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An investigation of ethical climate in a Singaporean accounting firm

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Abstract

Purpose – The primary objective of this study is to examine the moderating influence of professional commitment (PC) on the associations among ethical climate, organizational-professional conflict (OPC) and organizational commitment (OC) among public accountants. It aims to replicate recent findings on the relationships among ethical climate, OPC and OC. It also aims to extend prior research by investigating the association between ethical climate and both functional specialization and organizational rank in an accounting firm.

Design/methodology/approach – The authors surveyed all professional employees in the Singapore office of an international accounting firm.

Findings – Significant associations were found between ethical climate, OPC and OC. Participants' degree of affective commitment to their profession moderated the relationship between the public interest (benevolent/cosmopolitan) climate and perceived conflict and OC. Specifically, professionally committed employees reported less conflict and greater commitment when they felt the firm placed more emphasis on the public interest. These relationships were not present for employees with lower levels of professional commitment. It was also found that taxation specialists perceived the least emphasis in the firm on serving the public interest.

Originality/value – No prior study has documented the moderating influence of affective professional commitment on the association between ethical climate and accountants' OPC or OC. This finding has important implications, suggesting that accounting firms' ability to retain professionally committed employees will depend in part on the degree to which the firm upholds professional ideals such as serving the public interest. The fact that tax specialists perceived less emphasis on serving the public interest than other functional areas implies that tax practices may be overemphasizing client advocacy at the expense of public service.

Keywords

Ethical climate, Professional commitment, Organizational-professional conflict, Organizational commitment, Singapore, Job commitment, Continuing professional development, Professional ethics.

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INTRODUCTION

Researchers in management and business ethics have long recognized that the ethical climate or culture in an organization may influence important outcomes such as ethical decision making, organizational commitment, job satisfaction and turnover intentions (Martin and Cullen, 2006; Treviño et al., 1998; Victor and Cullen, 1987, 1988). However, relatively few studies have examined ethical climate in public accounting settings. Parboteeah et al. (2005) found that accountants in US firms perceived stronger benevolent and principled climates than those in Japanese firms, but did not address the relationships among climate perceptions and ethical decisions or affective organizational responses such as commitment or satisfaction[1]. In examining the relationship between the perceived ethical climate in Chinese public accounting firms and ethical decisions, Shafer (2008) concluded that climate perceptions are significantly associated with auditors' intentions to engage in unethical behavior, but have little association with their ethical judgments. Shafer (2009) reported that the ethical climate in Chinese CPA firms had a strong relationship with auditors' reported levels of organizational-professional conflict and affective organizational commitment; however, that study only examined the direct associations between climate perceptions and conflict and commitment, with no consideration of potential moderating variables.

The current study has several research objectives. A key objective is to examine how individual differences in professional commitment are related to employee responses to the perceived ethical climate in their organization. Affective professional commitment appears to have particular relevance as a potential moderator of the relations between ethical climate and outcomes such as organizational-professional conflict and organizational commitment. Individuals with stronger emotional attachments to their profession should be more likely to internalize the values and ideals of that profession, and consequently more sensitive to the congruence between those values and ideals and the perceived ethical climate in their organization. Thus, professionally committed employees should be more likely to respond negatively to an organizational climate that is inconsistent with professional values and ideals, experiencing increased conflict and reduced organizational commitment. In contrast, employees with little commitment to their profession and its values may be relatively indifferent to a climate that conflicts with those values. Despite the apparent influence of affective professional commitment on the relations among ethical climate, organizational-professional conflict and organizational commitment, no prior study has examined this influence.

[1] Phrases such as "affective organizational responses" and "affective outcomes" are often used to describe outcomes that involve or relate to feelings or emotions (e.g. Martin and Cullen, 2006). Outcomes such as organizational-professional conflict and organizational commitment clearly involve emotions and feelings; accordingly, we will adopt these phrases in the current paper

Before testing the moderating influence of professional commitment on the relations among ethical climate, OPC and OC, we first attempt to replicate the findings of Shafer (2009) that significant associations do indeed exist among ethical climate, conflict and commitment. Thus, the replication of these results was a secondary objective of the study. We also extend the Shafer (2009) findings by examining normative organizational commitment in addition to affective organizational commitment.

Public accounting firms should clearly be interested in these issues. It is often suggested that the ethical climate or culture in organizations may be effectively managed (Schminke et al., 2007; Grojean et al., 2004; Treviño et al., 1999; Cohen, 1993); thus, a proactive approach to the establishment and maintenance of a supportive ethical climate may allow firms to minimize dysfunctional consequences that arise from increased conflict and reduced organizational commitment. Examination of the potential moderating influence of professional commitment on the relations among ethical climate and affective responses should provide more meaningful insights than those obtained in prior accounting studies. Firms that want to promote high levels of professionalism and ethics should be especially interested in retaining employees who are more committed to the profession and its values; thus, determination of the aspects of ethical climate that are most salient to professionally committed employees should allow management to focus more attention on those climate dimensions.

Two additional objectives of our study were to test for differences in ethical climate perceptions across functional specializations (e.g. auditing, taxation, consulting) and hierarchical positions within a public accounting firm. A finding of significant differences across specializations may point to areas of practice in which the ethical climate is particularly weak and in need of improvement. The issue of differences in climate perceptions by hierarchical position should also be of interest. For instance, if higher-level employees tend to perceive the firm climate more positively, this may reflect a degree of self-deception on their part that will tend to perpetuate relatively unethical climates. In the current paper we conduct a comprehensive investigation of the perceived ethical climate within one office of an international accounting firm, which should provide a more valid test of differences across specializations and positions than those reported in prior research.

A final objective of the study was to extend the findings of Shafer (2009) to the context of Singapore. In response to its emergence as an important international financial center, a significant body of accounting research focusing on Singapore has been produced during the past two decades, including a limited number of studies of ethical issues (e.g. Holder-Webb and Sharma, 2010; Sharma et al., 2008). However, it appears that no prior study has investigated the organizational ethical climate in Singaporean public accounting firms. The replication of findings

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on ethical climate in alternative national contexts provides support for the robustness of these findings.

The next section reviews the relevant literature and proposes hypotheses and research questions. We then present our methodology and findings. The paper concludes with a discussion of the study's limitations and findings and suggestions for further research on organizational ethical climate in accounting settings.

LITERATURE REVIEW AND HYPOTHESIS/RESEARCH QUESTIONS

Ethical climate

In the current study we adopt the seminal theory of organizational ethical climate developed by Victor and Cullen (1987, 1988). The ethical climate concept is similar to broader constructs such as organizational culture or work climate (Schneider, 1975; Smircich, 1983), but is focused specifically on organizational policies or practices that have relevance for ethical decision making. Victor and Cullen's (1987, 1988) theory posits that ethical climates vary along two primary dimensions:

1. the ethical criteria; and
2. the loci of analysis that drive decision making.

Ethical criteria progress from egoism to benevolence to principle[2]. In egoistic climates, people tend to focus on personal benefits or self-interest when facing ethical dilemmas. In climates characterized by benevolence, concern is extended beyond the self, to mutual or group interests. Principled climates are focused on following ethical principles that may be embodied in rules, laws or codes of conduct. The second dimension adds nuance to the ethical climate construct by acknowledging that the locus of analysis when making ethical decisions may be on individuals, local groups, or broader segments of society (cosmopolitan). Crossing of the two dimensions yields the widely recognized typology of ethical climates illustrated in Figure 1.

Consideration of the individual cells in Figure 1 helps to clarify the theory. For instance, egoism pursued at the individual level results in a primary focus on doing what is best for oneself (self-interest). At the local level, egoism creates a focus on what is best for local collectives, generally interpreted as a focus on promotion of the interests of the organization, narrowly defined as firm profitability (company profit).

[2] Victor and Cullen (1988, p. 104) suggest that "much of moral philosophy can be organized under three major classes of ethical theory: egoism, benevolence, and deontology, or principle". While admittedly a simplification, they adopted these broad classes of theory to distinguish the basic criteria that may be used to guide ethical decision-making.

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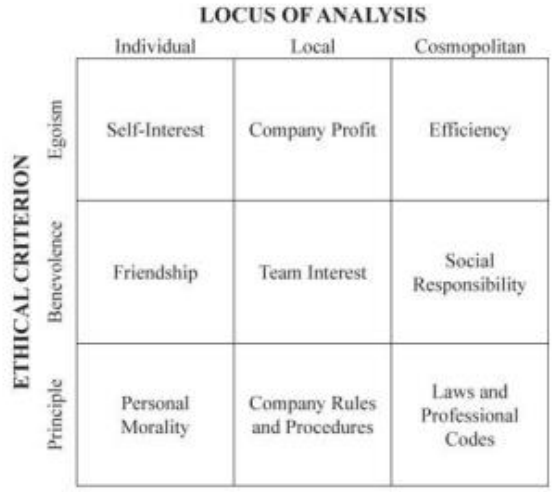

Source: Victor and Cullen (1988, p. 104)

At the cosmopolitan or societal level, Victor and Cullen (1987, 1988) suggest that egoism will translate into consideration of economic efficiency. Benevolence at the individual level focuses on the promotion of friendship or supportive relationships, and at the local level focuses on team interests. Benevolence at the cosmopolitan level is generally interpreted as a focus on doing what is best for society as a whole, i.e. being socially responsible or serving the public interest. A principled or deontological approach to ethical decision making may be based on the application of one's own personal principles of morality (individual), organizational rules and procedures (local), or laws and professional codes of conduct (cosmopolitan).

