



Effects of ethical context on conflict and commitment among Chinese accountants

Effects
of ethical
context

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Abstract

Purpose – The purpose of this paper is to address the impact of organizational ethical context (ethical climate and ethical culture) and Machiavellianism on organizational-professional conflict (OPC) and affective organizational commitment (OC) among Chinese accountants. The paper also aims to test for interactive effects of ethical context and Machiavellianism.

Design/methodology/approach – The paper is based on a field survey of 89 professional accountants employed by companies operating in Mainland China.

Findings – Two aspects of the organizational ethical culture, expectations of obedience to authority and strong ethical norms/incentives, emerged as the dominant influences on both OPC and affective commitment. Strong negative correlations are observed between OPC and OC, and between Machiavellianism and OC. Contrary to expectations, the organizational ethical context had the greatest impact on OC among high Machiavellians. For low Machiavellians, OPC fully mediated the relationship between ethical context and OC, but no such mediation effects are found for high Machiavellians.

Originality/value – This is the first study of the relationships among ethical context, OPC and OC among industry accountants in China, and the first study of the effects of Machiavellianism on these relationships. The results generally support our contention that organizational ethical context will be a key determinant of OPC and OC. The fact that weaker ethical cultures were strongly associated with increased conflict and decreased commitment suggests that managers of accounting/auditing departments should take a proactive approach to developing and nurturing positive or supportive cultures. The differences in results for high and low Machiavellians also raise interesting questions that should be addressed in future research.

Keywords Accountants, Ethics, China, Conflict

Paper type Research paper

Introduction

Studies in management and business ethics have demonstrated that employee perceptions of the prevailing ethical norms or practices in their organization, referred to as the organizational ethical climate or culture, often have significant effects on both ethical decisions and affective (emotional) outcomes such as organizational commitment (OC) (Treviño *et al.*, 1998; Parboteeah *et al.*, 2005; Martin and Cullen, 2006)[1]. However, the ethical context in organizations has received only limited attention in the accounting literature. The current study is an initial attempt to examine the impact of organizational ethical climate (Victor and Cullen, 1987, 1988) and ethical culture (Treviño *et al.*, 1998) on affective outcomes among industry



accountants in the People's Republic of China. Our investigation focuses on two potentially significant and related consequences of the perceived ethical context on industry accountants: organizational-professional conflict (OPC) and affective OC. Managers of accounting and auditing departments should be aware of the potential dysfunctional effects of a weak organizational ethical context, because a proactive approach to the development and maintenance of a supportive ethical context may reduce such effects (Grojean *et al.*, 2004; Schminke *et al.*, 2007).

As observed by Shafer (2009), most prior studies of OPC among accountants focused primarily on two antecedents of OPC: professional and OC (Aranya and Ferris, 1984; Harrell *et al.*, 1986). However, these studies provided weak and inconsistent support for the effects of commitment measures on perceived conflict. Shafer (2009) found that auditors' perceptions of the ethical climate in their organization had highly significant effects on both OPC and affective OC. The current study extends this line of research to industry accountants in China, and in addition to ethical climate examines the effects of the Treviño *et al.* (1998) measure of organizational ethical culture on OPC and OC. We also examine the relationship between Machiavellianism and OC, and the potential interactive effects of Machiavellianism and ethical context on conflict and commitment.

The following section reviews relevant literature and develops the research hypotheses. This is followed by an overview of the research methodology and presentation of the findings. The paper concludes with a discussion of the implications of the findings.

Literature review and hypothesis development

Ethical climate

Victor and Cullen (1988, p. 101) define organizational ethical climate as "the prevailing perceptions of typical organizational practices and procedures that have ethical content." Ethical climate comprises general and pervasive characteristics of organizations which could affect a broad range of decisions and attitudes (Victor and Cullen, 1987, 1988), and a large body of empirical research supports the contention that employee perceptions of the ethical climate in their organization affects ethical decisions and affective outcomes such as OC (Martin and Cullen, 2006).

