (65% of values over .70), .88 for growth climate (96% of values over .70), .80 for senior leadership climate (86% of values over .70), .89 for immediate supervisor climate (91% of values over .70), .49 for justice climate (23% of values over .70) and .92 for innovative service climate (98% of values over .70). For five of the six climate types, both the ICC and *rwg* values indicated sufficient justification for mean aggregation. Justice climate failed to meet the *rwg* cutoff for aggregation but due to its ICC1 significance and value

(.12), justice climate individual scores were also aggregated by the mean to the hotel level. However, justice climate hypothesis results should still be interpreted with caution.

Rwg values were also calculated separately for the hourly employee and manager subsamples. Results indicated that for hourly employees, the average rwg value for support climate was .77 (62% of values over .70), .89 for growth climate (95% of values over .70), .84 for senior leadership climate (84% of values over .70), .88 for immediate supervisor climate (88% of values over .70), .57 for justice climate (25% of values over .70) and .94 for innovative service climate (97% of values over .70). For the managerial sample, the average rwg value for support climate was .77 (93% of values over .70), .85 for growth climate (97% of values over .70), .93 for senior leadership climate (95% of values over .70), .97 for immediate supervisor climate (97% of values over .70), .61 for justice climate (54% of values over .70) and .93 for innovative service climate (97% of values over .70). For both subsamples, both the ICC and rwg values indicated sufficient justification for mean aggregation, with the exception of the justice climate rwg results. However, due to the adequate ICC1 values for justice climate, all six climate variables were aggregated by the mean for both subsamples.

Alphas. A Cronbach's alpha internal reliability analysis was conducted for each of the six climate variable measures and for the OCB outcome. All of the scales showed adequate internal consistency and all coefficient α 's were above .70 (Support $\alpha = .795$; growth $\alpha = .866$; immediate supervisor climate $\alpha = .939$; senior leadership climate $\alpha = .897$; justice $\alpha = .889$; innovative service $\alpha = .867$). In addition, the OCB scale showed adequate internal consistency ($\alpha = .873$). Removing items from the scales did not positively impact the alphas and therefore no items were removed.

Correlations. The correlation matrices for individual level data (both US only sample and 30 country sample) are presented in Tables 4 and 5, respectively. In addition, correlation matrices for hotel level data (both US only sample and 30 country sample) are presented in Table 6 and 7, respectively. It should be noted that age and gender data were only available for the U.S. sample. Overall, the correlation coefficients indicate that the six climate variables are all significantly correlated with each other in the US only hotel level sample ($r = .559, p < .01$, to $r = .846, p < .01$) as well as in the sample containing all 30 retained countries ($r = .614, p < .01$, to $r = .867, p < .01$). The correlation results also show that property size was significantly and negatively related to several outcome variables in the U.S. sample (e.g. Financial performance: $r = -.302, p < .001$; Productivity: $r = -.692, p < .001$; Q1 guest satisfaction: $r = -.162, p < .001$) and was thus included in subsequent regression analyses as a control variable. Several of the outcome variables were also significantly correlated with each other (e.g. Financial performance and Productivity: $r = .576, p < .001$; Financial performance and Q1 guest satisfaction: $r = .160, p < .001$). Correlation results from the hotel level U.S. sample (Table 6) further showed that support, senior leadership, immediate supervisor, and innovative service climates were all positively related to guest satisfaction, while justice climate was negatively related to financial performance, productivity and turnover. On the other hand, correlation results from the 30 country sample at the hotel level (Table 7) showed that only senior leadership and innovative service climate were significantly positively correlated with Quarter 2 guest satisfaction (but not Quarter 1). Since financial performance, productivity and turnover data were not available for the 30 country sample, the correlation results for these outcomes could not be compared with the U.S. only sample.

Table 4: Individual Level Correlations (US sample only)

Variable	Means	SD	1	2	3	4	5	6	7	8	9	10
1. Age	3.08	1.30	1									
2. Gender	1.47	0.50	.014*	1								
3. Job Level	1.11	0.31	-.014*	.058**	1							
4. Support	4.95	1.19	.002	.045**	.161**	0.794						
5. Growth	5.08	1.01	.037*	-.005	.161**	.600**	0.862					
6. Senior Leadership	4.95	1.17	.045**	.008	.146**	.623**	.763**	0.894				
7. Immediate Supervisor	5.00	1.21	-.004	.022**	.141**	.639**	.690**	.740**	0.939			
8. Justice	4.63	1.38	.050**	.010*	.045**	.435**	.574**	.548**	.490**	0.885		
9. Innovative Service	5.14	0.93	.033**	-.006	.104**	.662**	.711**	.702**	.634**	.492**	0.863	
10. OCB	5.29	0.92	.016**	.003	.128*	.582**	.736**	.725**	.642**	.546**	.667**	0.825

**p < .01; *p < .05.

Note: N = 61793; SD = Standard Deviation; Gender (1 = females; 2 = males); Job level (1 = hourly; 2 = manager); Alphas on the diagonal

Table 5: Individual Level Correlations (All countries)

Variable	Means	SD	1	2	3	4	5	6	7	8
1. Job Level	1.11	0.32	1							
2. Support	5.07	1.13	.142**	0.796						
3. Growth	5.13	1.01	.148**	.618**	0.867					
4. Senior Leadership	5.01	1.15	.132**	.631**	.773**	0.898				
5. Immediate Supervisor	5.08	1.17	.129**	.658**	.705**	.742**	0.939			
6. Justice	4.64	1.42	.053**	.452**	.603**	.585**	.513**	0.891		
7. Innovative Service	5.23	0.89	.094**	.674**	.720**	.707**	.643**	.507**	0.867	
8. OCB	5.29	0.93	.125**	.594**	.758**	.744**	.656**	.584**	.677**	0.838

**p < .01; *p < .05.

Note: N = 129531; SD = Standard Deviation; Job level (1 = hourly; 2 = manager); Alphas on the diagonal

Table 6: Hotel Level Correlations (US sample only)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Control Variable</i>																
1. Property Size	3.78	1.14	1													
<i>Climate</i>																
2. Support Climate	4.98	0.37	-.060	0.923												
3. Growth Climate	5.07	0.32	.058	.775 **	0.939											
4. Senior Leadership Climate	5.00	0.44	-.051	.770 **	.846 **	0.965										
5. Immediate Supervisor Climate	5.07	0.37	-.136 **	.813 **	.801 **	.835 **	0.978									
6. Justice Climate	4.49	0.51	.269 **	.580 **	.675 **	.620 **	.559 **	0.963								
7. Innovative Service Climate	5.17	0.33	-.086	.843 **	.824 **	.792 **	.793 **	.585 **	0.945							
<i>Outcomes</i>																
8. Financial Performance	0.80	0.05	-.320 **	.026	-.003	.039	.072	-.117 **	.082 *	1						
9. Productivity	-0.89	1.15	-.692 **	.021	-.031	.051	.099 *	-.137 **	.073	.576 **	1					
10. Customer Satisfaction (Q1)	0.86	0.05	-.162 **	.100 **	.054	.109 **	.113 **	-.007	.153 **	.160 **	.123 **	1				
11. Customer Satisfaction (Q2)	0.86	0.04	-.167 **	.093 *	.022	.093 *	.072	-.022	.137 **	.091 *	.068	.542 **	1			
12. Q1 Hourly TO	0.05	0.06	-.136 **	.073	.048	.080 *	.119 **	-.013	.030	.093 *	.128 **	-.041	-.055	1		
13. Q1 Manager TO	0.00	0.02	-.066	.064	.029	.044	.080 *	-.001	.048	.007	.025	-.011	-.040	.093 *	1	
14. Q2 Hourly TO	0.11	0.10	-.188 **	.037	-.063	.001	.034	-.109 **	-.039	.149 **	.153 **	-.048	-.040	.698 **	.026	1
15. Q2 Manager TO	0.06	0.17	-.035	.001	-.008	-.010	.038	.035	-.037	-.018	-.002	-.034	-.044	.099 *	.254 **	.059

**p < .01; *p < .05.

Note: N = 647 hotels; SD = Standard Deviation; Alphas on the diagonal

Table 7: Hotel Level Correlations (All Countries)

Variable	Mean	SD	1	2	3	4	5	6	7	8
<i>Control Variable</i>										
1. Property Size	3.74	1.14	1							
<i>Climate</i>										
2. Support Climate	5.08	0.35	-.047	0.935						
3. Growth Climate	5.00	0.46	.039	.792**	0.95					
4. Senior Leadership Climate	5.09	0.38	-.041	.778**	.860**	0.968				
5. Immediate Supervisor Climate	4.49	0.55	-.094 [†]	.834**	.829**	.854**	0.979			
6. Justice Climate	5.38	0.28	.188**	.614**	.737**	.676**	.621**	0.97		
7. Innovative Service Climate	5.20	0.34	-.057	.867**	.850**	.810**	.825**	.639**	0.95	
<i>Outcomes</i>										
8. Customer Satisfaction (Q1)	0.85	0.06	-.091 [†]	-.033	.008	.064	.046	-.010	.045	1
9. Customer Satisfaction (Q2)	0.85	0.05	-.092 [†]	-.012	.012	.074 [†]	.047	-.009	.069 [†]	.679**
**p < .01; *p < .05.										
Note: N = 1008 hotels; SD = Standard Deviation; Alphas on the diagonal										

Analyses for Hypothesis Testing

Main effect hypotheses were tested using either regression analysis or hierarchical linear modeling (HLM) with the U.S. only sample. Hypotheses with dependent variables at the hotel level were tested with regression analysis, and hypotheses predicting the influence of hotel level climate variables on individual level outcomes were tested via HLM. Based on preliminary analyses, hypotheses involving job satisfaction and organizational commitment variables were dropped and only hypotheses involving the OCB outcome were retained (i.e. H4 and H5). Furthermore, hypotheses that indicated service climate or innovation climate as the predictor were tested with innovative service climate. In addition, hypotheses that involved a distinction between hourly employees and managers (H1, 7, 8, and 22) were tested with the appropriate subsample. A summary of all hypothesis testing is presented in Appendix E.

Statistical and practical significance. It should also be noted that both statistical (p values) and practical (effect sizes) significance will be reported in this study. Since large sample

sizes have been known to overestimate statistical significance, effect sizes should also be examined in order to determine how much variance in the outcome variables the predictors are actually explaining (Kirk, 1996). Furthermore, the outcome in question should also be considered when examining practical significance because even 1% variance explained can still be quite substantial for a variable such as financial performance (Cooper, 1981). Nevertheless, findings with low effect sizes should be interpreted with caution.

Control variables. For the single level main effect regression analyses, property size was entered as a control variable since it was significantly and negatively correlated with several outcome variables (e.g. Productivity: $r = -.692$; Financial Performance: $r = -.320$; see Table 6). Property size was entered first into the regression equation and the six climate variables were individually entered second into the regression equation based on the focus of the hypothesis.