Prior research has documented that, in general, egoistic climates encourage unethical behavior, while benevolent and principled climates lead to relatively ethical behavior (Martin and Cullen, 2006; Treviño et al., 1998). Indeed, with their explicit focus on the pursuit of self-interest (egoistic/individual) and narrowly defined firm interests such as profitability (egoistic/local), it seems logical that egoistic climates should be associated with less ethical behavior[3]. In the case of benevolent climates, the welfare of individuals, organizational groups or members of society at large are a primary focus of concern. In such climates, employees perceive that decisions are made based on an overarching concern for the well-being of these parties (Martin and Cullen, 2006, p. 179); thus, such decisions should generally be viewed as ethical in nature[4]. It is somewhat more difficult to generalize regarding the effects of principled climates on ethical behavior. As noted by Treviño et al. (1998, p. 450), this difficulty arises primarily due to the uncertain effects of

[3] Note that the egoistic/cosmopolitan climate, which suggests an emphasis on economic efficiency (Victor and Cullen, 1987, 1988), has rarely emerged as a distinct climate type in empirical studies (Martin and Cullen, 2006). Thus, the common generalization that egoistic organizational climates are associated with less ethical behavior essentially refers to the egoistic/individual and egoistic/local climates.

[4] Note that, in terms of moral philosophy, benevolence is closely related to utilitarianism, or producing the greatest good for all the parties involved (Martin and Cullen, 2006). A utilitarian approach should produce decisions that are more ethical than those implied by an egoistic focus.

principled/individual climates. When the organizational climate encourages individuals to follow their own moral principles, it is difficult to predict behavior and whether such behavior will be viewed by others as ethical. The principled/local and principled/cosmopolitan climates, however, should clearly promote relatively ethical behavior due to their emphasis on following prescribed organizational or professional rules and codes of conduct.

The theory of organizational ethical climate developed by Victor and Cullen has been influential in the management and business ethics literatures. Martin and Cullen (2006) did a review and meta-analysis of over 40 published studies employing the theory between 1987 and 2005. They conclude that substantial support exists for the effects of ethical climate on affective outcomes such as organizational commitment and job satisfaction, as well as dysfunctional behaviors such as engaging in actions generally recognized as unethical.

Victor and Cullen (1987, 1988) point out that their proposed typology is intended simply as a theoretical framework; and not all climate types are likely to exist in a particular organization. Based on their review, Martin and Cullen (2006) observe that indeed most studies have not found evidence of all nine distinct climate types, and conclude that the most common empirically derived climates are:

- an "instrumental" climate that combines elements of the self-interest (egoistic/individual) and firm-interest (egoistic/local) climates;
- a "caring" climate that includes both friendship (benevolent/individual) and team interest (benevolent/local) considerations; and
- three principled climates corresponding with the original Victor and Cullen typology.

There has, however, been significant variation across studies in the climate types identified[5].

Certain ethical climate types appear especially relevant to the context of public accounting. In particular, the benevolent/cosmopolitan and principled/cosmopolitan climates appear very salient, since they reflect the traditional emphasis in public accounting on serving the public interest and following professional codes of conduct respectively. Interestingly, the existence of benevolent/cosmopolitan and principled/cosmopolitan climates has been consistently documented in studies of public accounting firms (Shafer, 2008, 2009; Parboteeah et al., 2005; Cullen et al., 2003)[6], as illustrated in Figure 2. Egoistic/individual and egoistic/local climates also appear highly relevant to the public accounting context, since the pursuit of self-interest and firm profitability are

[5] For instance, based on his survey of business school graduates working in a wide variety of organizations, Peterson (2002) found that a confirmatory factor analysis of all nine climate types fit the data as well or better than any reduced model. In their influential study, Treviño et al. (1998) found evidence of seven of the nine a priori climate types.

[6] The four studies cited here are, to the best of our knowledge, the only prior studies that have applied the Victor and Cullen (1987, 1988) model of ethical climate to the study of public accounting firms.

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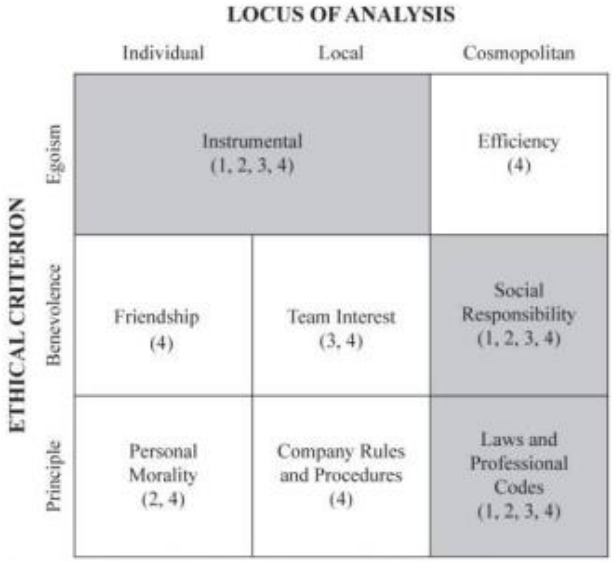
arguably among the primary obstacles to serving the public interest and following the spirit of professional codes of conduct. Also as indicated in Figure 2, all four of the previous studies of ethical climate in accounting firms have documented either egoistic/individual climates, egoistic/local climates, or climates that combine elements of both these types, collectively referred to as "instrumental" climates. Due to the apparent relevance of these climate types to public accounting and the fact that recent evidence supports their existence in this context, they were the primary focus of the current study.

Organizational-professional conflict

Accounting researchers developed the concept of organizational-professional conflict to describe the potential discord between professional and organizational goals and values (e.g. Aranya and Ferris, 1984; Aranya et al., 1981). The inherent potential for conflict between organizational and professional imperatives has a long history in the sociology and business literatures (Covaleski et al., 1998; Leicht and Fennell, 1997; Montgomery, 1992; Derber and Schwartz, 1991; Derber, 1982; Sorensen and Sorensen, 1974; Hall, 1968; Kornhauser, 1962; Blau and Scott, 1962). Organizational-professional conflict is similar to the person-organization fit construct, which acknowledges that dysfunctional outcomes may result from the incompatibility of personal and organizational values (Finegan, 2000; Kristof, 1996; Sims and Kroeck, 1994; O'Reilly et al., 1991; Chatman, 1989, 1991).



Notes: (a) The parenthetical references in the above figure correspond with the following studies: (1) Shafer (2009); (2) Shafer (2008); (3) Parboteeah *et al*. (2005); (4) Cullen *et al*. (2003). (b) According to Martin and Cullen (2006), most studies have found "instrumental" climates that combine elements of the egoistic/individual and egoistic/local types. Some accounting studies have concluded that separate egoistic/individual or egoistic/local climates existed, but even in some of these cases the climate factors that emerged combined some items from both sub-scales. Thus, we have combined these two climate types, and the parenthetical references in the Instrumental cell above should be interpreted to indicate that the studies found either an egoistic/individual climate, an egoistic/local climate, or some combination of both. (c) Climates that have consistently emerged in studies of public accounting firms are shaded in gray

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However, OPC is specifically focused on the pressures that may arise in organizational contexts to compromise professional values and ideals, presumably due to organizational emphasis on profitability or other performance measures. Thus, organizational-professional conflict is in essence a type of ethical conflict brought about by organizational imperatives that are inconsistent with the ethical values of a profession.

Early accounting studies operationalized OPC as the outcome of the interaction of professional and organizational commitments (e.g. Aranya and Ferris, 1984), and assumed these two forms of commitment were inherently incompatible and thus should be negatively correlated. As observed by Shafer (2009), however, these studies provided weak and inconsistent results. Indeed, one of the most robust findings of this early literature was that professional and organizational commitments tend to be positively, rather than negatively, correlated (Hall et al., 2005). Shafer (2009) argued that, by definition, the primary source of OPC should be organizational demands that conflict with professional standards and ethical values, and that the presence of such demands should be reflected in public accountants' assessments of the ethical climate in their organization[7]. Consequently, ethical climates that are not supportive of professional values should give rise to feelings of conflict for individual employees[8]. Empirical results based on a sample of auditors provided strong support for these contentions, indicating that ethical climate perceptions explained a large percentage of the variation in organizational-professional conflict. We attempt to replicate this finding in the current study, as reflected in the following hypothesis:

H1. Organizational ethical climates that are more (less) supportive of professional/ethical values will be associated with lower (higher) levels of organizational-professional conflict[9].