Following Victor and Cullen (1987, 1988), this study uses a two-dimensional theoretical typology of ethical climate. The first dimension is ethical criteria, which includes three main ethical theories: egoism, benevolence, and principle. These three ethical theories differ in their assumptions about basic motives. Egoism focuses on maximizing one's own interests, benevolence focuses on maximizing joint interests, while principle focuses on adherence to ethical norms or principles. The second dimension includes three loci of analysis: individual, local, and cosmopolitan. This dimension represents the level of analysis or referent groups considered when making ethical decisions, which may range from the individual to the broadest of social systems. The combination of these two dimensions provides a 3×3 matrix with nine theoretical climate types, as shown in Table I.

Victor and Cullen (1987, 1988) developed the ethical climate questionnaire (ECQ) to empirically test the existence of these nine climate types. Based on an exploratory factor analysis of the ECQ items, Victor and Cullen (1987) found six rather than nine distinct factors. Victor and Cullen (1988) reported similar results, finding that the items

loaded on only five of the nine theoretical climate types. Based on their review of the many studies of ethical climate over the past two decades, Martin and Cullen (2006) concluded that the common pattern has been broadly consistent with these early results, with many studies identifying five distinct climate types: an “instrumental” climate that combines elements of the egoistic/individual and egoistic/local climates, a “caring” climate that combines the benevolent/individual and benevolent/local, and three distinct principled climates that correspond with Victor and Cullen’s (1987, 1988) initial conceptualization. Despite the fact that most empirical studies have not found support for all nine of the distinct climate types[2], many authors continue to use Victor and Cullen’s (1987, 1988) seminal theoretical framework as a basis for discussion of organizational ethical climate. Indeed, as observed by Martin and Cullen (2006, p. 175), the ethical climate theory developed by Victor and Cullen is arguably one of the most influential theoretical frameworks in the business ethics literature. These authors conducted a review and meta-analysis of over forty studies from 1987 to 2005 that relied on the Victor and Cullen typology of ethical climates. In light of its widespread influence, we adopt the Victor and Cullen framework in our study.

Ethical culture

Treviño (1990) defined ethical culture as a subset of organizational culture comprising various “formal” and “informal” controls that may encourage either ethical or unethical behavior. Examples of formal cultural systems include organizational policies, leadership qualities, authority structures, and reward systems. Informal systems, on the other hand, include factors such as organizational norms or expectations and peer behavior (Treviño *et al.*, 1998). Organizational ethical culture is similar yet distinct from the ethical climate construct developed by Victor and Cullen (1987, 1988). Ethical climate may be viewed as more ideational in nature, relying on a theoretical typology of ideas such as organizational concern for the well-being of employees or society, and the degree of emphasis on following laws and codes of conduct (Victor and Cullen, 1987, 1988). As noted by Treviño *et al.* (1998, p. 453), ethical climate represents “[. . .] broad normative characteristics and qualities that tell people what kind of organization this is – essentially what the organization values.” In contrast, the concept of ethical culture is more phenomenal, focusing on employee perceptions of organizational practices such as rewards (punishments) for ethical (unethical) behavior (Treviño *et al.*, 1998).

Treviño *et al.* (1998) suggest that, by establishing what is considered legitimate or acceptable within an organization, the ethical culture may affect both employee attitudes and behavior. They developed an instrument to measure ethical culture, and conducted a field survey of 318 alumni from two private universities to assess the

Ethical criterion	Locus of analysis		
	Individual	Local	Cosmopolitan
Egoism	Self-interest	Company profit	Efficiency
Benevolence	Friendship	Team interest	Social responsibility
Principle	Personal morality	Company rules and procedures	Laws and professional codes

Source: Victor and Cullen (1988)

Table I.
Theoretical climate types

impact of culture in organizational settings. The results indicated that the instrument tapped three distinct components of ethical culture:

- (1) the general ethical environment, including the extent to which top managers serve as ethical role models and ethical (unethical) behavior is rewarded (punished);
- (2) organizational demands for obedience to authority; and
- (3) ethics code implementation.

The results further indicated that both the general ethical environment and expectations of obedience to authority had significant effects on the extent of observed unethical behavior in participants' organizations, as well as OC. Thus, the Treviño *et al.* (1998) ethical culture instrument shows promise as a predictor of employee attitudes and behavior. However, few subsequent studies have employed this instrument, and it has not been used in an accounting context.