HLM. In addition, several of the hypotheses in this study required analysis with HLM (H4 and H5) because of the nested nature of the data. Since this type of nested structure violates assumptions of independence (an assumption necessary for typical ordinary least squares (OLS) analysis), HLM is a more appropriate analysis due to the fact that it relaxes the assumption of independent and uncorrelated errors (Luke, 2004). Thus, HLM was the analysis of choice because it can test these cross-level relationships and model both levels simultaneously (Raudenbush & Bryk, 1992).

As a first step, HLM separately estimates Level 1 relationships among individual-level variables for each group (i.e., hotel), which is the equivalent of conducting OLS regressions for each hotel independently. In the second step, the individual results for each group (i.e., individual hotel parameter estimates) from the first step are used as outcome variables in Level 2

in order to estimate group-level effects (Luke, 2004). In an “intercepts-as-outcomes” model, it is assumed that the Level 1 intercepts vary across Level-2 groups (hotels) and thus the intercepts serve as the outcome variable for the Level 2 analysis. This model was used to test main effects (such as H4 and H5). Alternatively, the “slopes-as-outcomes” model uses the slopes of the Level 1 predicted relationships as the dependent variable in the Level 2 equation. This method is used to test for interaction effects (Luke, 2004). The HLM analysis is very similar to standard OLS regression with the difference being that HLM calculates the specified relationships at multiple levels simultaneously.

Furthermore, while standard OLS regression uses R^2 as an indicator of the proportion of variance explained by the model, multilevel models utilize a different metric called a pseudo R^2 , which represents the proportion of the reduction in prediction error for the model (Luke, 2004). The Snijders and Bosker (1994) formula was used in this study to determine the value of pseudo R^2 which was calculated by dividing the total variance of the hypothesized model by the total variance of the null model and subtracting the resulting ratio from one.

Tests of Hypotheses

Main Effects. Hypothesis 1 predicted that the relationship between innovative service climate and organizational financial performance would be stronger for managers than for hourly employees. It was tested with the comparison of two separate correlations: one for hourly employees and one for managers. In other words, the sample was split based on job level and the innovative service climate – financial performance relationship was tested for each sample. Correlation results indicated that the relationships between innovative service climate and financial performance were not statistically different between both samples (Managers: $r = .086$, $p < .05$; Hourly Employees: $r = .078$, $p < .05$; Fisher’s $Z = .15$, $p > .05$). Thus, Hypothesis 1 was

not supported. Similarly, Hypothesis 2, which predicted that service climate (now innovative service climate) would be positively related to organizational financial performance (regardless of job level) was also not supported ($b = .023$, $p > .05$; see Table 8) after controlling for hotel size.

Table 8. Hierarchical regression analysis for testing the effects of innovative service climate on financial performance

Independent variables	Model	
	1	2
<i>Controls</i>		
Property size	-.32**	-.32**
<i>Climate Variable</i>		
Innovative Service		.02
R ²	.10**	.10**
F	51.69**	25.93**
R ² increment		.00

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

Note: Entries are beta weights; $N = 453$ hotels

Hypothesis 3, which predicted a positive relationship between innovative service climate and guest satisfaction, was tested with both 2010 Quarter 1 and Quarter 2 guest satisfaction outcomes. Results indicated that this hypothesis was supported for both quarters (Q1: $b = .156$, $p < .001$; see Table 9; Q2: $b = .157$, $p < .001$; see Table 10). The positive relationship between innovative service climate and guest satisfaction accounted for 2.4% of the variance beyond hotel size for both quarters.

Table 9. Hierarchical regression analysis for testing the effects of innovative service climate on Q1 guest satisfaction

Independent variables	Model	
	1	2
<i>Controls</i>		
Property size	-.16**	-.15**
<i>Climate Variable</i>		
Innovative Service		.16**
R ²	.03**	.05**
F	12.44**	12.21**
R ² increment		.02**

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 463 hotels

Table 10. Hierarchical regression analysis for testing the effects of innovative service climate on Q2 guest satisfaction

Independent variables	Model	
	1	2
<i>Controls</i>		
Property size	-.17**	-.15**
<i>Climate Variable</i>		
Innovative Service		.16**
R ²	.03**	.05**
F	13.33**	12.75**
R ² increment		.02**

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 463 hotels

Hypotheses 4 and 5 were both tested using 2-level HLM. The data used to test these hypotheses consisted of individual OCB responses nested within hotel-level climates. Specifically, Hypothesis 4 predicted that hotel level justice climate (level 2) would be positively

related to OCBs (level 1) while Hypothesis 5 predicted that hotel level support climate (level 2) would be positively related to OCBs (level 1).

Prior to hypothesis testing, a null model was first estimated (i.e., the level-1 outcome variable only without any predictors added) in order to calculate the ICC. The ICC in an HLM model “measures the proportion of variance in the dependent variable that is accounted for by groups (i.e., level-2 units)” (Luke, 2004, p. 18) and is calculated by dividing the variance accounted for by the level 2 groups by the total variance of the null model. This step is similar to a one-way ANOVA with OCB as the dependent variable and hotel as the independent variable (except that it is multilevel in nature) and is a way of partitioning the OCB variance into between- versus within-hotel variability (Schulte, Ostroff & Kinicki, 2006), much like the ICCs conducted in the previous section. This was done to determine the amount of between-unit variance that can potentially be explained by the Level 2 predictors (i.e., the climate variables). The results indicated that a significant portion of variance in the OCB variable (5.9%) can be explained by hotel membership. This finding demonstrates a violation of the assumption of independence and therefore, using HLM analysis is justified (Luke, 2004).

Since Hypotheses 4 and 5 focus on main effects as opposed to interaction effects, an intercepts-as-outcomes model was tested. To test Hypotheses 4, OCB was included in the HLM model as the Level 1 outcome variable and justice climate was entered as the Level 2 predictor. HLM results showed that, as predicted, justice climate had a significant positive effect on individual level OCBs ($\pi = .39$, $SE = .02$, $p < .01$). For Hypothesis 5, support climate was included as the Level 2 predictor with OCB as the Level 1 outcome. Results also showed support for the predicted positive effect of support climate on OCBs ($\pi = .62$, $SE = .02$, $p < .01$).

For Hypotheses 4 and 5, pseudo R^2 indicates how much error reduction there has been for predicting OCB at Level 1 when comparing the hypothesized model (i.e., with climate variables) to the null model (i.e., no predictors). The Snijders and Bosker (1994) formula was used to calculate pseudo R^2 for both hypotheses, with the null model estimated for the ICC calculation above serving as a baseline model. For Hypothesis 4, the calculated pseudo R^2 was .037, or 3.7% of a reduction in model prediction error. For Hypothesis 5, the pseudo R^2 value was .048, or 4.8% of a reduction in prediction error. Taken together, the results indicate that both justice and support climates have a significant and positive effect on individual level OCBs.

Hypothesis 6 predicted that immediate supervisor leadership climate would be positively related to organizational productivity. This hypothesis was not supported ($b = .022$, $p > .05$; see Table 11).

Table 11. Hierarchical regression analysis for testing the effects of immediate supervisor climate on hotel productivity

Independent variables	Model	
	1	2
<i>Controls</i>		
Property size	-.69**	-.69**
<i>Climate Variable</i>		
Immediate Supervisor		.02
R^2	.48**	.48**
F	415.18**	207.52**
R^2 increment		.00

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

Note: Entries are beta weights; $N = 463$ hotels

Hypotheses 7 and 8 focused on the outcome variable of turnover. Since data were available for both Quarters 1 and 2 and for hourly employees and managers, both hypotheses were tested with each of these four turnover outcome variables. Furthermore, only hourly

employee climate data were used to predict hourly employee turnover, and only manager climate data were used to predict managerial turnover. It should be noted that property size was negatively related to all four turnover outcomes. Hypothesis 7 predicted a negative relationship between justice climate and turnover. Results showed that this hypothesis was partially supported. Specifically, justice climate significantly predicted turnover for hourly employees in both quarters (Q1: $b = -.100$, $p < .05$, $\Delta R^2 = .010$; Q2: $b = -.161$, $p < .01$, $\Delta R^2 = .025$; see Table 12), but not for managers (Q1: $b = -.024$, $p > .05$; Q2: $b = -.010$, $p > .05$; see Table 13). It should also be noted that the effect size for results relating to Quarter 2 hourly employee turnover (2.5% of the variance explained) was larger than that for Quarter 1 turnover (1% of the variance explained), even though both results were statistically significant.

Table 12. Hierarchical regression analysis for testing the effects of justice climate on Q1 and Q2 Hourly Employee Turnover

Independent variables	Model Q1: Hourly Employees		Model Q2: Hourly Employees	
	1	2	1	2
<i>Controls</i>				
Property size	-.13**	-.11*	-.18**	-.15**
<i>Climate Variable</i>				
Justice		-.10*		-.16**
R ²	.02**	.03**	.03**	.06**
F	8.08**	6.23**	15.53**	13.75**
R ² increment		.01*		.03**

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

Note: Entries are beta weights; $N = 445$ hotels

Table 13. Hierarchical regression analysis for testing the effects of justice climate on Q1 and Q2 Manager Turnover

Independent variables	Model Q1: Manager TO		Model Q2: Manager TO	
	1	2	1	2
<i>Controls</i>				
Property size	-.07	-.07	-.04	-.04
<i>Climate Variable</i>				
Justice		-.02		-.01
R ²	.00	.00	.00	.00
F	1.92	1.08	.57	.31
R ² increment		.00		.00

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 444 hotels

Hypothesis 8 predicted that growth climate would also be negatively related to turnover. Results were similar to those for Hypothesis 7 in that relationships between growth climate and manager turnover were not supported in either Quarter 1 or 2 (Q1: $b = -.078$, $p > .05$; Q2: $b = -.029$, $p > .05$; see Table 15). However, Hypothesis 8 was only supported for hourly employee Quarter 2 turnover (Q2: $b = -.121$, $p < .05$, $\Delta R^2 = .015$), and not for Quarter 1 (Q1: $b = -.061$, $p > .05$; see Table 14).

Table 14. Hierarchical regression analysis for testing the effects of growth climate on Q1 and Q2 Hourly Employee Turnover

Independent variables	Model Q1: Hourly Employees		Model Q2: Hourly Employees	
	1	2	1	2
<i>Controls</i>				
Property size	-.13**	-.13**	-.18**	-.18**
<i>Climate Variable</i>				
Growth		-.06		-.12*
R ²	.02**	.02**	.03**	.04**
F	8.08**	4.90**	15.53**	11.26**

R ² increment	.00	.02*
--------------------------	-----	------

**p<0.01; *p<0.05; †p<0.10.
Note: Entries are beta weights; N = 445 hotels

Table 15. Hierarchical regression analysis for testing the effects of growth climate on Q1 and Q2 Manager Turnover

Independent variables	Model Q1: Manager TO		Model Q2: Manager TO	
	1	2	1	2
<i>Controls</i>				
Property size	-.07	-.07	-.04	-.04
<i>Climate Variable</i>				
Growth		-.08		-.03
R ²	.00	.01	.00	.00
F	1.92	2.31	.57	.47
R ² increment		.01		.00

**p<0.01; *p<0.05; †p<0.10.
Note: Entries are beta weights; N = 444 hotels

Climate Interactions. Hypotheses that focused on the interaction of two climate types (i.e. H17 through H21) were tested using regression analysis with the US only sample. Since H19 predicts the interaction effects of innovation and service climate and those two climate types were combined to form innovative service climate, H19 could not be tested. For the remaining hypotheses, property size was entered first into the regression equation as a control variable. Then, the climate variables were individually entered second. The interaction term between climate types was entered third. In order to reduce multicollinearity (Aiken & West, 1991), all climate variables were centered before being entered into the regression equation by subtracting the mean from the variable. The centered climate variables were then multiplied to form the interaction terms.