Organizational and professional commitment

[7] In the current paper we use the term "public accountant(s)" to refer to professional employees of traditional public accounting firms, i.e. firms that provide auditing/assurance services and thus are required to employ licensed or qualified accounting professionals. Though such firms provide a broad array of accounting and business consulting services, as a general rule all professional employees (employees who provide services to clients, excluding administrative and clerical support staff) are required to adhere to accountants' codes of professional conduct.

[8] Though our arguments herein suggest that significant correlations should exist between ethical climate perceptions and organizational-professional conflict, we feel these two constructs are clearly distinct from a conceptual point-of-view. As we have defined it, organizational-professional conflict is a type of ethical conflict that should only arise if the perceived ethical climate in one's organization is inconsistent with professional ideals and values. For instance, if an employee is committed to professional values such as serving the public interest, and they also feel their firm has a similar commitment, little or no OPC should exist. The ethical conflict that employees may experience as a result of relatively unethical organizational climates is therefore a clearly distinguishable concept from the climates themselves.

[9] We state our hypotheses in general terms because we do not know a priori which particular ethical climate types will emerge based on our empirical analysis. Based on our earlier discussion, we anticipate that egoistic/individual and egoistic/local climates will clearly be less supportive of ethical behavior in a public accounting context, while benevolent/cosmopolitan and principled/cosmopolitan climates will be more supportive of ethical behavior.

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The issue of organizational commitment has concerned management researchers for many years[10]. Early studies of organizational commitment tended to view the construct as one dimensional in nature (e.g. Mowday et al., 1979; Porter et al., 1974). However, the work of Meyer and his colleagues (Meyer et al., 2002; Allen and Meyer, 1996, 1990; Meyer and Allen, 1984, 1991) seems to have established consensus that organizational commitment is multidimensional, comprising three distinct components:

1. affective commitment, which reflects identification with or emotional attachment to an organization;
2. normative commitment, or a feeling of obligation to the organization; and
3. continuance commitment, which arises from the high costs of leaving an organization, or the sense that no better options are currently available to the employee.

Empirical research has supported the validity of this three-component conceptualization, and it remains influential in studies of organizational commitment (e.g. Somers, 2009; Chang et al., 2007; Eby et al., 1999).

Several prior studies have recognized the potential relation between ethical climate and organizational commitment, although they have generally either adopted unidimensional commitment measures or focused specifically on affective commitment[11]. These studies have often relied on the idea of value congruence to argue that ethical climate will be a significant determinant of affective organizational commitment. For instance, Cullen et al. (2003, p. 128) argue that, among the prevailing value systems in any organization, ethical climates play a particularly significant role in shaping employees' perceptions of their overall work context. Thus, "the individual's perceptions of […] these morally relevant organizational values, practices and procedures should have strong effects on people's affective reactions to the organization". Consequently, given that most people prefer working for "ethical" organizations (Treviño et al., 1998), organizational contexts that are perceived as more ethical should increase emotional attachment to one's employer. Similarly, Treviño et al. (1998, p. 450) suggest that "Employees may feel more attached to and may identify more with the values of organizations that increase felt responsibility for others and encourage concern for employees and the community".

Empirical research has provided support for the conceptual link between ethical climate and organizational commitment. Based on their meta-analysis of ethical climate research, Martin and

[10] For a review of early research on organizational commitment, see Mathieu and Zajac (1990).

[11] For example, Treviño et al. (1998) used two of the three dimensions from O'Reilly and Chatman's (1986) organizational commitment instrument: identification with the attitudes and goals of the organization and internalization of the organization's values, both essentially measures of affective commitment. Cullen et al. (2003) used the 15-item Mowday et al. (1979) unidimensional measure of commitment. Ambrose et al. (2008) used five items from Allen and Meyer's (1990) affective commitment scale. Similarly, Shafer (2009) measured affective organizational commitment using seven items from the Meyer and Allen (1984) scale.

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Cullen (2006) concluded that instrumental (egoistic/individual and egoistic/local) climates were negatively associated with commitment, while caring (benevolent/individual and benevolent/local) and principled climates were positively associated with commitment. Treviño et al. (1998) similarly found that organizational cultures that were more supportive of ethical values were associated with higher levels of organizational commitment. In a public accounting context, Shafer (2009) found significant correlations between egoistic/individual, benevolent/cosmopolitan, and principled/cosmopolitan climates and affective organizational commitment. As anticipated, the egoistic climate was associated with lower levels of commitment, while the benevolent and principled climates were associated with higher commitment levels. We attempt to replicate this finding in the current study.

We also examine the relationship between organizational ethical climate and normative organizational commitment, or employees' sense of obligation to their employer. It seems intuitive that if employees feel their organization provides a supportive ethical environment they should also recognize that the maintenance of such an environment requires investment and effort on the part of the employer. Accordingly, their sense of normative obligation or loyalty to the organization should increase. However, as previously noted, empirical research on the relationship between ethical climate and organizational commitment has generally either adopted unidimensional commitment measures or focused specifically on affective commitment. This reflects a general paucity of research on factors associated with normative organizational commitment. Indeed, Meyer et al. (2002) concluded that no potential determinant of normative commitment had been investigated in a sufficient number of studies to warrant inclusion in their meta-analysis. Consistent with our argument, however, they do suggest that organizational policies or practices that encourage emotional attachment or affective commitment also seem likely to increase employees' feelings of responsibility or sense of obligation to their employer. This reasoning is reflected in the following hypothesis[12]:

H2. Ethical climates that are more (less) supportive of professional/ethical values will be associated with higher (lower) levels of affective and normative organizational commitment.

Research on commitment to occupations or professions has followed a pattern quite similar to that of organizational commitment. In their influential study, Meyer et al. (1993) noted that many researchers had recognized the intuitive notion that commitment may be directed toward different types of organizations or groups. For instance, employees may be committed to their local employing organization, to labor unions that represent their interests, and to their professions or

[12] Among the three components of organizational commitment, we felt that ethical climate would have the least relevance for continuance commitment, which arises from factors such as firm-specific training and experience and a perceived lack of alternative employment opportunities. Accordingly, we did not measure continuance commitment in the current study.

careers, and these commitments should be distinguishable (Meyer et al., 1993). Unfortunately, early studies of occupational or professional commitment (apparently following early research on organizational commitment) had largely viewed the construct as unidimensional (e.g. Morrow and Wirth, 1989; Aranya et al., 1981). Meyer et al. (1993) attempted to demonstrate the generalizability of their three-component commitment scale by changing the wording of the scale items to refer to occupations or professions rather than organizations. Based on surveys of nursing students and registered nurses, they found empirical evidence that the constructs of organizational commitment and professional commitment were distinct[13]. Their work has been influential, and many researchers continue to apply their three-component model of PC, comprising affective, normative and continuance commitment to one's profession (e.g. Chang et al., 2007; Snape and Redman, 2003).

It seems likely that public accountants' responses to the perceived ethical climate in their firm will depend on their level of professional commitment, in particular their level of affective commitment. Affective professional commitment reflects employees' emotional attachment to and identification with their profession (Lee et al., 2000; Meyer et al., 1993). Those possessing higher levels of affective commitment should therefore be more likely to internalize the values and goals of the profession (Hall et al., 2005). Prominent among the espoused values and goals of the public accounting profession are serving the public interest (in favor of personal or firm interests) and adhering to the spirit of professional codes of conduct (American Institute of Certified Public Accountants, 2009). An emphasis on serving the public interest and following professional codes of conduct are characteristic of benevolent/cosmopolitan and principled/cosmopolitan climates, respectively. In contrast, an emphasis on personal/firm interests is characteristic of instrumental climates. Consequently, employees with relatively high levels of affective professional commitment should perceive a greater degree of congruence (resulting in less conflict and more commitment) between their values and those of the organization if they feel the organization emphasizes benevolent/cosmopolitan and principled/cosmopolitan concerns, and a lack of such congruence if they feel the organization emphasizes instrumental concerns. Simply put, employees with relatively high levels of commitment to professional ideals should be more sensitive to climates that either reinforce or conflict with those ideals. In contrast, employees with relatively low levels of commitment to professional ideals should be less sensitive to ethical climates relevant to those ideals. For instance, if an employee has relatively little concern about whether his/her firm acts in the public interest or follows professional codes of conduct, they should not be highly sensitive to perceptions of weak benevolent/cosmopolitan or principled/cosmopolitan climates. For such employees, ethical concerns should simply be less salient than they are for employees

[13] Meyer et al. (1993) conducted a confirmatory factor analysis of a six-component model of commitment that included affective, normative and continuance commitment to employees' organization and profession (nursing). This six-component model provided a superior fit to the data when compared to a three-component model that combined the organizational and professional commitment items.