Organizational-professional conflict and organizational commitment

Accounting researchers have long recognized that a professional's behavior is believed to be influenced by the common code of ethics among their peers; thus, professionals are subject to ethical expectations independent of and perhaps conflicting with the expectations of their employer (Aranya *et al.*, 1981; Aranya and Ferris, 1984; Harrell *et al.*, 1986; Covalleski *et al.*, 1998; Shafer *et al.*, 2002; Shafer, 2009). In their influential study, Aranya and Ferris (1984) refer to this potential discord between professional and organizational expectations as OPC. Aranya and Ferris (1984) suggested that the organizational and professional orientations of professional employees were traditionally considered to be conflicting on the assumption of incompatibility of the professional and organizational-bureaucratic value systems. OPC appears to be an under-studied area in accounting. For instance, Hall *et al.* (2005) identify only seven prior studies of OPC in the accounting literature. In general, these studies have been characterized by inconsistencies in both their theoretical assumptions and empirical findings.

Aranya and Ferris (1984) assumed that organizational and professional commitment are the two primary antecedents of OPC, and that the inherent conflict between these two forms of commitment would lead to OPC. Based on a survey of over 2,000 US and Canadian accountants, however, they found that the commitment variables were positively correlated and thus not necessarily conflicting. They also concluded that the interaction of organizational and professional commitment did not account for a significant portion of reported OPC.

Harrell *et al.* (1986) retested the relationships among these three variables with a sample of 59 internal auditors. Following Aranya and Ferris (1984), they hypothesized that the interaction of organizational and professional commitment would lead to OPC. They also hypothesized that professional (organizational) commitment would be negatively (positively) correlated with OPC. Their results supported each of these hypotheses. On the contrary, based on a sample of 201 management accountants, McGregor *et al.* (1989) found that OC was negatively, rather than positively, correlated with OPC. The relationship between professional commitment and OPC was not significant. In a more recent study, Shafer *et al.* (2002) hypothesized that higher levels of professionalism among certified management accountants would lead to higher

levels of OPC, which would in turn lead to lower levels of affective OC and job satisfaction and higher turnover intentions. A structural equations model supported each of these hypotheses. Consistent with the findings of McGregor *et al.* (1989), Shafer *et al.* (2002) found a very strong negative relationship between OPC and OC.

The variation in theoretical assumptions and results in these prior studies gives us an indication that other variables may have a significant impact on OPC. These past studies all focused on individual differences in commitment variables. However, following Shafer (2009), we argue that the primary determinants of OPC should be organizational factors such as the perceived ethical context[3] OPC is a measure of conflicting expectations from one's organization and one's profession. The primary source of such conflict should be perceived demands or expectations from the organization to violate professional norms or values. Individual differences in variables such as professionalism and professional commitment may interact with the organizational ethical context to create OPC, but the primary source of OPC should be the organizational context that professionals find themselves in. Thus, in the current study we were interested in investigating the effects of the perceived ethical context on OPC.

With respect to ethical climate, a perceived egoistic or instrumental climate should be positively associated with OPC because in egoistic climates, more emphasis is placed on the pursuit of self-interest (egoistic/individual) or firm-interest (egoistic/local). Such climates should conflict with professional norms and values, which emphasize that professional accountants working for any type of organization have an obligation to be impartial and objective, to serve the public interest, and to follow the ethical standards of the profession. Thus, *ceteris paribus*, egoistic or instrumental climates should be associated with higher levels of OPC. In contrast, climate types that are supportive of or consistent with professional standards, such as benevolent/cosmopolitan and principle/cosmopolitan climates, should be negatively associated with OPC. Similarly, if an organization has an ethical culture which provides stronger support for the ethical norms or expectations of the accounting profession, accountants should perceive lower levels of OPC. On the contrary, if the ethical culture does not support ethical conduct, professionals should perceive higher levels of OPC. This reasoning is reflected in the following hypotheses:

H1a. Self-interest (egoistic/individual) and firm interest (egoistic/local) climates will be positively associated with OPC, while public interest (benevolent/cosmopolitan) and principled (principle/cosmopolitan) climates will be negatively associated with OPC.

H1b. An ethical culture which provides stronger (weaker) support for ethical/professional behavior will be negatively (positively) associated with OPC.