Hypothesis 17 predicted that innovative service climate would moderate the relationship between senior leadership climate and organizational financial performance, such that high senior leadership climate will have a stronger effect on organizational financial performance when innovative service climate is also high. The interaction term significantly predicted financial performance ($b = .126$, $p < .05$, $\Delta R^2 = .012$; see Table 16). However, due to the small effect size observed, this finding should be interpreted with caution.

Table 16. Hierarchical regression analysis for testing the effect of the innovative service climate – senior leadership climate interaction on financial performance

Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.32**	-.32**	-.30**
<i>Climate Variables</i>			
Senior Leadership		.03	.01
Innovative Service		.05	.07
<i>Interactions</i>			
Senior Leadership X Innovative Service			.13*
R^2	.10**	.10**	.12**
F	51.69**	17.32**	14.59**
R^2 increment		.00	.01*

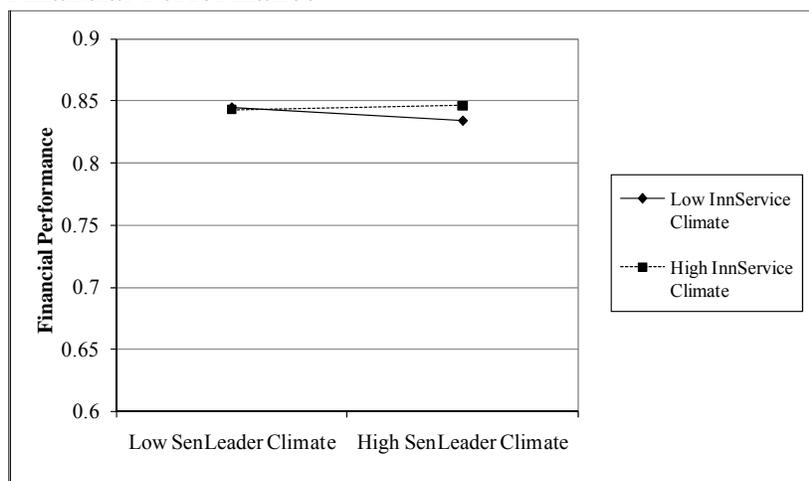
** $p < 0.01$; * $p < 0.05$; † $p < 0.10$.

Note: Entries are beta weights; $N = 453$ hotels

As can be seen in the interaction graph below (see Figure 2), the results indicated that the combination of high innovative service climate and high senior leadership climate was related to higher organizational financial performance as predicted. However, at low levels of senior leadership climate, innovative service climate has no effect. A simple slope analysis revealed that senior leadership climate does not predict organizational financial performance when innovative service climate is high ($b = .083$, $p > .05$) and only marginally predicts it when it

innovative service climate is low ($b = -.111$, $p = .088$). Therefore, Hypothesis 17 was not supported.

Figure 2. Interaction Effects of Innovative Service and Senior Leadership Climates on Financial Performance



Furthermore, Hypothesis 18 stated that the relationship between innovative service climate and financial performance would be moderated by growth climate such that having both a strong innovative service climate and growth climate will be associated with better financial performance. Results indicated that the interaction was marginally supported in the expected direction ($b = .090$, $p = .076$, $\Delta R^2 = .006$; see Table 17), but once again, the effect size was small.

Table 17. Hierarchical regression analysis for testing the effect of the innovative service – growth climate interaction on financial performance

Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.32**	-.30**	-.28**
<i>Climate Variables</i>			
Growth		-.14†	-.13
Innovative Service		.15†	.17*
<i>Interactions</i>			
Growth X Innovative Service			.09†

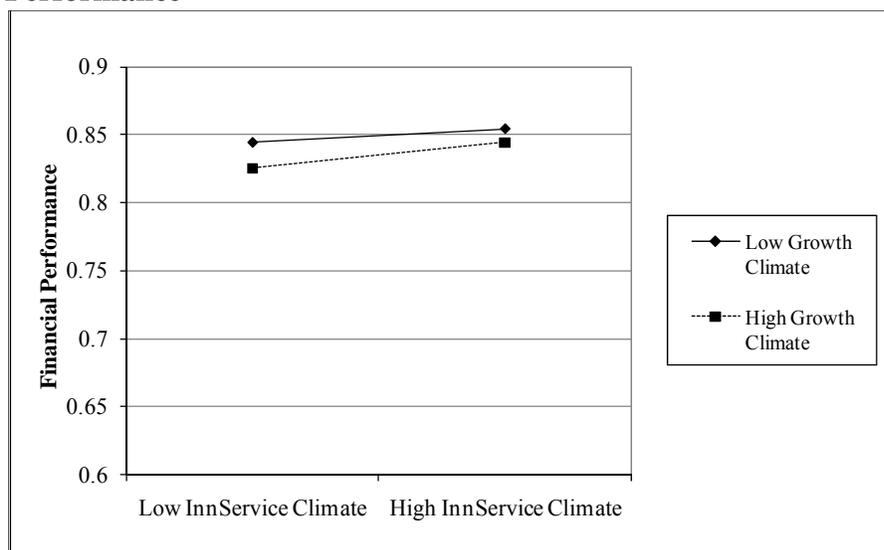
R ²	.10**	.11**	.12**
F	51.69**	18.31**	14.59**
R ² increment		.01	.01†

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 453 hotels

A simple slope analysis revealed that innovative service climate positively predicts organizational financial performance when growth climate is both high ($b = .400, p = .000$) and low ($b = .236, p = .001$). However, looking at Figure 3, it appears that low growth climate has a more positive effect on financial performance than high growth climate on financial performance at all levels of innovative service climate. Thus, Hypothesis 18 was not supported.

Figure 3. Interaction Effects of Growth and Innovative Service Climates on Financial Performance



As predicted by Hypothesis 20, the relationship between innovative service climate and guest satisfaction was significantly moderated by growth climate (see Table 18). However, the interaction term only significantly predicted guest satisfaction for the first Quarter (Q1: $b = .107, p < .05, \Delta R^2 = .009$), but not the second (Q2: $b = .073, p > .05$). Furthermore, the effect size was

once again quite small for the Quarter 1 result, with only .09% of the variance being explained by the interaction term.

Table 18. Hierarchical regression analysis for testing the effect of the innovative service – growth climate interaction on Q1 and Q2 guest satisfaction

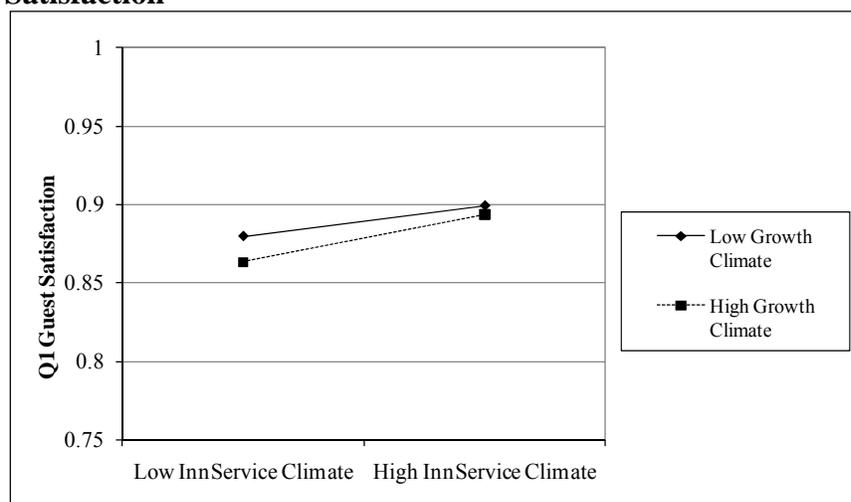
Independent variables	Model 1: Q1 Guest Satisfaction			Model 2: Q2 Guest Satisfaction		
	1	2	3	1	2	3
<i>Controls</i>						
Property Size	-.16**	-.13**	-.12*	-.17**	-.12*	-.11*
<i>Climate Variables</i>						
Growth		-.11	-.09		-.25**	-.23**
Innovative Service		.25**	.28**		.37**	.39**
<i>Interactions</i>						
Growth X Innovative Service			.11*			.07
R ²	.03**	.05**	.06**	.03**	.07**	.07**
F	12.44**	8.67**	7.63**	13.33**	11.36**	9.05**
R ² increment		.03**	.01*		.04**	.00

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 463 hotels

Figure 4 shows that the two lines are almost parallel, demonstrating the small magnitude of the interaction relationship. It should also be noted that the graph of the Quarter 1 results indicates that low growth climate is associated with higher guest satisfaction at low levels of innovative service climate than is high growth climate at low levels of innovative service climate. However, at high levels of innovative service climate, growth climate seems to have little effect. A simple slope analysis revealed that innovative service climate significantly predicts Quarter 1 guest satisfaction when growth climate is both high ($b = .424$, $p < .01$) and low ($b = .328$, $p < .01$). Due to the form of the interaction, however, Hypothesis 21 was not supported.

Figure 4. Interaction Effects of Growth and Innovative Service Climates on Q1 Guest Satisfaction



Hypothesis 21 predicted that leadership climate would moderate the relationship between growth climate and organizational productivity, with productivity being higher when both climate types are strong. This hypothesis was tested using both the senior leadership and immediate supervisor climate types. The interaction term was significant for both senior leadership ($b = .087$, $p < .05$, $\Delta R^2 = .005$; see Table 19) and immediate supervisor climate ($b = .087$, $p < .05$, $\Delta R^2 = .006$; see Table 20) moderators. Once again, it should be noted that both interaction terms explain less than 1% of the variance in organizational productivity.

Table 19. Hierarchical regression analysis for testing the effect of the senior leadership climate– growth climate interaction on organizational productivity

Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.69**	-.68**	-.67**
<i>Climate Variables</i>			
Growth		-.09	-.09
Senior Leadership		.10	.14*
<i>Interactions</i>			
Growth X Senior Leadership			.09*

R ²	.48**	.48**	.49**
F	415.18**	139.19**	106.46**
R ² increment		.00	.01*

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 454 hotels

Table 20. Hierarchical regression analysis for testing the effect of the immediate supervisor climate– growth climate interaction on organizational productivity

Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.69**	-.68**	-.66**
<i>Climate Variables</i>			
Growth		-.09	-.08
Immediate Supervisor		.10	.13*
<i>Interactions</i>			
Growth X Immediate Supervisor			.09*
R ²	.48**	.48**	.49**
F	415.18**	139.48**	106.89**
R ² increment		.00	.01*

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 454 hotels

The graphs below illustrate the nature of the growth climate – leadership climate interactions. Figures 5 and 6 show that in high growth climate organizations, poor senior leadership and immediate supervisor leadership climates are related to the lowest amount of organizational productivity, while low growth climate and strong leadership climate are associated with the highest levels of productivity. For the senior leadership climate moderator, the simple slope analysis revealed that growth climate marginally predicts hotel productivity when senior leadership climate is high ($b = -.141$, $p = .055$) and significantly when it is low ($b = -.362$, $p < .01$). However, both effects are not in the expected direction. For the immediate

supervisor climate, the simple slope analysis results showed that growth climate significantly predicts productivity when immediate supervisor climate is high ($b = -.189, p < .01$) as well as low ($b = -.396, p < .01$).