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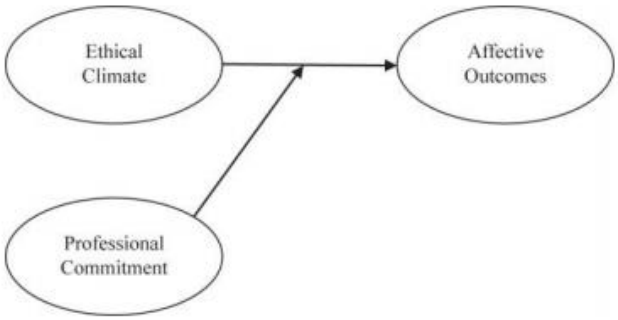
who are highly committed to professional ideals.

Thus, we suggest that affective professional commitment should moderate the relationship between perceived ethical climate and affective outcomes, as illustrated in Figure 3. While a number of prior studies have documented direct relationships between ethical climate perceptions and affective outcomes (Martin and Cullen, 2006), no prior study has examined this potential moderating influence of professional commitment on this relationship. Based on the foregoing discussion, we propose the following hypothesis:



H3. Affective professional commitment will moderate the relationships between perceived ethical climate and organizational-professional conflict, affective organizational commitment, and normative organizational commitment.

Effects of functional specialization and organizational rank

We also sought to examine the relationships between perceived ethical climate and both functional specialization and organizational rank within a public accounting firm. These relationships should be of interest to the management of such firms. For instance, although the role of auditors in serving the public interest has traditionally received primary attention in the accounting literature, all public accountants have an obligation to act in a way that does not harm the public. Thus, a finding that consideration of the public interest is given little emphasis in other areas of practice, such as taxation and consulting, would be indicative of problematic behavior that could discredit the firm and the profession as a whole. The relationship between ethical climate perceptions and organizational rank should also be of interest. If significant disparities in climate perceptions by rank were found, this could be a cause for concern. For example, if higher-level employees perceive the climate in the firm more positively, this could indicate that they are subject to a self-deception bias, or that they are unaware of the degree of pressure to compromise ethical standards existing at lower levels of the firm (due to factors such as time pressure). In either case, climates that create pressure for unethical behavior at lower levels of the firm may unknowingly be perpetuated.

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It is unclear whether differences in ethical climate will exist across the major functional specializations in a public accounting firm. One could speculate that a more positive climate will exist in the auditing practice, due to the fact that auditors are subject to more extensive and restrictive rules of conduct than other areas. For instance, auditors are subject to strict rules relating to issues such as independence from clients, contingent fees and the earning of commissions. Auditing has traditionally been public accounting's primary claim to "professional" status due to the heavy emphasis on auditors' role in protecting the public interest, and accordingly in most jurisdictions auditing is the primary focus of peer review and government inspection processes. On the other hand, most of the major scandals that have damaged the reputation of public accounting over the last 30 years have related to deficiencies in the quality of audits, and many observers of the accounting profession have lamented the decline in auditors' professionalism and ethics in recent years (e.g. Wyatt, 2004; Zeff, 2003a, b).

It appears that Parboteeah et al. (2005) is the only prior study that has investigated potential differences across functional specializations within public accounting firms. In their comparison of ethical climate perceptions between US and Japanese firms, they found no significant differences by functional specialization. However, their study pooled responses across several accounting firms, potentially confounding organizational and functional effects. Thus, it seems that the relative strength of the ethical climate among functional specializations in public accounting is essentially an open question, posed below:

RQ1. Will differences in perceived ethical climate exist among functional specializations within a public accounting firm?

Regarding organizational position, it could be argued that those at higher ranks, such as managers and partners, will tend to have a more positive assessment of the ethical climate because they are likely to feel more responsibility for the promotion of ethical policies in the firm and may tend to rationalize the appropriateness of the firm's climate. On the other hand, those in higher organizational positions have probably been exposed to more situations involving ethical pressures and necessary compromises, since they are the ones who ultimately have to negotiate and resolve disputes with clients. Parboteeah et al. (2005) found that in general organizational position had no significant relationships with US and Japanese public accountants' perceptions of ethical climate. Shafer (2009) found only one significant difference in climate perceptions by organizational position: managers felt there was more emphasis on the pursuit of self-interest (egoistic/individual climate) than did seniors. But again, both these studies pooled responses from multiple accounting firms, providing relatively weak tests of the influence of organizational position. Due to the lack of a clear basis for hypothesizing differences in perceived ethical climate by organizational position, we pose the following research question:

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RQ2. Will differences in perceived ethical climate exist by rank within a public accounting firm?

RESEARCH METHOD

Instrument

Participants responded to:

- 20 items from the Cullen et al. (1993) Ethical Climate Questionnaire designed to measure egoistic/individual, egoistic/local, benevolent/ cosmopolitan, principled/local and principled/cosmopolitan climates[14];
- a five-item organizational-professional conflict scale;
- measures of affective and normative organizational commitment and affective professional commitment adapted from Meyer et al. (1993);
- the impression management scale (Paulhus, 1991); and
- a demographic questionnaire.

The Ethical Climate Questionnaire, as refined and expanded by Cullen et al. (1993), has been widely used and appears to possess acceptable levels of reliability and validity[15]. The instrument consists of four statements relating to each of the theoretical ethical climate types. The organizational-professional conflict scale included two of the three items used by Shafer et al. (2002), along with three items added for the current study. The revised scale was reviewed for face validity by several accounting practitioners[16]. The Meyer et al. (1993) commitment measures have also been widely used in prior studies and generally found to possess strong reliability and validity. These scales include six items each for affective and normative commitment. The Paulhus (1991, 1984) impression management scale is often used to control for participants' propensity to bias their responses in a socially desirable direction. It is especially important to control for this

[14] As discussed previously, our primary interest in the current study was on the potential effects of egoistic/individual, egoistic/local, benevolent/cosmopolitan and principled/cosmopolitan climates. We also included the principled/individual climate in the instrument due to the facts that this climate type was recently documented in Chinese accounting firms by Shafer (2008); and legitimate questions exist regarding the nature of its relationship with our dependent measures.

[15] As noted by Martin and Cullen (2006, p. 178), the Ethical Climate Questionnaire is "the most fully developed, widely used, and accepted measure of ethical climate [developed] to date". Their meta-analytic results provide considerable support for the predictive validity of the instrument by demonstrating strong correlations between ethical climate perceptions and variables such as organizational commitment and dysfunctional organizational behaviors. Regarding the internal reliability of the instrument, note that the recent findings of Shafer (2008, 2009) provide support for the reliability of the instrumental (egoistic/individual and egoistic/local), benevolent/cosmopolitan, and principled/cosmopolitan climates in the context of Asian public accounting firms.

[16] We defined and discussed the concept of organizational-professional conflict with several partners and managers working in international accounting firms and then asked them to review our OPC measure to obtain feedback on whether the items appeared to be clear and understandable, and whether they appeared to be legitimate measures of organizational-professional conflict in public accounting practice. Minor revisions to the wording of some of the items were made based on these discussions.

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potential bias in studies of sensitive issues such as ethics (Randall and Fernandes, 1991). Indeed, Shafer (2009) found that impression management was highly correlated with Chinese public accountants' reports of organizational ethical climate, organizational-professional conflict, and affective organizational commitment[17].

We retained the original six-point scale for the Ethical Climate Questionnaire, anchored on "completely false" (1) and "completely true" (6). Six-point scales were also used for the organizational-professional conflict, organizational commitment, and professional commitment measures, anchored on "completely disagree" (1) and "completely agree" (6). We retained the original seven-point scale for impression management, anchored on "not true" (1) and "very true" (7).

Participants

The study was conducted in cooperation with top management of the Singapore office of an international accounting firm. The firm allowed us to survey all professional employees in the office. Thus, participants ranged from partners to entry-level staff, and included all the firm's primary functional specializations: auditing, taxation, advisory/ consulting, and accounting. The research instrument was reviewed in detail by firm partners, and was distributed with a cover letter from the office managing partner encouraging participation. The instrument was also accompanied by a cover letter from the researchers that assured participants their responses were anonymous and that the identity of the firm would be treated as strictly confidential. The survey was conducted in English, which was considered appropriate given the prevalent use of English in the Singaporean business community. Participants were instructed to complete the instrument without assistance, seal it in a provided envelope, and return it to firm personnel for collection by the researchers.