Employees' level of commitment to their organization has long been recognized as a significant concern of management (Porter *et al.*, 1974; Aranya *et al.*, 1981; Aranya and Ferris, 1984). Based on the influential work of Meyer and Allen (1984, 1991), organizational behavior researchers commonly recognize three distinct components of OC: affective commitment, or emotional attachment to the organization; normative commitment, or a perceived obligation to remain with the organization; and continuance commitment, which arises from the perceived costs associated with

leaving the organization (Snape and Redman, 2003; Chang *et al.*, 2007; Erben and Güneser, 2008; Williamson *et al.*, 2009; Somers, 2009).

Many prior studies have assumed that a supportive ethical context in an organization will lead to higher levels of OC “[. . .] based upon the notion that most people will feel more attached and committed to an organization if they perceive that the organization supports and encourages ethical conduct and discourages unethical conduct” (Treviño *et al.*, 1998, p. 453). In support of this contention, Treviño *et al.* (1998) point out that popular press surveys indicate that employees generally prefer working for ethical organizations. Indeed, based on their meta-analysis of studies of ethical climate, Martin and Cullen (2006) conclude that climates that are more supportive of ethical values and behavior lead to higher levels of OC. Treviño *et al.* (1998) also found that perceptions of the ethical culture in one’s organization had significant effects on employee commitment. More specifically, they found that the general ethical environment (obedience to authority) had a significant positive (negative) association with OC. Ethical context appears to have particular relevance for affective OC, since a positive or supportive climate should create “positive affect” or emotional attachment to the organization among its members (Martin and Cullen, 2006, p. 181). Consequently, we focused on affective OC in our study.

The relationship between ethical context and OC should arguably be stronger for professional employees such as accountants. Aspiring accountants receive formal training in professional ethics during their university education, and professional licensing examinations test such knowledge. Thus, during the course of their education and training an attempt is made to instill in accountants an appreciation of the ethical standards and public responsibilities of their profession[4]. Climates that are perceived as promoting self-interest or firm interest over professional ideals and standards should be associated with lower levels of affective commitment. Climates that are supportive of professional ideals and standards, in particular benevolent/cosmopolitan and principle/cosmopolitan climates, should increase commitment to the organization. Organizational ethical cultures that are perceived as more supportive of professional values and ideals should also be associated with higher levels of affective OC. Thus, we propose the following hypotheses:

H2a. Self-interest (egoistic/individual) and firm interest (egoistic/local) climates will be negatively associated with affective OC, while public interest (benevolent/cosmopolitan) and principled (principle/cosmopolitan) climates will be positively associated with affective OC.

H2b. An ethical culture which provides stronger (weaker) support for ethical/professional behavior will be positively (negatively) associated with affective OC.

Based on the results of previous accounting studies (Shafer, 2009; Shafer *et al.*, 2002; McGregor *et al.*, 1989), we also anticipated a negative association between OPC and affective OC. This contention is consistent with the organizational behavior literature on person-organization fit, which indicates that if employees perceive a close fit between their personal values and the organization’s values, OC will be greater (Finegan, 2000; Kristof, 1996; Chatman, 1991, 1989). This line of reasoning is reflected in the following hypothesis:

H3. OPC will be negatively associated with affective OC.

Machiavellianism

The Machiavellianism construct as initially developed by Christie and colleagues described individuals who possess cold and calculating personalities, are willing to use guile and deceit in the single-minded pursuit of “winning,” and have relatively little concern for conventional standards of ethics or morality (Christie and Geis, 1970; Christie, 1970; Geis *et al.*, 1970). Machiavellianism has been widely studied in business ethics, and research indicates that individuals who score high on Machiavellianism are more likely to engage in unethical behavior across a variety of business settings. For instance, Ghosh and Crain (1995), using undergraduate business students as surrogates for taxpayers, found that high Machiavellians were more likely to engage in dishonest reporting. Ross and Robertson (2000) reported that high Machiavellian salespeople were more likely to mislead potential clients. Wirtz and Kum (2004) concluded that high Machiavellian consumers were more likely to cheat on product service guarantees, and Winter *et al.* (2004) found that high Machiavellians were more likely to view violations of the intellectual property and privacy rights of others as acceptable. Recent accounting research also indicates that high Machiavellianism is associated with a propensity for professional tax practitioners to condone overly aggressive tax avoidance strategies (Shafer and Simmons, 2008).