Figure 5. Interaction Effects of Senior Leadership and Growth Climates on Organizational Productivity

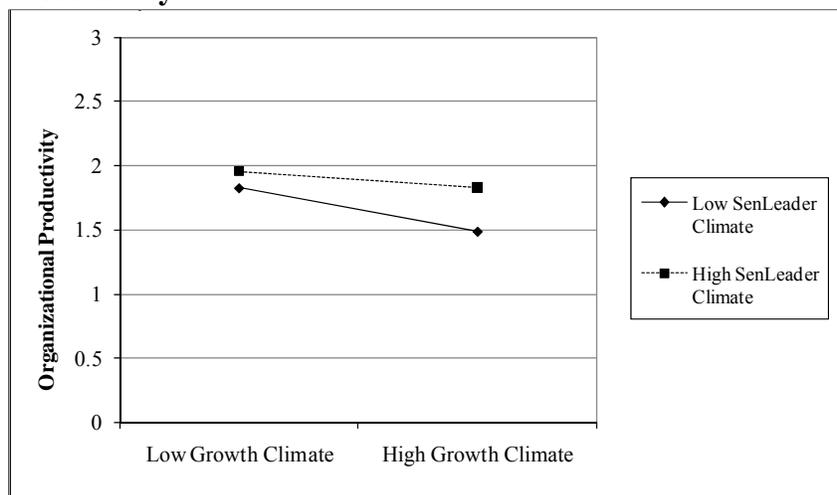
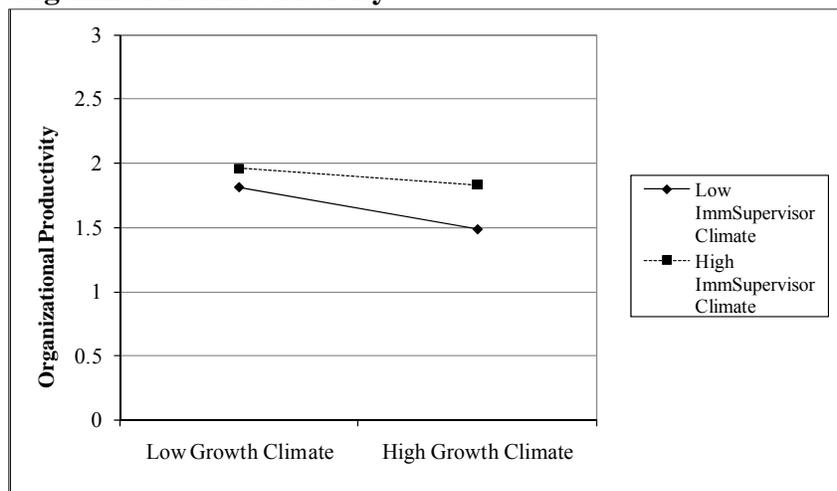


Figure 6. Interaction Effect of Immediate Supervisor and Growth Climates on Organizational Productivity



Cultural Moderators. Conceptually, HLM was used to test the cross-cultural hypotheses because the independence assumptions of OLS regression are violated because of the nested data. Specifically, hotels within one country and within the same cultural environment are likely to be

more similar to each other than hotels in other countries (Van der Vegt et al., 2005). Furthermore, OLS regression would disregard hotel country membership and the resulting statistical dependence among hotels within each country, thereby underestimating the standard errors and leading to potential errors in hypothesis testing (Goldstein et al., 1998; Van der Vegt et al., 2005). In addition, varying sample sizes across countries, which is a characteristic of the present data, is not as likely to affect HLM results and distort findings (Van der Vegt et al., 2005). Therefore, HLM was the method of choice to test Hypotheses 22 through 30.

The cross-cultural hypotheses (H22- H30) were tested using 2- or 3-level HLM. The procedure was similar to that for Hypotheses 4 and 5 with the individual level outcome (OCB) as the Level 1 dependent variable and the grand mean centered climate dimensions as Level 2 variables (H24-H30). However, for this set of hypotheses, the grand mean centered Hofstede indices for each country for power distance, uncertainty avoidance, and individualism/collectivism were added as the Level 3 predictors (see Appendix A for list of Hofstede indices by country). Thus, a 3-level model was needed due to the individual data being nested within hotel level climate types which were in turn nested within country-level cultural dimensions. Alternatively, 2-level HLM analyses were utilized to examine Hypotheses 22 and 23 because the guest satisfaction outcome specified in both hypotheses is at the hotel level (i.e. the same level of analysis as the climate dimensions). Therefore, for these two hypotheses, Quarter 1 or Quarter 2 guest satisfaction was entered as the Level 1 outcome, the grand mean centered climate variable was entered as the Level 1 predictor, and the Hofstede cultural dimension was entered as the Level 2 predictor.

As previously noted, hypotheses that included either job satisfaction or organizational commitment as outcome variables were dropped from the study (Hypotheses 24, 25, 27, 28, 29

and 30). Therefore, only Hypotheses 22, 23 and 26 were retained (i.e. those specifying an OCB outcome or guest satisfaction outcome).

Once again, a null model (i.e., no predictors) was estimated for each outcome variable to determine the portion of variance that can be accounted for by between-group differences. For the guest satisfaction outcome (Quarter 1 and Quarter 2) of Hypotheses 22 and 23, the ICC value was found to be .53 for Quarter 1 and .50 for Quarter 2. This signifies that approximately 50% of the variance in guest satisfaction regardless of quarter can be attributed to country membership. For the OCB outcome in the 3-level HLM model, the ICC was calculated for 2 levels to estimate the proportion of the variance that can be attributed to hotel differences as well as to country differences (Raudenbush & Bryk, 1992). Results indicate that 7.1% of the variance in individual OCB outcomes lies between hotels and that 6% of the variance resides between countries. Taken together, these results indicate that multi-level analysis for Hypotheses 22, 23 and 26 is justified.

Hypothesis 22, which predicted that for low level jobs, the innovative service climate - guest satisfaction relationship would be moderated by power distance, was not supported. Results indicated that power distance had no effect on the relationship between innovative service climate and Quarter 1 ($\pi = .01$, $SE = .04$, $p > .05$) or Quarter 2 ($\pi = .01$, $SE = .04$, $p > .05$) guest satisfaction. In addition, Hypothesis 23, predicting that the relationship between innovative service climate and guest satisfaction would be moderated by uncertainty avoidance, was also not supported. Uncertainty avoidance did not have a significant effect on the innovative service climate - guest satisfaction relationship in Quarter 1 ($\pi = .01$, $SE = .06$, $p > .05$) or Quarter 2 ($\pi = .01$, $SE = .05$, $p > .05$).

Finally, the 3- level model testing Hypothesis 26 where OCB was the Level 1 outcome, justice climate was the Level 2 predictor and power distance was the Level 3 predictor, was also not supported. Therefore, the cross-level interaction between organizational justice climate and cultural power distance did not have a significant effect on individual OCBs ($\gamma = -.01$, $SE = .15$, $p > .05$).

Ancillary Analyses

Several ancillary analyses were conducted to determine if having a climate of support from both colleagues and leaders has a stronger effect on outcomes than either one type of climate alone. Specifically, the guest satisfaction outcome was examined in relation to the interaction of support climate and immediate supervisor climate and senior leadership climate. It was found that both interaction terms marginally predicted Quarter 1 (but not Quarter 2) guest satisfaction scores (Support*Immediate Supervisor (see Table 21): $b = .100$, $p = .054$, $\Delta R^2 = .008$; Support* Senior Leadership (see Table 22): $b = .102$, $p = .053$, $\Delta R^2 = .008$).

Table 21. Hierarchical regression analysis for testing the effect of the immediate supervisor climate– support climate interaction on Q1 Guest Satisfaction

Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.16**	-.15**	-.13**
<i>Climate Variables</i>			
Support		.07	.07
Immediate Supervisor		.07	.11*
<i>Interactions</i>			
Support X Immediate Supervisor			.10†
R ²	.03**	.04**	.05**
F	12.44**	6.67**	5.97**
R ² increment		.02*	.01†

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; $N = 463$

Table 22. Hierarchical regression analysis for testing the effect of the senior leadership climate– support climate interaction on Q1 guest satisfaction

Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.16**	-.16**	-.14**
<i>Climate Variables</i>			
Support		.02	.03
Senior Leadership		.14*	.17*
<i>Interactions</i>			
Support X Senior Leadership			.10†
R ²	.03**	.05**	.06**
F	12.44**	7.80**	6.83**
R ² increment		.02**	.01†

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; $N = 463$

According to Figures 7 and 8, the form of the interaction for both relationships is quite similar in that the combination of a strong support climate and a strong leadership climate is related to higher guest satisfaction scores. Simple slope analyses also showed similar results for the two interactions. For the support climate moderator of the immediate supervisor climate – guest satisfaction relationship, the simple slope analysis revealed that immediate supervisor climate significantly predicts Quarter 1 guest satisfaction when support climate is high ($b = .168$, $p < .05$) but not when it is low ($b = .092$, $p > .05$). Similarly, a simple slope analysis showed that senior leadership climate positively predicted guest satisfaction at high levels of support climate ($b = .151$, $p < .05$) but not low ($b = .065$, $p > .05$). Overall, results indicate that having high levels

of both support and leadership climate is associated with more positive guest satisfaction outcomes than one of these climate types alone.