A total of 260 instruments were received, representing a response rate of over 90 percent. Twelve instruments were omitted due to incomplete or partial responses, resulting in an adjusted sample size of 248. Demographic information for participants is summarized in Table I. As indicated in the cross-tabulation by position and specialization, the sample was comprised of 141 auditors, 39 taxation specialists, 28 consultants, and 34 employees of the firm's accounting services group. Due to a relatively small number of partners in the firm, partners and managers were combined for

[17] In light of the findings of Shafer (2009), we measured impression management to control for potential omitted variable bias in our regression models. In this case the omitted variable of concern is participants' tendency to bias their reports of measures such as ethical climate, OPC and OC in a socially desirable direction. For instance, if a participant has a high propensity for such bias, they might overstate the extent to which the firm emphasizes the public interest (benevolent/cosmopolitan climate) and understate the extent of their organizational-professional conflict. Such bias would potentially result in an overestimation of the negative relationship between the benevolent/cosmopolitan climate and OPC. Inclusion of the impression management variable in our multiple regression models should at least partially control for the effects of social desirability response bias.

purposes of data analysis[18]. After merging these groups, there were 71 partners/managers, 82 seniors, and 89 staff. Participants' mean age was approximately 29, and mean experience was slightly less than five years. The mean ages and experience levels by position reported in Table I all appear reasonable. The sample included 158 females and 83 males; thus, females accounted for almost two-thirds of all professional employees in the office. Females accounted for the majority of the sample across all functional specializations and positions; however, the disparity was less pronounced for auditors and for partners/managers. These patterns appear reasonable because, due to family reasons, it seems likely that females would prefer positions such as taxation and accounting services that are typically less demanding than auditing in certain respects, such as the amount of travel required; and it appears that the heavy time demands of public accounting should lead to higher attrition rates for females. The great majority of participants described their nationality as either Singaporean or Malaysian. The sample also included small groups of Chinese, Indonesian, and other nationalities, which are grouped under the "other" category. Most participants possessed Bachelor's degrees, although approximately 10 percent indicated that they possessed neither a Bachelor's nor a Master's degree. The majority of these respondents, reported in the "other" category, described their degree status as either "diploma" (suggesting perhaps that they possessed an associate degree) or "ACCA" (suggesting that they had not completed a university degree but nevertheless had received or were pursuing professional certification). A total of 106 participants held CPA or equivalent certifications (e.g. Chartered Accountant), while 136 were not certified. As would be expected, the great majority of managers and partners (particularly in the auditing area) and a significant portion of the seniors were certified, while relatively few of the staff members had attained certification.

[18] Confidentiality considerations preclude us from disclosing the exact number of partners in the participating office; however, the number was well below the level that would warrant their analysis as a separate group.

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	Audit	Tax	Advisory	Acct	Total
Sample size					
Partner/manager	35	16	11	9	71
Senior	49	12	10	11	82
Staff	57	11	7	14	89
Total	141	39	28	34	242
Age					
Partner/manager	36.2	36.5	37.8	35.9	36.4
	(8.9)	(4.8)	(7.9)	(6.2)	(7.6)
Senior	26.7	28.2	27.5	28.0	27.1
	(2.5)	(3.8)	(2.8)	(4.4)	(3.0)
Staff	24.2	26.1	27.1	23.6	24.6
	(2.3)	(2.7)	(2.1)	(2.6)	(2.6)
Total	27.9	30.8	31.0	28.3	28.7
	(6.8)	(6.13)	(7.0)	(6.6)	(6.8)
Professional experience (years)					
Partner/manager	11.3	9.8	10.0	9.8	10.6
	(6.5)	(5.0)	(8.5)	(7.9)	(6.6)
Senior	3.2	3.4	2.8	4.4	3.4
	(1.1)	(1.9)	(1.4)	(2.5)	(1.6)
Staff	1.2	1.0	1.2	1.9	1.3
	(0.7)	(0.54)	(1.0)	(1.5)	(0.9)
Total	4.5	5.4	5.0	4.9	4.7
	(5.3)	(5.1)	(6.4)	(5.4)	(5.4)
Gender (female/male)					
Partner/manager	16/19	12/4	7/3	7/1	42/27
Senior	35/14	9/2	7/3	10/1	61/20
Staff	34/23	5/6	2/5	13/1	54/35
Total	85/56	26/12	16/11	30/3	157/82
Nationality (Singaporean/Malaysian/other)					
Partner/manager	15/15/5	11/2/1	9/1/0	9/0/0	44/18/6
Senior	16/25/8	7/1/1	7/3/0	9/1/1	39/30/10
Staff	23/21/13	9/1/1	6/0/1	13/0/1	51/22/16
Total	54/61/26	27/4/3	22/4/1	31/1/2	134/70/32
Degree (Bachelor's/Master's/other)					
Partner/manager	22/5/7	11/0/2	7/2/2	6/0/2	46/7/13
Senior	43/2/2	12/0/0	7/0/2	6/0/4	68/2/8
Staff	53/0/3	9/0/1	6/1/0	11/0/1	79/1/5
Total	118/7/12	32/0/3	20/3/4	23/0/7	193/10/26
Certification (CPA or equivalent/none)					
Partner/manager	34/1	10/6	9/2	6/3	59/12
Senior	17/32	5/7	4/6	4/7	30/52
Staff	13/44	3/8	0/7	1/13	17/72
Total	64/77	18/21	13/15	11/23	106/136

Notes: Numbers do not total 248 due to missing values. For the age and professional experience variables the top numbers are the mean values, while the numbers in parentheses are standard deviations. For gender the first number in each cell is the number of female participants, while the second number is the number of male participants. For nationality the first, second and third numbers in each cell represent the number of participants of Singaporean, Malaysian and other descent, respectively. For education the first, second, and third numbers in each cell represent the number of participants holding Bachelor's, Master's or other degrees, respectively. For certification the first number in each cell is the number of participants holding CPA or substantially equivalent certifications (e.g., Chartered Accountant), while the second number is the number of participants without such certifications

Scale construction

Exploratory principal components factor analyses were run for the ethical climate, organizational-professional conflict, and commitment measures, using a minimum cutoff of 0.4 for factor loadings. The Appendix reports the resulting items for these scales and their α reliabilities, along with the impression management items. Each of the scales will be discussed in turn.

The factor analysis for the ethical climate instrument revealed three interpretable factors with eigenvalues in excess of 1:

1. a benevolent/cosmopolitan factor that included all four of the original items and had a

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coefficient α of 0.79;

2. a principled/cosmopolitan factor that included the four original items plus one principled/individual item and had a coefficient α of 0.83; and

3. an instrumental factor that included five items representing the egoistic/individual and egoistic/local climates and had a coefficient α of 0.78.

Thus, all the coefficient α values for the climate scales were above the recommended cutoff of 0.70. The five organizational-professional conflict items all loaded strongly (loadings ranged from 0.74 to 0.87) on a single factor that explained approximately 70 percent of the variation. The α coefficient for this scale was also quite high at 0.87. Thus, the OPC scale, as revised for the current study, possesses strong internal reliability.

The organizational commitment measures (affective and normative) were analyzed as a single group. The analysis revealed that all affective commitment items loaded significantly on a single dimension; however, three items had significant cross-loadings with normative commitment and consequently were deleted. The resulting three-item scale for affective commitment had a strong α coefficient of 0.92. Five of the six normative commitment items loaded strongly on a single dimension with no significant cross-loadings. The sixth item failed to load significantly on either dimension and thus was deleted. The five-item measure of normative commitment also had strong internal reliability, with an α coefficient of 0.89. The analysis for the affective professional commitment scale revealed that three of the six items loaded significantly on a single factor that had a strong coefficient α of 0.89.

FINDINGS

Mean responses

Means by specialization and organizational position are presented in Tables II and III. As the data in Table II indicate, the associations between functional specialization and ethical climate perceptions were significant at conventional levels for the benevolent/cosmopolitan and instrumental climates[19]. In the case of the benevolent/cosmopolitan climate, post hoct-tests revealed that the differences between the taxation group and each of the other groups were significant at the 0.05 level, while none of the other groups were significantly different from one another. Thus, taxation specialists perceived significantly less emphasis in the firm on serving the public interest than any of the other groups, including consultants and accounting services professionals. In the case of the instrumental climate, taxation and accounting specialists felt there was more emphasis on instrumental concerns (pursuit of self-interest and/or company interests) in the firm. However, t-tests revealed that these differences among groups were not significant. Thus,

[19] All tests for differences in means reported in this section employed one-way ANOVA models to test the overall effects of the independent measures (functional specialization and organizational position), combined with post hoc tests of differences among groups using Bonferroni t-tests.

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in response to RQ1, the results indicate that the taxation area stands out as having the least perceived emphasis on serving the public interest (benevolent/ cosmopolitan climate). There were no significant differences by area in organizational-professional conflict or any of the commitment measures.