High Machiavellians also tend to exhibit a “cool syndrome,” being less affected by social pressure and more emotionally detached than low Machiavellians (Geis and Christie, 1970). McHoskey *et al.* (1998) characterize high Machiavellians as possessing glibness and superficial charm, callousness, a lack of empathy, and relatively low levels of genuine affection for others. It seems quite likely that a natural inclination towards traits such as callousness, emotional detachment, and a lack of affection should extend to one’s work organization. Thus, this discussion clearly suggests that high Machiavellians should possess relatively low levels of affective commitment to their organization. To our knowledge, however, no prior study has theorized a relationship between Machiavellianism and OC. Although it was not the primary focus of his study, consistent with our argument van der Westhuizen (1991) reported a significant negative correlation between Machiavellianism and OC among the USA and South African sales managers. Becker and O’Hair (2007) recently reported that when high Machiavellians engage in positive organizational citizenship behavior, it is more likely to be motivated by a desire to portray a positive image of themselves than genuine concern for the organization or pro-social values. The foregoing discussion suggests the following hypothesis:

H4. High (low) Machiavellians will possess lower (higher) levels of affective OC.

We also felt that Machiavellianism and the organizational ethical context would have potential interactive effects on OPC and affective OC. OPC arises due to perceived incompatibility between professional standards and organizational demands, i.e. it should be the result of a perceived organizational ethical context that is not supportive of or consistent with the ethical standards or ideals of the profession. Thus, as previously hypothesized, perceptions of a more negative or unethical context in one’s organization should lead to higher levels of OPC and lower levels of affective commitment. High Machiavellians, being less concerned with conventional standards of morality and more resistant to social influence, should be less influenced by the perceived ethical context in their organization. Consequently, they should be less likely

to experience OPC and reduced OC in response to a perceived negative ethical context. High Machiavellians should also be less responsive to a perceived positive ethical context. Low Machiavellians, being more concerned with ethical issues, should experience relatively lower (higher) levels of OPC (OC) in response to a perceived positive ethical context. This argument leads to the following hypothesis:

- H5. The relationships among ethical context, OPC, and affective OC will be weaker (stronger) for high (low) Machiavellians.

Research method

Survey instrument

For purposes of the current study, participants completed ethical climate and ethical culture scales, measures of OPC and affective OC, the Machiavellianism scale, and a demographic questionnaire. The scale items are illustrated in the Appendix, and each of the measures will be discussed in greater detail below.

To assess the perceived ethical climate in their organization, participants completed the ECQ as refined by Cullen *et al.* (1993). This scale contains 36 items, with four items representing each of the nine theoretical climate types. Participants indicate the extent to which each of the 36 statements is true for their organization on a six-point scale anchored on “completely false” (1) and “completely true” (6). The ethical climate scale has been used extensively in prior studies, and generally found to possess acceptable levels of reliability and validity (Martin and Cullen, 2006). Participants also completed the ethical culture scale developed by Treviño *et al.* (1998). Based on their survey of over 2,000 university graduates, Treviño *et al.* (1998) found that this scale possessed relatively high levels of reliability. The version of the scale used in the current study included 15 items and used the same six-point scale used for the ECQ. We excluded the ethical culture items relating to organizational codes of ethics because local Chinese firms seldom have a formal code of ethics.

We used the three-item version of the OPC scale adapted from the original Aranya and Ferris (1984) instrument by Shafer *et al.* (2002). Prior studies have found that this version of the scale possesses acceptable levels of internal reliability among samples of professional accountants (Shafer *et al.*, 2002; Shafer, 2009). The OC scale was developed by Meyer and Allen (1991), and has been widely used in previous studies. Both the OPC and OC scales used a six-point likert format anchored on “completely disagree” (1) and “completely agree” (6). The Machiavellianism IV scale developed by Christie and Geis (1970) was used to measure Machiavellianism. This scale has been widely used in research in the social sciences and business ethics. The instrument consists of 20 items (see Appendix), with responses provided on seven-point scale from “disagree strongly” (1) to “agree strongly” (7). A Machiavellianism score is computed for each participant by summing their responses and adding a constant of 20 to the summation. Thus, scores may range from 20 to 160. The demographic information included age, gender, professional certifications, type of enterprise worked for (local unlisted, local listed, or multinational company), position, educational background, and accounting experience.