Figure 7. Interaction Effects of Support and Immediate Supervisor Climates on Q1 Guest Satisfaction

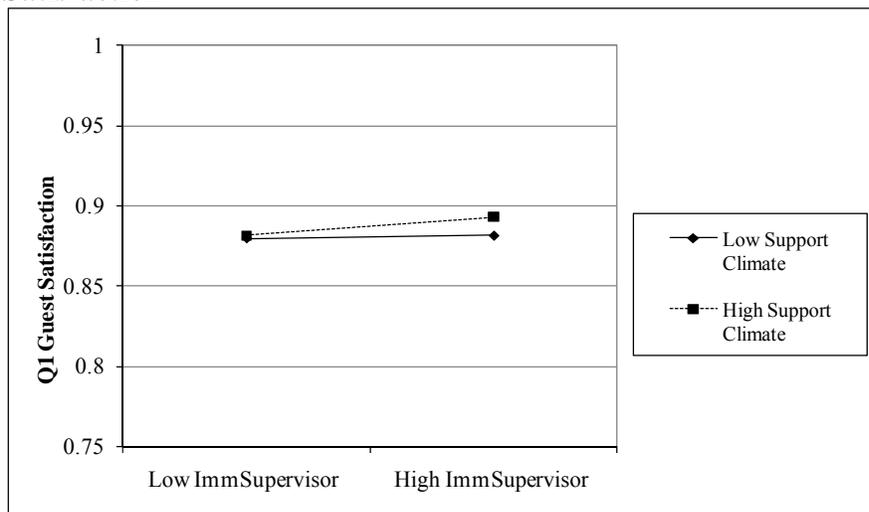
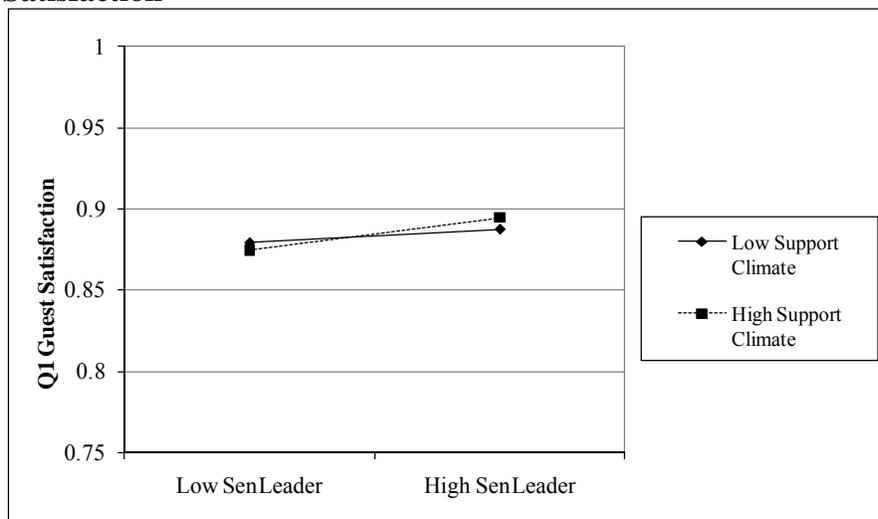


Figure 8. Interaction Effects of Support and Senior Leadership Climates on Q1 Guest Satisfaction



Another set of ancillary analyses expanded upon Hypothesis 17 to further test the interaction of innovative service climate with both types of leadership climates and in relation to financial performance and guest satisfaction. Results indicated that immediate supervisor climate

significantly moderated the relationship between innovative service climate and financial performance ($b = .139$, $p < .01$, $\Delta R^2 = .015$; see Table 23). According to Figure 9, the combination of a strong innovative service and immediate supervisor climate is related to increased organizational financial performance. A simple slope analysis revealed that innovative service climate significantly predicted financial performance when immediate supervisor climate was high ($b = .185$, $p < .01$) but not when it was low ($b = .008$, $p > .05$).

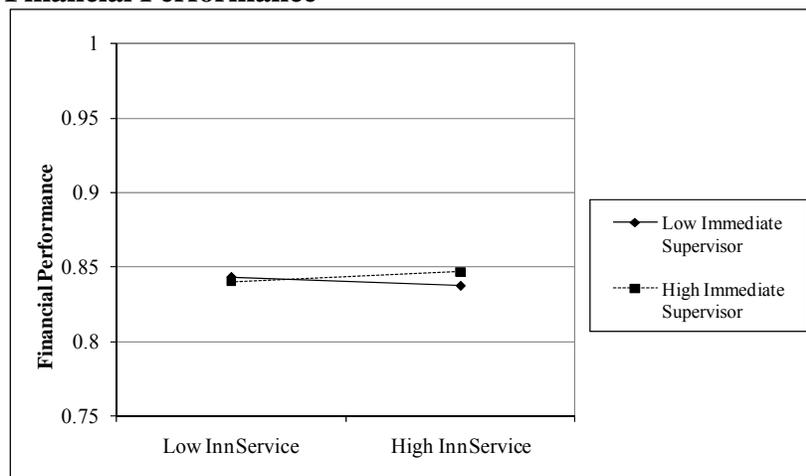
Table 23. Hierarchical regression analysis for testing the effect of the immediate supervisor climate–innovative service climate interaction on financial performance

Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.32**	-.32**	-.30**
<i>Climate Variables</i>			
Innovative Service		.00	.02
Immediate Supervisor		.03	.08
<i>Interactions</i>			
Innovative Service X Immediate Supervisor			.14**
R ²	.10**	.10**	.12**
F	51.67**	17.39**	15.00**
R ² increment		.00	.02**

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

Note: Entries are beta weights; $N = 453$

Figure 9. Interaction Effects of Immediate Supervisor and Innovative Service Climates on Financial Performance



Furthermore, senior leadership climate moderated the relationship between innovative service climate and guest satisfaction ($b = .105$, $p = .052$, $\Delta R^2 = .008$; see Table 24). Figure 10 shows that the combination of strong innovative service and senior leadership climates is related to higher guest satisfaction. The simple slope analysis showed that innovative service climate positively predicted Quarter 1 guest satisfaction at both high ($b = .245$, $p < .01$) and low ($b = .152$, $p < .05$) levels of senior leadership climate.

Table 24. Hierarchical regression analysis for testing the effect of the senior leadership climate– innovative service climate interaction on Q1 guest satisfaction

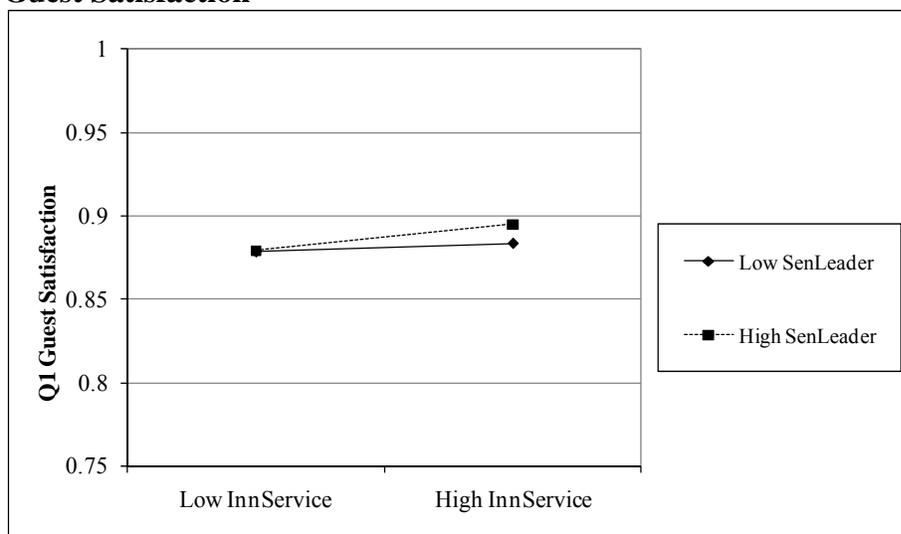
Independent variables	Model		
	1	2	3
<i>Controls</i>			
Property Size	-.16**	-.15**	-.13**
<i>Climate Variables</i>			
Innovative Service		.10	.12
Senior Leadership		.07	.11
<i>Interactions</i>			
Innovative Service X Senior Leadership			.11†

R ²	.03**	.05**	.06**
F	12.44**	8.37**	7.27**
R ² increment		.03**	.01†

**p<0.01; *p<0.05; †p<0.10.

Note: Entries are beta weights; N = 463

Figure 10. Interaction Effects of Senior Leadership and Innovation Service Climates on Q1 Guest Satisfaction



Chapter 4

Discussion

Study Overview

This study examined how six different organizational climates affect organizational and individual outcome variables, how these climate dimensions interact, and how national culture influences climate-outcome relationships. Even though multiple climates exist simultaneously in organizations (Reichers & Schneider, 1990), most climate research has focused only on one type of climate in a given study (Kuenzi & Schminke, 2009). In addition, most climate studies fail to examine how the relationship between climate dimensions and outcome variables are influenced by cultural context, an important factor to consider especially with the increasing number of MNCs emerging with overseas locations (Ashkanasy & Jackson, 2001). This study investigated how climate dimensions (support, growth, justice, innovative service, immediate supervisor and senior leadership climate) differentially relate to organizational financial performance, organizational productivity, guest satisfaction, turnover and OCBs. In addition, this study examined how the different types of climate interact when predicting the specified outcome variables and how these relationships are influenced by cultural power distance, uncertainty avoidance and individualism/collectivism. Thus, results from this study can be used to better illuminate how multiple climates behave in a large MNC (hotel chain) and which climates or combination of climate types relate to outcomes both in the US and cross-culturally.

Taken together, the findings of this study show some support for main effect hypotheses, significant findings for climate interaction hypotheses (though not in the predicted direction),

and a lack of support for hypotheses involving the cultural moderators. The main effect results demonstrated that when innovative service climate is higher, guest satisfaction is also higher. Furthermore, results showed that both justice and support climates were related to a higher level of OCBs. Findings also showed that high justice and growth climates were each associated with lower turnover rates of hourly employees. Regarding climate interactions, ancillary analysis results revealed that when a high support climate is coupled with a high leadership climate (either senior leadership or immediate supervisor focused), the resulting guest satisfaction rate is higher. Furthermore, ancillary analyses also discovered that the combination of higher innovative service climate and higher immediate supervisor climate was related to higher organizational financial performance, while the combination of higher innovative service climate and senior leadership climate related to higher Quarter 1 guest satisfaction.

For the hypothesized climate interaction results, all of the interaction terms significantly (or marginally) predicted financial performance, guest satisfaction, and organizational productivity. However, the examination of the interaction graphs showed that relationships were not in the predicted direction. For instance, growth climate had a negative effect on financial performance, guest satisfaction, and organizational productivity when used as a moderator even though it was predicted that it would compound the positive effects of the other climate type in the interaction term. It should also be noted that when examining the outcome of guest satisfaction in all climate interaction hypotheses, significant interaction results were only found for Quarter 1 but not for Quarter 2.

The results of this study also demonstrated several non-significant findings. Specifically, innovative service climate failed to significantly predict organizational financial performance with either the full sample or broken down by job level. Justice and growth climates each failed

to predict managerial turnover. Also contrary to prediction, immediate supervisor climate did not significantly predict organizational productivity. Furthermore, the cultural moderator hypotheses were not supported. Specifically, neither power distance nor uncertainty avoidance had any significant effect on the relationship between innovative service climate and guest satisfaction. Results also showed that power distance failed to moderate the relationship between justice climate and individual OCBs.

Overarching Reasons for Non-Significant Results

There are several overarching potential reasons for non-significant findings. First, range restriction was an issue for almost all variables in the study. Specifically, all six of the climate variables had very high means (ranging from 4.5 – 5.2 out of a possible 6), and a frequency analysis showed that most of the sample (99% for support; 95% for growth; 89% for senior leadership; 94% for immediate supervisor; 53% for justice; 96% for innovative service) reported very high agreement with all climate items (over 4.5 on a 6-point scale). Furthermore, the mean of the individual outcome variable (OCB) was above a five out of six, once again indicating gravitation toward the high end of the scale and low variability. In addition, range restriction was also present in the organizational outcome variables, with the minimum guest satisfaction and financial performance scores falling at or above .59 on a zero to one scale. Furthermore, guest satisfaction was measured by the percentage of guests who were satisfied with the service at the hotel, but did not account for the proportion of guests who were highly dissatisfied, dissatisfied or neutral. Therefore, while the hypotheses were developed to relate to the full spectrum of guest satisfaction scores, scores in the lower half of the scale were not present in the data. As range restriction attenuates correlations (Liao & Rupp, 2005), it is not surprising that a number of the hypotheses involving these variables were not supported.