	Audit ($n = 141$)	Tax ($n = 39$)	Advisory ($n = 28$)	Acct ($n = 34$)	Total ($n = 242$)
BCC	4.40 (0.69)	3.85[a] (0.65)	4.38 (0.64)	4.36 (0.60)	4.31** (0.69)
PCC	4.97 (0.67)	4.68 (0.75)	5.05 (0.63)	4.95 (0.67)	4.93 (0.68)
INST	3.46 (0.79)	3.75 (0.68)	3.48 (1.01)	3.83 (0.80)	3.56* (0.82)
OPC	2.56 (0.98)	2.62 (0.80)	2.31 (0.81)	2.55 (0.78)	2.54 (0.91)
AOC	3.99 (1.08)	3.85 (1.01)	4.32 (1.15)	4.27 (1.19)	4.04 (1.10)
NOC	3.69 (0.95)	3.64 (0.87)	3.91 (1.04)	3.74 (0.90)	3.72 (0.94)
APC	4.63 (0.96)	4.52 (0.73)	4.64 (0.92)	4.69 (0.91)	4.62 (0.91)

Notes: Top numbers are means; numbers in parentheses are standard deviations. All responses were provided on six-point scales, where 6 represents stronger perceptions of climate types and higher levels of conflict and commitment. BCC, benevolent/cosmopolitan climate; PCC, principled/ cosmopolitan climate; INST, instrumental climate; OPC, organizational-professional conflict; AOC, affective organizational commitment; NOC, normative organizational commitment; APC, affective professional commitment. [a]Difference between taxation specialists and all other groups was significant at the 0.05 level. *Overall difference in means is significant at the 0.05 level or smaller based on a one-way ANOVA analysis; **overall difference in means is significant at the 0.01 level or smaller based on a one-way ANOVA analysis

Means by organizational position are presented in Table III. The results indicate that partners and managers felt there was less emphasis on instrumental concerns in the firm[20]. Partners and managers also believed their firm placed greater emphasis on following laws and codes, but this difference was not significant. Differences in perceived emphasis on the public interest were negligible. In light of these results, only an equivocal response can be offered to RQ2: partners/managers perceived less emphasis on instrumental or egoistic goals compared with seniors, but no other significant differences by position were found.

Highly significant differences by position were noted for organizational-professional conflict and the organizational commitment measures, with managers/partners reporting lower levels of conflict and greater commitment[21]. Prior research has shown that organizational-professional conflict among public accountants is negatively associated with organizational commitment, and that lower levels of commitment are associated with lower job satisfaction and higher turnover intentions (Shafer et al., 2002). Consequently, the pattern of results observed for these variables is

[20] t-Tests revealed that the difference between seniors versus managers/partners was significant at the 0.05 level, but the difference between staff and managers/partners was not significant.
[21] For each of these measures, t-tests revealed that the differences between managers/partners versus seniors and staff were significant at the 0.05 level, while no significant differences were found between seniors and staff persons.

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not surprising, since normal attrition processes (as well as ongoing organizational socialization efforts) should produce partners/managers who perceive less conflict and possess greater commitment.

	Staff ($n = 89$)	Senior ($n = 82$)	Manager/partner ($n = 71$)	Total ($n = 242$)
BCC	4.31 (0.66)	4.25 (0.79)	4.35 (0.59)	4.31 (0.69)
PCC	4.85 (0.63)	4.91 (0.72)	5.05 (0.62)	4.93 (0.68)
INST	3.60 (0.79)	3.70[a] (0.80)	3.38 (0.80)	3.56* (0.82)
OPC	2.69 (0.80)	2.62 (1.02)	2.26[b] (0.83)	2.54** (0.91)
AOC	3.94 (1.05)	3.84 (1.06)	4.41[b] (1.09)	4.04** (1.10)
NOC	3.57 (0.90)	3.57 (0.97)	4.02[b] (0.86)	3.72** (0.94)
APC	4.58 (0.84)	4.49 (0.98)	4.81 (0.86)	4.62 (0.91)

Notes: Top numbers are means; numbers in parentheses are standard deviations. All responses were provided on six-point scales, where 6 represents stronger perceptions of climate types and higher levels of conflict and commitment. BCC, benevolent/cosmopolitan climate; PCC. principled/cosmopolitan climate; INST, instrumental climate; OPC, organizational-professional conflict; AOC, affective organizational commitment; NOC, normative organizational commitment; APC, affective professional commitment. [a]Difference between seniors and managers/partners was significant at the 0.05 level. Difference between staff and managers/partners was not significant. [b]Difference between managers/partners and both seniors and staff persons was significant at the .05 level. No significant differences were found between seniors and staff. *Overall difference in means is significant at the 0.05 level or smaller based on a one-way ANOVA analysis; overall difference in means is significant at the 0.01 level or smaller based on a one-way ANOVA analysis

Correlation and regression analysis

Correlation results for the continuous measures are presented in Table IV[22]. The correlations are uniformly consistent with H1 and H2. Highly significant negative relations were observed between the benevolent/cosmopolitan and principled/cosmopolitan climates and organizational-professional conflict[23]. A particularly strong positive correlation was also found between the instrumental climate measure and OPC. Consistent with H1, these findings strongly suggest that

[22] The reported correlations are Pearson correlation coefficients.

[23] Due to the highly significant correlations among several of our measures, we performed supplemental analyses to obtain assurance that the constructs were independent. To test the relations among the ethical climate measures and OPC, we conducted an exploratory factor analysis that included all the ethical climate items as well as the OPC items. In the analysis, the OPC items all loaded significantly on a single dimension and had no significant cross-loadings with any of the climate measures. To verify the independence of the commitment measures, we ran an exploratory factor analysis that included all the organizational (affective and normative) and professional (affective) commitment items. The affective professional commitment items all loaded on a single dimension and had no significant cross-loadings with any of the organizational commitment items. We also performed a confirmatory factor analysis using LISREL that included the items for each of our seven continuous measures (AOC, NOC, APC, OPC, benevolent/cosmopolitan climate, principled/cosmopolitan climate, and instrumental climate). The seven-factor model provided a strong fit to the data, with a confirmed fit index (CFI) in excess of 0.95 and a root mean square error (RMSEA) below 0.08. Further, the combination of any of the seven variables (e.g. combining organizational and professional commitment measures) resulted in a significant deterioration of model fit. Taken together, these findings provide strong empirical support for the independence of the constructs measured.

climates that are supportive of professional/ethical values will be associated with lower levels of perceived conflict. Strong and highly significant correlations were also found between ethical climate and affective organizational commitment. As anticipated in H2, benevolent/cosmopolitan and principled/cosmopolitan climates were associated with higher degrees of emotional attachment to the organization, while an emphasis on instrumental concerns reduced commitment. Also in line with H2, the ethical climate measures were significantly correlated with normative organizational commitment. Though highly significant, the coefficients were smaller than in the case of affective commitment.

Consistent with Shafer (2009), we also found a strong negative correlation between organizational-professional conflict and affective organizational commitment. The negative relationship between OPC and normative organizational commitment was highly significant as well. The latter finding, which has not previously been documented, indicates that organizational pressure to compromise professional values is associated not only with lower levels of emotional attachment, but with lower levels of loyalty and perceived obligation to the organization as well.

Although not hypothesized, affective professional commitment was significantly correlated with all the other variables in Table IV. As discussed previously, numerous accounting studies have found that organizational and professional commitments tend to be positively correlated; thus, the significant correlations between these variables are not surprising. The significant negative correlation between professional commitment and organizational-professional conflict is also not surprising in light of the strength of the negative correlation between OPC and affective organizational commitment. More will be said about the relationship between the ethical climate variables and affective professional commitment in the Discussion section.

Highly significant correlations were found between the propensity for impression management and virtually all the other measures. These results suggest that our participants biased their reports of ethical climate, organizational-professional conflict, and affective organizational/professional commitment in a socially desirable direction. The only exception was the normative organizational commitment variable, which was not significantly correlated with impression management. As discussed previously, Shafer (2009) found that impression management was highly correlated with Chinese public accountants' reports of organizational ethical climate, organizational-professional conflict, and affective organizational commitment. More recently, Shafer and Simmons (2011) found that impression management influenced Chinese tax practitioners' reports of the ethical culture in their organization. In light of these findings, researchers should consider controlling for impression management when investigating the organizational ethical context in public accounting firms.