The research instrument was translated from English to Chinese using a back-translation procedure. Two graduate business students whose native language is Chinese first translated the English version to Chinese, and slight adjustments were made to the initial translation to the mutual satisfaction of the two translators.

After this, a professional translator performed the back-translation of the Chinese instrument into English. The original and back-translated English versions were compared and adjusted, and the final Chinese version was agreed upon by all translators. The instrument was reviewed by three professional accountants in Hong Kong, and minor changes were made to improve clarity-based on the feedback received from these reviews.

Sample and data collection

The instrument was distributed to staff accountants, supervisors and managers employed by Chinese companies operating in Shenzhen and Shanghai. A cover letter stating that all responses would be treated as strictly confidential and the data would be used only for academic research was attached to each survey instrument. We visited each company and delivered the instrument to participants directly. Participation in the survey was voluntary. After completion of the survey, participants sealed the instrument in an envelope provided and returned it directly to the researchers.

We initially contacted 16 companies through personal contacts, and 15 of the companies agreed to let us distribute our survey instrument to accounting employees. Although we used a non-random sample, in deciding what companies to contact we attempted to diversify the sample to the extent possible by including companies from different industries as well as both multinational and local Chinese companies. The participating companies were from various industries (three from high-technology, nine from traditional manufacturing, two from financial services, and one from retail). Five companies were multinationals, while ten were local Chinese companies. We distributed a total of 120 instruments, and received 89 useable responses. Thus, the response rate was approximately 74 percent, which is relatively high for survey research[5].

Table II provides a summary of demographic data. As indicated in the table, the mean age of participants was 34, and they had an average accounting experience of 5.5 years. Slightly over half the participants (56 percent) were female. Approximately, 67 (33) percent were employed by Chinese (multinational) companies. Over 60 percent held bachelors or

Sample size	89
Mean age	34
Mean accounting experience (years)	5.5
<i>Gender</i>	
Male (%)	43.8
Female (%)	56.2
<i>Organization type</i>	
Local company (%)	52.8
Local listed company (%)	14.6
Multinational company (%)	32.6
<i>Position</i>	
General and senior staff (%)	62.9
Supervisor and manager (%)	37.1
<i>Certificate</i>	
CPA/CA (%)	73
None (%)	27

Table II.
Demographic summary

masters degrees and more than 70 percent held a professional accounting certification (e.g. certified public accountant (CPA) or chartered accountant (CA)).

Findings

Preliminary analysis

Exploratory principal components factor analyses were used to test the dimensionality of the ethical climate and culture scales. The results for ethical climate revealed two interpretable factors with eigenvalues in excess of one. The first factor included three of the four principle/cosmopolitan items (“The first consideration is whether a decision violates any law,” “People are expected to comply with the law and professional standards over and above other considerations,” and “In this organization, people are expected to strictly follow legal or professional standards”) and one of the principle/local items (“Everyone is expected to stick by organizational rules and procedures”). The internal reliability of these four items, based on coefficient alpha, was relatively strong at 0.79. The other factor included two of the benevolent/cosmopolitan items (“People in this organization have a strong sense of responsibility to the outside community” and “People in this organization are actively concerned about the public interest”). The coefficient alpha for these two items was marginally acceptable at 0.68. Based on these results, we were only able to perform hypothesis tests for the benevolent/cosmopolitan and principle/cosmopolitan climate types.

The factor analysis for ethical culture revealed four factors with eigenvalues in excess of one. However, one of these factors (“guidance/rewards”) was comprised of three items that all had significant cross-loadings on other factors and thus was excluded from further analyses. We carefully examined the common characteristics of the items which loaded on each of the three remaining factors. The first factor included three items designed by Treviño *et al.* (1998) to measure organizational expectations for obedience to authority (“This organization demands obedience to authority figures, without question,” “People in this organization are expected to do as they’re told,” and “The boss is always right in this organization”) and consequently will be referred to as “obedience to authority”. The second factor included five statements relating to ethical norms set by top management and rewards for ethical behavior (“The top managers of this organization represent high ethical standards,” “People of integrity are rewarded in this organization,” “Top managers of this organization regularly show that they care about ethics,” “Ethical behavior is the norm in this organization,” and “Top managers of this organization guide decision making in an ethical direction”). This factor will be referred to as “ethical norms.” The third factor included two statements relating to penalties or punishment for unethical behavior (“Penalties for unethical behavior are strictly enforced in this organization” and “Unethical behavior is punished in this organization”), and thus will be referred to simply as “penalties.” The coefficient alpha reliabilities for the obedience to authority, ethical norms, and penalties factors were 0.87, 0.81, and 0.93, respectively, indicating relatively strong internal reliabilities.