Second, several of the outcome variables may not have captured the full conceptual range of the constructs due to the way in which they were measured. For example, financial performance was calculated as the percentage of labor costs in relation to total revenue but does not take other costs into account (such as property and overhead costs), which can be quite high and thus give a different picture of organizational profit than does an index that does not include such information. Therefore, the measure does not represent a complete picture of the hotel financial performance.

In addition, the items in the growth climate scale focus on the availability of development and advancement opportunities. However, Van Dam and colleagues (2008) note that growth climate includes not only agreement about available growth opportunities, but also factors such as active and open encouragement at every level (i.e. organizational, leader, coworker) of learning and skill development and support for job change and special projects. Justice climate is another example of a climate scale with a narrow conceptual focus. In particular, the two items used to test hypotheses revolved around pay fairness, which can be considered a part of distributive justice climate (Colquitt, 2001), but no items were available to measure procedural or interactional justice. Therefore, as measured in this study, justice climate did not include resource allocation or perceptions of interpersonal treatment fairness.

It should also be noted that climate and OCB scales were developed in-house and were not taken from previously validated scales due to the archival nature of data collection. Psychometrically, the scales were found to be sound and reliable. Nevertheless, the use of unvalidated measures may have resulted in a narrower focus of the climate scale items as opposed to the entire breadth of the climate constructs in question.

In addition, the intercorrelations between the climate dimensions were all highly significant and ranged from .559 to .867. This is a potential explanation for the counterintuitive climate interaction findings, since regression analysis is not able to differentiate between factors that are so highly correlated (Liao & Rupp, 2005). Even though climate dimensions were highly correlated, collapsing climate variables was not justified in this study due to both the theoretical rationale for distinct climate dimensions based on item content and the results of the EFA and CFA, which specified a six climate model. However, even though climate dimensions were kept as six separate factors and climate variables were first mean centered before being multiplied to form the interaction terms, the high intercorrelations of the climate factors still could have posed a problem during hypothesis testing.

Finally, the full spectrum of hotels was used for the hypothesis testing, meaning that both full service and non-full service hotels and a wide range of hotel brands were included in the sample. The wide variability in procedures and policies across these various brand types may have introduced excessive noise into the analysis resulting in an unclear portrayal of the influence of climate variables. Several hypotheses were alternatively also analyzed using just the full service hotel sample, but the results did not yield a consistently different picture than results from the full sample and hence, the full sample of hotels was retained.

Discussion of Specific Hypotheses

Looking at some hypotheses more specifically, innovative service climate positively predicted guest satisfaction (Hypothesis 3). This finding is consistent with existing literature that has demonstrated the positive link between service climate and service performance and customer ratings (e.g. Salanova et al., 2005). Furthermore, while this significant result replicates

the previously found service climate – guest satisfaction relationship, it also contributes to the literature by extending the construct to innovative service climate rather than simply service climate. In other words, a climate that focuses on *both* excellent customer service provision and approaching service problems in a new and innovative way leads to higher guest satisfaction.

Correlation results showed that innovative service climate was significantly and positively related to financial performance ($r = .082, p < .05$), but this relationship disappears once hotel size is controlled for (Hypothesis 2). In contrast, the positive relationship between innovative service climate and guest satisfaction remains even after hotel size is taken into account. The likely reason for this difference is that when looking at financial performance, there are many other factors that contribute to the result in addition to customer service. Therefore, it makes sense that innovative service would have a greater effect on guest satisfaction, where the resulting behavior from the climate effect (i.e., service behavior) can be applied more directly to influence the outcome variable. In other words, since employees have a more direct effect on guest satisfaction because they deal with guests on a regular basis, employees have more control over the more proximal guest satisfaction outcome than the more distal financial performance outcome.

Similar to Hypothesis 2 in that the relationship was not significant when hotel size was controlled for, the correlational results for Hypothesis 6 showed a positive relationship between the immediate supervisor climate and productivity ($r = .10, p < .05$). However, hotel size did account for a large percentage of the variance in productivity and the relationship was negative, indicating that smaller hotels show higher productivity indices. A possible reason for this relationship is that larger hotels introduce a lot of complexity into the picture since there are many more rooms and more employees to manage, making it more difficult to uphold a

standardized high level of productivity. Furthermore, employees in the smaller hotel properties are also more likely to feel greater accountability to management since there are fewer total employees, leading to increased productivity. Therefore, it is not surprising that the relationship between immediate supervisor climate and productivity is higher in smaller hotels ($r = .06$) than in large hotels ($r = .01$) since supervisors may have more of an influence over a smaller workforce.

Justice and growth climates were each negatively related to turnover as originally expected but for hourly employees only. While the hypotheses did not specify a difference in relationship between the two climate types and turnover, it is apparent from the results that having a climate of pay fairness and growth opportunities would be more important for those with lower level jobs since they have more to gain from organizations who actively support fairness and career development. In other words, hourly employees with lower pay and lower level jobs would be more likely than managers to benefit from a high justice and growth climate. It is likely that those with higher level, managerial jobs already experience better levels of pay fairness and do not value developmental opportunities as much since they already have some level of influence in the organization and less room for advancement.

While the interaction terms in Hypotheses 17-21 significantly predicted the outcome variables hypothesized, the form of the interaction graphs showed some unexpected patterns. For most of these findings (three out of four), one of the two climate types making up the interaction term was growth climate, which was associated with lower financial performance, lower guest satisfaction, and lower productivity. Since growth climate was the climate type to consistently cause the interaction term to have the opposite form from what was expected, this particular climate type should be further inspected. Specifically, when considering the organizational

context a number of hotels had begun a service training initiative for employees (which several of the growth climate scale items refer to). When employees go through service training, while likely beneficial in the long run, participation could have potential unwanted results in the short term. In particular, the mass training of employees causes disruptions to customer service interactions because positions have to be temporarily filled by employees who are not as familiar or comfortable stepping into a new role or location. In addition, the service training also costs the company money due to the cost of training materials and the additional pay that must be provided to the employees temporarily filling in for those who are going through service training. Finally, the time that it takes to complete the training can also have a negative impact on productivity since there are less employees available to handle the usual workload. Taken together, this contextual information sheds light on the reasons why growth climate, though originally predicted to be beneficial, can have potentially negative effects on financial performance, guest satisfaction, and organizational productivity.

Furthermore, while Hypothesis 17, predicting that the interaction of high innovative service climate and high senior leadership climate would be related to better financial performance, showed significant results, the form of the interaction was not as anticipated. At high levels of innovative service climate, senior leadership climate did not have an effect, which is contrary to the prediction. However, an ancillary analysis revealed that the interaction of an innovative service climate and leadership climate indeed predicted financial performance, but that it was actually immediate supervisor climate, not senior leadership, that is the influential moderator. Furthermore, ancillary analyses also found that the predicted combination of innovative service and senior leadership climate was also important, but for the outcome of guest satisfaction rather than financial performance. Taken together, these findings point to the

importance of having a supportive leadership climate acting in conjunction with a high innovative service climate so that employees have the necessary support and encouragement. However, the two leadership climate variables differentially contributed to the organizational outcomes when combined with an innovative service climate. Therefore, the original rationale behind a need to have a leadership climate to further support an innovative service was justified (Amabile et al., 2004; Kisfalvi & Pitcher, 2003), albeit with a different combination of climate and outcome variables than was originally anticipated. These results should be replicated in another organization to determine the robustness of these findings and to see if the same pattern of the innovative service climate – leadership climate interactions emerge.

While the interaction of growth climate and innovative service climate failed to predict guest satisfaction in the way expected, ancillary analyses revealed that another combination of climate variables was more effective in predicting this outcome. Specifically, having a high support climate and a high leadership climate at either level (senior leader or immediate supervisor) contributed to higher guest satisfaction. This finding implies that a collective perception of support from various sources leads to better customer service and that a combination of these climate variables is more beneficial for guest satisfaction than one of the climates by itself. As previously discussed, guest satisfaction is an important outcome for this study, not only because of its critical importance for an organization in the service industry, but also because it is the organizational outcome that employees have more control over and is less distal than outcomes such as financial performance and turnover. Therefore, the ancillary analysis results shed light on the combination of climate variables that positively contribute to guest satisfaction and show that when attempting to predict guest satisfaction, a combination of

either innovative service and senior leadership climate or one of support and leadership (supervisor or senior) climate is related to increased guest satisfaction.

This study also discovered that power distance failed to influence the relationship between justice climate and OCBs. The rationale behind this lack of a significant finding most likely lies in the way in which justice climate was measured. Although originally hypothesized to encompass multiple aspects of justice and general fairness perceptions in the organization, the only justice climate items remaining after the preliminary factor analysis were those related to pay fairness. Because cultures with high power distance already anticipate a certain level of inequality in various life settings (Hofstede, 2001) and would not be as negatively affected by unfair treatment as those in low power distance cultures, it was predicted that a high justice climate in a low power distance climate would be associated with more OCBs. However, since pay fairness as measured was more of an administrative function of an organization than the way in which employees were personally treated, the positive relationship between pay fairness climate and OCBs would be less expected to vary by culture or level of power distance. In other words, the influence of pay fairness on OCBs is more likely to be a universal relationship, rather than one dependent on power distance since it is not likely to be influenced by cultural inequality norms but instead by the organization's predetermined reward structure. Furthermore, results revolving around justice climate should be interpreted carefully because this was the only type of climate that did not have an average rwg of .70 or above, implying that while the ICC value allowed aggregation to the hotel level, there was lower within-hotel agreement than other climate types.

It was also found that power distance and uncertainty avoidance failed to moderate the relationship between innovative service climate and guest satisfaction. One possible reason for

this non-significant result is the differences in definitions of service excellence across cultures. While the employees of the organization provided data responses about the climate types, hotel customers provided guest satisfaction data and thus, both sources should be taken into consideration when explaining the findings. Reimann, Lunemann, and Chase (2008) note the importance of distinguishing between the actual service quality and the customer's satisfaction with the service (which includes both service perceptions and service expectation components). Previous studies (e.g., Ngai et al., 2007; Sharma, Tam, & Kim, 2009) have shown that expectations for and evaluations of customer service vary by culture, thereby making comparisons all the more challenging. For example, Ngai and colleagues (2007) found that Asian hotel guests are more likely to engage in private complaint behavior rather than in formalized feedback to the hotel. Thus, Asian hotel guests would more frequently only provide positive guest feedback (if any), while non-Asian guests would vary more in their responses. In addition, Reimann and colleagues (2008) discovered that customers from low uncertainty avoidance countries are more tolerant of and more lenient when it comes to evaluating delivered service. Stauss and Mang (1999) also argued that customer cultural background can lead to different interpretations of service, such as individualistic customers having the expectations of personally customized service. Since there is no way to account for such customer cultural differences in the current study due to the anonymous and non-identifying nature of the guest satisfaction ratings, the differences in guest conceptualization of service quality may have been responsible for the lack of significant results. With an industry such as hospitality, it may be just as important to consider the cultural background of the guest providing the response ratings as it is to consider the country in which the hotel is located and the cultural background of its employees.