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	BCC	PCC	INST	OPC	AOC	NOC	APC	IM
BCC	–							
PCC	0.55 (0.00)	–						
INST	−0.23 (0.00)	−0.06 (0.34)	–					
OPC	−0.36 (0.00)	−0.28 (0.00)	0.54 (0.00)	–				
AOC	0.49 (0.00)	0.34 (0.00)	−0.54 (0.00)	−0.56 (0.00)	–			
NOC	0.33 (0.00)	0.21 (0.00)	−0.29 (0.00)	−0.24 (0.00)	0.46 (0.00)	–		
APC	0.42 (0.00)	0.42 (0.00)	−0.28 (0.00)	−0.37 (0.00)	0.50 (0.00)	0.22 (0.00)	–	
IM	0.29 (0.00)	0.21 (0.00)	−0.20 (0.00)	−0.29 (0.00)	0.30 (0.00)	0.09 (0.14)	0.27 (0.00)	–

Note: Top numbers are Pearson correlation coefficients; numbers in parentheses are significance levels based on two-tailed tests. BCC, benevolent/cosmopolitan climate; PCC, principled/cosmopolitan climate; INST, instrumental climate; OPC, organizational-professional conflict; AOC, affective organizational commitment; NOC, normative organizational commitment; APC, affective professional commitment; IM, impression management

Regression models for the effects of ethical climate on organizational-professional conflict, affective organizational commitment, and normative organizational commitment are presented in Tables V-VII. Impression management, area (specialization), and position are included as control variables in the models[24]. Table V reports the results for the sample as a whole. All models are highly significant and explain significant portions of the variation in the dependent measures. The model for organizational-professional conflict indicates that each of the three ethical climate dimensions was significant, but the instrumental climate had a particularly large effect. Thus, perceptions of an inordinate emphasis on the pursuit of self-interest or firm interest appear to be the most significant source of organizational-professional conflict. The model explains almost 40 percent of the variation in perceived conflict, and provides strong support for H1[25].

[24] Although several of the independent variables in Tables V-VII were significantly correlated, none of the variance inflation factors for these variables exceeded 1.6 in any of the reported models. Thus, it appears the results were not significantly biased by multicollinearity. Other demographic variables such as gender and education had no significant effects on the dependent variables in these regression models.

[25] Note that the impression management variable was also significant in this model, which implies that participants' reports of organizational-professional conflict were biased in a socially desirable direction. To investigate this issue further, we ran the regression model for OPC without including the impression management variable, and found that the association between each of the three ethical climate types and OPC were greater in this model. Thus, it does appear that participants' reports of OPC were biased in a socially desirable direction, and that inclusion of the impression management variable in the regression model partially mitigated the effects of such bias.

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	Standardized β	*t*-statistic	*p*-value
Effects of ethical climate on organizational-professional conflict (independent variables) [a]			
Benevolent/cosmopolitan climate	−0.136	−2.15	0.032
Principled/cosmopolitan climate	−0.132	−2.15	0.033
Instrumental climate	0.480	8.95	0.000
Impression management	−0.131	−2.45	0.015
Area	−0.095	−1.84	0.068
Position	−0.115	−2.23	0.027
Effects of ethical climate on affective organizational commitment (independent variables) [b]			
Benevolent/cosmopolitan climate	0.309	5.23	0.000
Principled/cosmopolitan climate	0.119	2.08	0.039
Instrumental climate	−0.452	−8.98	0.000
Impression management	0.082	01.63	0.104
Area	0.163	3.37	0.001
Position	0.088	1.82	0.070
Effects of ethical climate on normative organizational commitment (independent variables) [c]			
Benevolent/cosmopolitan climate	0.253	3.39	0.001
Principled/cosmopolitan climate	0.048	0.65	0.507
Instrumental climate	−0.207	−3.28	0.001
Impression management	−0.047	−0.74	0.461
Area	0.066	1.08	0.281
Position	0.153	2.52	0.012

Notes: [a]Model F-value = 26.1, model significance = 0.000, adjusted $R^2 = 0.384$; [b]model F-value = 35.4, model significance = 0.000, adjusted $R^2 = 0.465$; [c]model F-value = 7.8, model significance = 0.000, adjusted $R^2 = 0.147$

	Standardized β	*t*-statistic	*p*-value
Effects of ethical climate on organizational-professional conflict (independent variables) [a]			
Benevolent/cosmopolitan climate	−0.208	−2.33	0.021
Principled/cosmopolitan climate	−0.060	−0.72	0.472
Instrumental climate	0.425	5.48	0.000
Impression management	−0.108	−1.40	0.164
Area	−0.077	−1.04	0.299
Position	−0.156	−2.08	0.039
Effects of ethical climate on affective organizational commitment (independent variables) [b]			
Benevolent/cosmopolitan climate	0.427	5.31	0.000
Principled/cosmopolitan climate	0.082	1.10	0.272
Instrumental climate	−0.360	−5.12	0.000
Impression management	0.006	0.08	0.935
Area	0.202	3.05	0.003
Position	0.134	1.99	0.049
Effects of ethical climate on normative organizational commitment (independent variables) [c]			
Benevolent/cosmopolitan climate	0.264	2.51	0.013
Principled/cosmopolitan climate	0.036	0.37	0.712
Instrumental climate	0.120	−1.31	0.192
Impression management	0.010	0.11	0.911
Area	0.085	0.98	0.328
Position	0.200	2.26	0.026

Notes: [a]Model F-value = 13.4, model significance = 0.000, adjusted $R^2 = 0.375$; [b]model F-value = 21.2, model significance = 0.000, adjusted $R^2 = 0.498$; [c]model F-value = 4.1, model significance = 0.001, adjusted $R^2 = 0.132$

The model for affective organizational commitment produced particularly strong results, explaining almost half the variation in commitment. Both the benevolent/cosmopolitan and instrumental climates had highly significant effects in this model, and the effect of the principled/cosmopolitan climate was also significant[26]. The model for normative commitment explained a much lower percentage of the variation, but nonetheless was highly significant. As in

[26] Note that in this model and the remainder of the regression models presented, the impression management variable was not significant at conventional levels. This indicates that the regression results were not significantly impacted by the propensity for impression management.

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the case of affective commitment, the largest effects were for the benevolent/cosmopolitan and instrumental climates. The principled/cosmopolitan climate was not significant in this model. With this one exception, the models in Table V for affective and normative organizational commitment support H2.

To address the moderating influence of affective professional commitment on the relationships between ethical climate and our outcome measures, we divided the sample into high and low professional commitment groups. This was accomplished by first determining the median value for affective professional commitment for the sample as a whole and then classifying each participant as being either above or below the median. Separate regression models were then run for the high commitment and low commitment groups to test for differences in the observed relationships. This approach to testing for moderating influence is recommended by Pedhazur (1997). The resulting regression models are presented in Tables VI and VII. Although the overall results are mixed, an interesting pattern of interactions emerged. In particular, we found that the benevolent/cosmopolitan (public interest) climate had consistently significant effects for highly committed professionals, but no significant effects for employees with relatively low levels of professional commitment. The instrumental climate had highly significant effects on conflict and commitment for both groups, with one exception: its effect on normative commitment was not significant for the high professional commitment group.

	Standardized β	*t*-statistic	*p*-value
Effects of ethical climate on organizational-professional conflict (independent variables) [a]			
Benevolent/cosmopolitan climate	−0.025	−0.26	0.793
Principled/cosmopolitan climate	−0.201	−2.07	0.041
Instrumental climate	0.528	6.21	0.000
Impression management	−0.132	−1.63	0.107
Area	−0.155	−1.86	0.065
Position	−0.096	−1.19	0.237
Effects of ethical climate on affective organizational commitment (independent variables) [b]			
Benevolent/cosmopolitan climate	0.067	0.68	0.500
Principled/cosmopolitan climate	0.164	1.63	0.106
Instrumental climate	−0.497	−5.71	0.000
Impression management	−0.108	1.31	0.194
Area	0.176	2.05	0.042
Position	−0.008	−0.10	0.918
Effects of ethical climate on normative organizational commitment (independent variables) [c]			
Benevolent/cosmopolitan climate	0.199	1.84	0.068
Principled/cosmopolitan climate	0.061	0.55	0.583
Instrumental climate	−0.263	−2.75	0.007
Impression management	−0.139	−1.52	0.130
Area	0.032	0.34	0.736
Position	0.092	1.00	0.316

Notes: [a]Model F-value = 7.9, model significance = 0.000, adjusted $R^2 = 0.262$; [b]model F-value = 6.7, model significance = 0.000, adjusted = $R^2$0.230; [c]model F-value = 2.5, model significance = 0.029, adjusted $R^2 = 0.071$

The principled/cosmopolitan climate, which had the weakest effects in the overall models, had little impact on the high and low commitment groups. Again, there was one exception: the principled/cosmopolitan climate was associated with lower levels of organizational-professional conflict in the low professional commitment group. Taken together, these results provide partial

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support for H3.

DISCUSSION

Findings and further research

Our study supports and extends previous research on ethical climate in public accounting firms. Consistent with Shafer (2009), we found that supportive ethical climates are associated with significantly lower (higher) levels of organizational-professional conflict (affective organizational commitment). The findings of these two studies suggest that public accountants' perception of the ethical climate in their firm may be a significant determinant of both organizational-professional conflict and organizational commitment. Until recently, however, this relationship had neither been acknowledged nor investigated in the accounting literature. In the current study we extend this line of research to demonstrate that ethical climate also has a significant association with accountants' normative organizational commitment, or sense of obligation to their firm. These results imply that firms may reduce perceived organizational-professional conflict and increase organizational commitment by promoting a supportive ethical climate.