Limitations and Future Research Recommendations

There are several limitations present in this study. First, while the sample size was substantial and included numerous hotels across 30 countries, the hotels were nonetheless part of the same organization and the same industry, thus limiting the external generalizability of the findings. Future studies should replicate these climate relationships in other industries to ensure that the findings are not solely contingent on industry type (Van der Vegt et al., 2005). For instance, since the sampled organization was in the service industry, it made sense that service and innovation climates collapsed into one factor. However, this will likely not be true for other industries and, thus, differential findings for these two climate types can be examined.

Second, another limitation relates to the use of internally developed scales that have not been previously validated in the literature. Due to this fact, the nomological network of the climate variables as measured in this study has not been previously established. Validated measures should be utilized in the future to ensure the conceptual breadth of variables.

In addition, several of the hypotheses in this study could not be examined cross-culturally because of the unavailability of objective organizational outcome data for countries other than the U.S. Therefore, most of the main effect hypotheses could not be studied in the context of cultural moderators. Future research should examine how cultural dimensions such as power distance, uncertainty avoidance and individualism/collectivism influence the relationship between climate variables and financial performance, productivity and turnover, since the present study was unable to test these important questions.

Furthermore, for the relationships that were able to be tested in a cultural context, only Hofstede's dimensions were utilized. This was due to the greater parsimony of the Hofstede

model (as compared to the GLOBE framework) as well as its established ability to predict behavioral frequencies (Smith, 2006). However, future studies should also test the cultural moderator hypotheses using GLOBE dimensions (House et al., 2004) as an alternative way of examining the influence of cultural context. One of the advantages of the GLOBE dimensions is that they distinguish between cultural values (i.e., the way things should be in the society) and actual cultural practice (i.e., the way things actually are in the society) (House, Javidan, Dorfman, & de Luque, 2006). House and colleagues (2006) demonstrated that values and practices don't always perfectly align and that the two dimensions are related to separate outcomes, such as values being more related to leadership attributes and practices being more related to societal phenomena such as national competitiveness. Therefore, it would be interesting to study how the climate – outcome relationships differ in the context of cultural values versus cultural practices.

Another limitation of this study was its cross-sectional nature. Climate variable data were collected in the middle of the year (Quarter 2) while organizational outcome data were collected at the beginning of the year (Quarter 1) or the same time as the climate variables (Quarter 2). Therefore, causality cannot be implied. Future studies should examine the relationships proposed in this study longitudinally in order to gain more insight into the causal behavior of the climate dimensions. It is important to examine the way in which climates develop in organizations over time and how that development influences changes in organizational outcomes. For example, an emerging innovative climate may not have an immediate effect on financial performance but once developed, could lead to financially beneficial changes and increased profit. Therefore, a one-time snapshot of the climate – outcome relationship may not provide a full picture of the complexity of climate influences, especially for climates that continuously bring about change (e.g. innovation climate).

Given that all of the interaction terms significantly predicted all of the hypothesized organizational outcome variables (although not in the expected direction) and that ancillary analyses revealed significant results in the hypothesized direction (although with different combinations of variables), future research should further explore interactions between climate types. Four ancillary analyses showed a positive influence of climate interactions on guest satisfaction and financial performance and demonstrated that combinations of climates yield better results than a single climate type alone. This implies that climate interaction hypotheses show promise and are worth pursuing in future research in order to understand complex combinations of climates that are beneficial for differential outcomes. Therefore, it appears that the interaction of climate types does matter but the exact nature of how the interactions operate needs further attention, including additional study of the interactions of other types of climates and in various industries. In addition, as demonstrated in the first section of this paper, there is a strong conceptual rationale for examining climate interactions and climate influences across national cultures.

In general, future research should continue examining different types of organizational climates including ones not investigated in this study (e.g. empowerment climate, Seibert et al., 2004; psychological safety climate, Baer & Frese, 2003) as well as climate strength (e.g. Gonzales-Roma et al., 2002) as a moderator for the climate-outcome relationships, in order to better understand the complexity of the construct (Kuenzi & Schminke, 2009). Future studies should also take other contextual factors into account, such as organizational reward structures and regional/national current economic situations, when examining climate influences since there could be other contextual factors at play that can change or attenuate the influence of a climate dimension. Additional outcome variables, such as absenteeism, should also be examined

in future research in relation to climate variables and climate interactions, since this might be a way for employees to react to unfavorable organizational climate. There is still much to be learned about the organizational climate construct and all of its potential influences in organizations (Kuenzi & Schminke, 2009).

Implications for Practice

Despite the limitations discussed above, there were several implications that emerged from the results of this study. For instance, since innovative service climate was discovered to positively predict guest satisfaction, organizations in the service industry should attempt to develop this type of climate in order to improve customer experience. This involves creating policies and practices that focus on not only excellent customer service, but also employee responsiveness to change and willingness to search for creative solutions to customer issues. Based on the results of this study, such practices should help increase the number of satisfied customers. Furthermore, although not originally hypothesized, ancillary analyses revealed that the combination of high innovative service climate and high senior leadership climate was associated with even higher guest satisfaction than that achieved with one type of climate alone. Ancillary findings also showed that guest satisfaction is higher when there is both a high support climate and a strong leadership climate. Overall, these results imply that innovative service alone is related to increased guest satisfaction but adding additional climates involving support from different sources further improves the guest satisfaction rate. Therefore, organizations should also consider fostering an environment of support from both peers and leaders at all levels to provide employees with the support they need to offer better customer service and consequently enhance guest satisfaction scores.

Another result that surfaced was the positive influence of climate variables on OCBs. Both justice and support climates had a strong positive relation to OCBs, indicating that individuals who experience a fair and supportive climate in their organization were more likely to engage in helpful citizenship behaviors. Therefore, organizations with policies and practices centered around fair treatment (in this case regarding pay) and a supportive work environment are more likely to have a workforce that engages in OCBs.

In addition, this study showed that hotels having a strong justice climate or growth climate also had lower rates of hourly employee turnover. Since service industries like the hotel industry employ many hourly workers and the hiring and training of these employees is time consuming and expensive, organizations should consider factors that can help minimize these costs by reducing turnover. Implications from this study indicate that organizations with policies that value pay fairness and advancement opportunities for employees experience lower turnover and so organizations looking to reduce turnover should develop justice and growth climates through internal policies and practices.

Overall, this study achieved the objectives of showing how different types of climates differentially influence various outcomes at different levels of analysis (i.e. individual and organizational) and how interactions of climate types predict organizational success.

Appendix A

List of hotel sample sizes by country and Hofstede dimension scores

Country	Hotels	N per Country	Power Distance	Uncertainty Avoidance	Individualism/Collectivism
Argentina	1	319	49	86	46
Australia	8	1173	36	51	90
Austria	6	603	11	70	55
Belgium	3	251	65	94	75
Brazil	4	599	69	76	38
Canada	14	1925	39	48	80
Chile	2	489	63	86	23
China	42	15328	80	30	20
Costa Rica	4	750	35	86	15
Denmark	1	86	18	23	74
Ecuador	2	381	78	67	8
El Salvador	1	74	66	94	19
France	14	1150	68	86	71
Germany	23	2050	35	65	67
Greece	1	172	60	112	35
Hungary	2	230	46	82	80
India	8	2669	77	40	48
Indonesia	7	2636	78	48	14
Ireland	5	530	28	35	70
Italy	1	110	50	75	76
Jamaica	1	599	45	13	39
Japan	4	978	54	92	46
Malaysia	6	1534	104	36	26
Mexico	8	2200	81	82	30
Netherlands	2	286	38	53	80
Panama	1	286	95	86	11
Peru	1	296	64	87	16
Philippines	2	500	94	44	32
Poland	1	335	68	93	60
Portugal	2	318	63	104	27
Romania	1	298	90	90	30
Russia	6	1122	93	95	39
Singapore	4	902	74	8	20
South Korea	4	1022	60	85	18
Spain	8	1232	57	86	51
Switzerland	2	329	34	58	68
Thailand	19	3046	64	64	20
Trinidad and Tobago	1	73	47	55	16
Turkey	3	252	66	85	37
United Kingdom	55	6677	35	35	89
USA	860	79356	40	46	91
Venezuela	2	492	81	76	12
Vietnam	2	867	70	30	20

Appendix B

List of Survey Languages

Languages
Albanian
Amharic
Arabic
Bengali
Bosnian
Cambodian (Khmer)
Chinese Simplified (Mandarin)
Chinese Traditional (Cantonese)
Czech
Dutch
English
French
German
Greek
Haitian Creole
Hindi
Hungarian
Indonesian
Japanese
Korean
Malay
Papiamento (Aruba)
Papiamentu (Curacao)
Polish
Portuguese (for Brazil)
Romanian
Russian
Somali
Spanish (International version)
Swahili
Tagalog
Telugu
Thai
Tigrina (Eritrea)
Tigrina (Ethiopia)
Turkish
Urdu
Vietnamese

Appendix C

List of Hypotheses

Hypothesis Number	Hypothesis
1	The positive relationship between innovation climate and organizational financial performance will be stronger for manager level employees than for hourly employees.
2	Service climate will be positively related to organizational financial performance.
3	Service climate will be positively related to guest satisfaction.
4	Justice climate will be positively related to organizational citizenship behaviors.
5	Support climate will be positively related to organizational citizenship behaviors
6	Immediate supervisor leadership climate will be positively related to organization level productivity.
7	Justice climate will be negatively related to turnover
8	Growth climate will be negatively related to turnover
9	Justice climate will be positively related to job satisfaction
10	Justice climate will be positively related to organizational commitment
11	Growth climate will be positively related to organizational commitment.
12	Growth climate will be positively related to job satisfaction.
13	Support climate will be positively related to organizational commitment.
14	Support climate will be positively related to job satisfaction.
15	Upper level leadership climate will be positively related to organizational commitment.
16	Immediate supervisor leadership climate will be positively related to job satisfaction.
17	The relationship between upper level leadership climate and organizational financial performance will be moderated by innovation climate, such that upper level leadership climate will have a stronger effect on organizational financial performance when innovation climate is stronger than weaker.

18	The relationship between innovation climate and organizational financial performance will be moderated by growth climate, such that innovation climate will have a stronger effect on organizational financial performance when growth climate is stronger than weaker.
19	The relationship between innovation climate and guest satisfaction will be moderated by service climate, such that innovation climate will have a stronger effect on guest satisfaction when service climate is stronger than weaker.
20	The relationship between service climate and guest satisfaction will be moderated by growth climate, such that service climate will have a stronger effect on guest satisfaction when growth climate is stronger than weaker.
21	The relationship between growth climate and organizational level productivity will be moderated by leadership climate, such that growth climate will have a stronger effect on organizational level productivity when leadership climate is stronger than weaker.
22	For those with low level jobs, the relationship between innovation climate and guest satisfaction will be moderated by power distance such that in cultures of high power distance, this relationship will be less positive.
23	The relationship between innovation climate and guest satisfaction will be moderated by uncertainty avoidance such that in cultures of low uncertainty avoidance, this relationship will be more positive.
24	The relationship between justice climate and job satisfaction will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.
25	The relationship between justice climate and organizational commitment will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive
26	The relationship between justice climate and OCBs will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.
27	The positive relationship between leadership climate and job satisfaction will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.
28	The positive relationship between leadership climate and organizational commitment will be moderated by power distance, such that in cultures of low power distance, this relationship will be more positive.
29	The relationship between innovation climate and job satisfaction will be moderated by uncertainty avoidance, such that this relationship will be positive in low uncertainty avoidance cultures and negative in high uncertainty avoidance cultures.

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The relationship between growth climate and job satisfaction will be moderated by individualism/collectivism, such that in cultures of high individualism, this relationship will be more positive.

Appendix D

Factorial Invariance Analyses (EFA and CFA)

	EFA: Tucker's Phi values (over .85 is ok)						Individual Country CFA					DECISION
Country	Imm Supervisor	Sen Leader	Innovative Service	Growth	Justice	Support	χ^2	RMSEA	NNFI	CFI	SRMR	
Argentina	0.94	0.92	0.95	0.91	0.97	0.49	394.06	0.086	0.92	0.94	0.047	
Australia	0.97	0.95	0.85	0.88	0.78	0.98	609.48	0.067	0.93	0.94	0.037	
Austria	0.96	0.77	0.88	0.83	0.87	0.96	455.12	0.075	0.92	0.93	0.049	
Belgium	0.92	0.94	0.94	0.92	0.77	0.96	469.53	0.12	0.83	0.86	0.063	
Brazil	0.95	0.95	0.85	0.90	0.97	0.77	656.07	0.094	0.9	0.92	0.046	
Canada	0.97	0.89	0.96	0.97	0.96	0.90	860.48	0.065	0.94	0.95	0.041	
Chile	0.99	0.87	0.95	0.77	0.93	0.95	329.31	0.061	0.95	0.96	0.044	
China	0.99	0.72	0.57	0.99	0.89	0.98	7320.2	0.073	0.95	0.96	0.029	
Costa Rica	0.98	0.96	0.91	0.83	0.97	0.98	409.59	0.06	0.95	0.96	0.039	
Denmark	0.98	0.86	0.88	0.79	0.75	0.5	218.62	0.074	0.87	0.89	0.079	DROP
Ecuador	0.98	0.96	0.97	0.91	0.97	0.96	380.14	0.076	0.93	0.94	0.051	
El Salvador	0.94	0.92	0.85	0.77	0.4	0.8	272.02	0.12	0.69	0.74	0.12	DROP
France	0.99	0.99	0.97	0.99	0.93	0.88	502.81	0.057	0.95	0.96	0.042	
Germany	0.99	0.99	0.98	0.95	0.96	0.97	787.16	0.06	0.95	0.96	0.036	
Greece	0.99	0.97	0.82	0.88	0.62	0.95	328.44	0.11	0.89	0.91	0.063	DROP
Hungary	0.97	0.97	0.87	0.75	0.97	0.68	366.99	0.093	0.88	0.9	0.062	DROP
India	0.98	0.71	0.7	0.92	0.99	0.67	1404.02	0.072	0.93	0.95	0.032	
Indonesia	0.98	0.89	0.82	0.9	0.98	0.88	1501.74	0.075	0.94	0.95	0.035	
Ireland	0.99	0.97	0.88	0.94	0.99	0.95	521.67	0.089	0.92	0.93	0.041	
Italy	0.65	0.81	0.83	0.6	0.49	0.93	414.09	0.17	0.34	0.46	0.18	DROP
Jamaica	0.99	0.96	0.91	0.94	0.95	0.93	346.77	0.058	0.92	0.93	0.049	
Japan	0.97	0.95	0.91	0.96	0.86	0.72	914.92	0.094	0.91	0.92	0.055	
Malaysia	0.98	0.98	0.94	0.96	0.96	0.92	794.68	0.069	0.94	0.95	0.031	
Mexico	0.99	0.99	0.97	0.98	0.99	0.95	808.13	0.057	0.95	0.96	0.036	
Netherlands	0.96	0.96	0.91	0.94	0.98	0.81	339.15	0.077	0.92	0.93	0.057	
Panama	0.91	0.8	0.7	0.97	0.7	0.52	553.46	0.13	0.82	0.85	0.061	DROP
Peru	0.96	0.91	0.93	0.74	0.54	0.93	359.75	0.082	0.9	0.92	0.055	
Philippines	0.95	0.99	0.94	0.9	0.73	0.71	623.85	0.098	0.87	0.89	0.055	DROP
Poland	0.97	0.93	0.94	0.78	0.53	0.83	512.22	0.11	0.88	0.9	0.058	DROP
Portugal	0.98	0.98	0.87	0.99	0.9	0.45	438.13	0.096	0.9	0.92	0.061	
Romania	0.98	0.84	0.75	0.93	0.85	0.94	385.61	0.088	0.89	0.91	0.064	
Russia	0.98	0.86	0.94	0.98	0.92	0.31	910.02	0.086	0.92	0.94	0.035	
Singapore	0.97	0.9	0.84	0.85	0.97	0.86	945.94	0.098	0.9	0.91	0.043	
South Korea	0.94	0.93	0.77	0.98	0.91	0.77	1072.77	0.1	0.87	0.89	0.063	DROP
Spain	0.98	0.96	0.9	0.98	0.92	0.2	807.12	0.077	0.93	0.95	0.047	
Switzerland	0.94	0.96	0.81	0.94	0.71	0.87	495.38	0.1	0.89	0.91	0.053	DROP
Thailand	0.98	0.92	0.9	0.92	0.98	0.66	1337.19	0.066	0.95	0.96	0.027	
Trinidad and Tobago	0.96	0.87	0.78	0.56	0.84	0.77	251.63	0.12	0.38	0.49	0.17	DROP
Turkey	0.97	0.96	0.69	0.69	0.97	0.63	434.06	0.11	0.83	0.86	0.085	DROP
United Kingdom	1	0.98	0.97	0.95	1	0.92	1702.19	0.051	0.97	0.97	0.028	
Venezuela	0.97	0.93	0.9	0.81	0.95	0.43	474.09	0.085	0.91	0.93	0.056	
Vietnam	0.93	0.8	0.52	0.88	0.57	0.81	827.39	0.096	0.86	0.88	0.068	DROP

Appendix E

Hypothesis Testing Results

Hypothesis	Tested or Dropped	Sample	Analysis	Result
1	Tested	US only	Correlation	Not supported
2	Tested	US only	Regression	Not supported
3	Tested	US only	Regression	Supported
4	Tested	US only	2 - level HLM	Supported
5	Tested	US only	2 - level HLM	Supported
6	Tested	US only	Regression	Not supported
7	Tested	US only	Regression	Partially supported
8	Tested	US only	Regression	Partially supported
9	Dropped	US only	2 - level HLM	N/A
10	Dropped	US only	2 - level HLM	N/A
11	Dropped	US only	2 - level HLM	N/A
12	Dropped	US only	2 - level HLM	N/A
13	Dropped	US only	2 - level HLM	N/A
14	Dropped	US only	2 - level HLM	N/A
15	Dropped	US only	2 - level HLM	N/A
16	Dropped	US only	2 - level HLM	N/A
17	Tested	US only	Regression	Not supported
18	Tested	US only	Regression	Not supported
19	Dropped	US only	Regression	N/A
20	Tested	US only	Regression	Not supported
21	Tested	US only	Regression	Not supported
22	Tested	All countries	2- level HLM	Not supported
23	Tested	All countries	2- level HLM	Not supported
24	Dropped	All countries	3- level HLM	N/A
25	Dropped	All countries	3- level HLM	N/A
26	Tested	All countries	3- level HLM	Not supported
27	Dropped	All countries	3- level HLM	N/A
28	Dropped	All countries	3- level HLM	N/A
29	Dropped	All countries	3- level HLM	N/A
30	Dropped	All countries	3- level HLM	N/A

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VITA
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EDUCATION

The Pennsylvania State University – University Park

Ph.D. in Industrial/Organizational Psychology (May 2011)

Dissertation: *A cross-cultural study of the effects of multiple organizational climates on organizational, customer-rated, and individual outcomes*

M.S. in Industrial/Organizational Psychology (May 2008)

Thesis: *The Effects of Machiavellianism, Perspective Taking, and Emotional Intelligence Components on Negotiation Strategies and Outcomes*

Pace University – New York

Bachelor of Arts in Psychology, *Summa Cum Laude* (May 2005)

APPLIED EXPERIENCE

Research Assistant for the VW Foundation

8/08 - 12/10

- Collected and analyzed longitudinal creativity process and outcome data from engineering teams
- Created personality reports for participants for feedback purposes

Assessor for the PSU Early Career Leadership Assessment Center

1/06 – 11/10

- Assisted in writing assessment center exercises and rater training materials
- Observed and evaluated managerial exercises and delivered feedback to participants

Research Assistant for Marine Corps Live Fire/Simulator Training Project

8/06 - 1/09

- Assisted in conducted a literature review and cost-benefit analysis of live fire training
- Attended Marine Corps bases in order to collect observational data on simulator and live fire performance

Pennsylvania State University Practicum Group

9/05 - 6/09

Aerosoles, New York, NY:

- Conducted focus group interviews and store observations for a job analysis
- Assisted in creating and validating an online selection tool for sales associates

Development Dimensions International (DDI), Bridgeville, PA: (Team Co-Leader)

- Interacted with the client to set project goals, present results, and monitor project progress
- Created items based on research for a global leadership tool used by the client company

PUBLICATIONS AND CONFERENCE PRESENTATIONS

Farr, J., Johnson, J., **Baytalskaya, N.**, & Sin, H.P. (2011). Feedback Seeking Behavior in Work Groups. In P. Gelléri & C. Winter (Eds.), *Personnel psychological assessment and its contribution to professional and organizational success*.

Farr, J., **Baytalskaya, N.**, & Johnson, J. (2011). Not Everyone is Above Average: Providing Feedback in Formal Job Performance Evaluations. In R. Sutton (Ed.), *Feedback: The handbook of criticism, praise, and advice*.

Rosing, K., Bledow, R., Farr, J., **Baytalskaya, N.**, & Johnson, J. (August, 2010). The force behind radical and incremental innovation: Momentum - Motivational and cognitive antecedents. In R. Bledow (Chair), *The Challenge to Explore and Exploit: Bridging Perspectives of Different Disciplines*. AOM Symposium.

Gevers, J., Mohammed, S., **Baytalskaya, N.** & Beefink, F. (August, 2008). The Development and Validation of a Pacing Preference Scale. In S. Mohammed and N. Baytalskaya (Chairs), *Providing Timely Assistance: New Developments in the Measurement of Temporal Constructs*. AOM Symposium