The current study is the first to document the moderating influence of affective professional commitment on the relationship between ethical climate and organizational-professional conflict and organizational commitment. Employees who were more highly committed to the public accounting profession reported lower levels of organizational-professional conflict and heightened levels of affective and normative commitment when they felt their firm was more focused on serving the public interest. No similar responses were found for employees with low levels of professional commitment. Thus, our findings suggest that the ideal of public service has resonance for committed professionals in public accounting firms. These results further imply that accounting firms' ability to retain professionally committed employees will to some extent depend on the firm's degree of adherence to professional ideals such as serving the public interest.

The principled/cosmopolitan climate was also significantly associated with organizational-professional conflict and affective organizational commitment for the sample as a whole, although these effects were relatively weak compared with the other climate types. These findings indicate that a rules-based approach to ethics is less likely to be associated with public accountants' attitudes than appeals to professional ideals such as serving the public interest.

Regardless of their level of professional commitment, participants appeared quite sensitive to the presence of an instrumental climate in their firm, one that emphasizes the pursuit of self-interest or firm interests. A perceived emphasis on instrumental concerns was associated with higher levels of organizational-professional conflict and reduced organizational commitment. For the sample as a

whole, the instrumental climate clearly had the strongest association with reported conflict and commitment, and this generally held true across both high and low commitment groups.

We also found that taxation specialists felt there was significantly less emphasis placed on serving the public interest in the firm. The accounting profession's claims to public service have traditionally emphasized the role of auditors in safeguarding the public from unscrupulous financial reporting practices. Nevertheless, tax advisors should also play a key public service role by ensuring that companies and individuals pay their fair share of taxes. It is perfectly acceptable and in fact expected that tax practitioners will serve as advocates for their clients in minimizing their tax obligations (American Institute of Certified Public Accountants, 2009). However, this has to be done within legally acceptable means, and overly aggressive tax minimization strategies can easily cross the line into illegal tax evasion. Indeed, much criticism has been leveled against international accounting firms in recent years for allegedly marketing illegal tax shelters to their clients (e.g. Scannell, 2005; Herman, 2004; Johnston, 2004).

Such accusations certainly raise concerns regarding the extent of professional tax advisors' commitment to the ideal of serving the public interest, and the findings of the current study add to those concerns. It seems quite interesting that tax practitioners' perceptions of the public interest climate in the firm stood out as lower than all other groups, including not only auditing but also the consulting and accounting groups. Consulting in particular is a commercially oriented practice that focuses on serving the client's needs, yet the consultants perceived more emphasis in the firm on serving the public interest than did the tax professionals. Since this is the first study to find significant differences in ethical climate perceptions across functional specializations in an accounting firm, future research should further investigate this issue.

The significant correlations between ethical climate and affective professional commitment also raise interesting questions for future research. To our knowledge, no prior research in management or accounting has examined the relationship between organizational ethical climate and professional commitment. The finding of strong correlations between ethical climate and affective professional commitment suggests that value congruence between organizations and individuals may enhance professional as well as organizational commitment. Aspiring accountants receive basic training in issues relating to professionalism and ethics during their university education, which along with early socialization processes (such as membership in university-based accounting societies) should instill some degree of professional commitment. Such commitment should continue to develop as a result of experience and socialization processes that occur on the job, and therefore the ethical climate in one's organization may be an important antecedent of professional commitment. For instance, if the organization places great emphasis on serving the public interest and meeting professional expectations, top managers serve as positive

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role models for professional/ethical conduct, and the organization rewards behavior that is consistent with professional ideals, employees' may be more likely to internalize the values and expectations of their profession and thus have higher levels of affective professional commitment. The psychic and monetary rewards that accrue from working in such an organization may also enhance individuals' sense of loyalty to the profession, i.e. normative professional commitment. Longitudinal studies would be particularly effective in obtaining a more nuanced understanding of the effects of organizational characteristics such as ethical climate on the development of organizational and professional commitment among public accountants.

Another interesting aspect of our study is that the ethical climates documented, and their relationship with organizational-professional conflict and affective organizational commitment, were quite similar to Shafer's (2009) findings in Mainland China. Because the current study was not cross-cultural, we did not develop a priori expectations regarding differences between accounting firms in China and Singapore. However, the two national contexts are clearly distinct. China is in a long period of transition from a state-controlled to a socialist market economy, and during this period of transition a great deal of concern has been expressed regarding the state of ethics both in the business community and in public accounting firms (Shafer, 2008). One of the factors often cited as a cause of the relatively poor state of business ethics in China is its weak legal system (e.g. Snell and Tseng, 2002). In contrast, Singapore is a relatively advanced and well-developed economy that is known in Asia for strong governance mechanisms and a strong legal system. Indeed, many large US corporations doing business in Asia establish their regional headquarters in Singapore due to its reputation for effective enforcement of the rule of law (Holder-Webb and Sharma, 2010). Thus, the relatively consistent results of this study and that of Shafer (2009) provide evidence for the robustness of the ethical climate construct and its association with affective outcomes such as organizational commitment among public accountants[27].

[27] One could argue, for instance, that in relatively "unethical" business cultures public accounting firms are likely to place less emphasis on professional ideals such as serving the public interest and adhering to the principles embodied in professional codes of conduct. It could also be argued that in such environments individual public accountants should be less concerned with ethical issues and thus less sensitive to the perceived ethical climate in their firm. If such arguments are valid, in less ethical business cultures there should be a lower likelihood of documenting benevolent/cosmopolitan and principled/cosmopolitan climates in accounting firms, and the relationships between employee perceptions of the ethical climate in their firm and affective responses such as organizational commitment should also be weaker. In comparing the findings of the current study with those of Shafer (2009), however, these patterns do not hold true. Both studies found evidence of benevolent/cosmopolitan and principled/cosmopolitan climates, and the association between these climates and organizational commitment actually appear to be somewhat stronger in the Shafer (2009) study. If we accept the common argument that the prevailing business culture in China is relatively weak, these findings seem to imply that this culture does not have a major impact on the ethics of public accountants. It may be the case that organizations of professionals are somewhat insulated from their surrounding cultural environment due to the heavy emphasis on ethics in professional training and the effects of more strict regulatory mechanisms such as professional codes of conduct and peer review or government inspection processes. As discussed herein, future studies should be carefully designed to address the association between national cultures and organizational ethical climates in public accounting.

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The impact of national culture on ethical climate in public accounting firms should be further investigated. Parboteeah et al. (2005) appears to be the only prior study that has directly addressed this issue. That study compared ethical climate perceptions in US and Japanese firms, finding that US public accountants perceived significantly stronger benevolent/local, benevolent/cosmopolitan, and principled/cosmopolitan climates. No significant difference was found in perceptions of the egoistic/individual climate. As previously noted, the Parboteeah et al. (2005) study pooled responses across multiple accounting firms. It seems that studies of climate perceptions across countries within the same international accounting firm would provide more meaningful tests of the effects of national culture. By holding the overall organizational context constant, this approach should achieve maximum equivalence on dimensions other than national culture. This type of study should also provide meaningful insights for the participating organization(s), since international accounting firms should be interested in maintaining uniform quality standards worldwide.

Another opportunity for further research would be to compare ethical climate perceptions across multiple firms in the same country/region. Prior studies have not obtained sufficiently large samples of public accountants from multiple firms within the same jurisdiction to allow meaningful comparisons of this nature. Such research could provide interesting insights into variations in ethical climate across firms and firm types. For instance, a comparison of the ethical climates in Big 4 and second-tier firms within the same region would provide evidence relating to the common assumption that larger firms provide higher quality professional services (which carries with it the implicit assumption that larger firms are more "ethical").

Limitations

Due to a number of limitations, the findings of this study should be interpreted with caution. The empirical results are based on measures of association; thus, it cannot be concluded if the relationships observed are causal in nature. If future experimental research can be designed to further support the hypothesized relationships, a case may be made for causality. The findings are also limited in that the non-auditing sub-groups (taxation, consulting and accounting services) were relatively small. This limits the degree of confidence in our finding that the taxation specialists perceived less emphasis in the firm on serving the public interest. Thus, future studies should address the issue of cross-functional differences in ethical climate perceptions using larger sample sizes. The sample ideally should have included more high-level staff, especially partners. This would have provided a stronger basis for conclusions regarding differences by rank in perceptions of ethical climate and affective outcomes, and may have altered the regression results since significant differences by rank in some of the dependent measures were observed. Results are also limited by potential social desirability response bias. We attempted to control for this bias

by measuring participants' propensity for impression management; however, like any proxy the impression management variable itself may not adequately capture the tendency to bias responses to ethically sensitive issues.

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