Principal components factor analysis was also conducted for the OPC and OC scales. Both analyses confirmed that all items in these scales loaded on a single factor. However, the coefficient alpha for the three-item OPC scale was only 0.52. After deleting the item with the lowest factor loading, (“My current employment situation gives me the opportunity to express myself fully as a professional”), the reliability increased to 0.68 and thus was marginally acceptable. The coefficient alpha for the OC

scale was 0.88, indicating strong internal reliability. Scores for each of the continuous measures were constructed by taking the mean of the related items.

Correlation and analysis of variance were used to test the effects of the demographic variables. No significant associations were found between the dependent measures and gender, education level, professional experience or age. We did find that organization type had a significant impact on OC; in this case accountants working for local companies had higher levels of commitment than those employed by multinationals. This result may be due to the fact that in China, employees of multinational companies normally earn higher salaries but have a much heavier workload compared to employees in local companies. Thus, they may view their employment situation in a more instrumental fashion and feel less emotionally attached to their organization.

Correlation analyses for the primary variables of interest are reported in Table III. As shown in the table, the correlations for OPC and affective OC were generally supportive of the hypotheses. Consistent with *H1a*, there was a highly significant negative correlation between the benevolent/cosmopolitan climate and perceived OPC. However, the relationship between OPC and the principle/cosmopolitan climate was not significant. Two of the three ethical culture factors also exhibited highly significant relationships with OPC, as anticipated in *H1b*. The correlation between OPC and the obedience to authority factor was highly significant and positive. This suggests that organizational demands for obedience to authority conflict with professional accountants' expectations of some degree of autonomy in decision making. The ethical norms factor had a highly significant negative correlation with OPC, which is consistent with the intuitive proposition that an organizational culture in which high ethical standards are emphasized and rewarded significantly reduces perceived conflict between organizational and professional expectations. With the exception of the principle/cosmopolitan climate, all correlations among the ethical context measures and affective OC were highly significant. As anticipated in *H2a*, a perceived organizational emphasis on the public interest (benevolent/cosmopolitan climate) was associated with higher levels of commitment. Also consistent with expectations (*H2b*), the obedience to authority (ethical norms) factor was associated with lower (higher)

	OPC	OC	OA	EN	PEN	BCC	PCC	MACH
OPC	–	–0.470**	0.344**	–0.362**	–0.192	–0.285**	–0.169	0.243*
OC		–	–0.414**	0.528**	0.371**	0.368**	0.137	–0.307**
OA			–	–0.128	–0.418**	–0.243*	–0.023	0.138
EN				–	0.464**	0.518**	0.462**	–0.335**
PEN					–	0.398**	0.473**	–0.127
BCC						–	0.518**	–0.326**
PCC							–	–0.276**
MACH								–

Notes: Significance at: *0.05 and **0.01. OPC, organizational-professional conflict (higher scores indicate greater conflict); OC, affective OC (higher scores indicate greater commitment); OA, obedience to authority (higher scores indicate greater demands for obedience); EN, ethical norms (higher scores indicate more emphasis on ethical norms/rewards); PEN, penalties (higher scores indicate more emphasis on penalties for unethical actions); BCC, benevolent/cosmopolitan climate (higher scores indicate more emphasis on the public interest); PCC, principle/cosmopolitan climate (higher scores indicate more emphasis on legal/professional principles); MACH, Machiavellianism (higher scores indicate greater Machiavellianism)

Table III.
Correlations

levels of affective commitment. There was a highly significant positive correlation between the penalties factor and commitment. Given that most employees prefer working for ethical organizations (Treviño *et al.*, 1998), one would expect that they also prefer to see organizational ethical standards upheld through the use of punishment if necessary; thus, the latter correlation also appears logical. In line with *H3*, we found a strong negative association between OPC and affective OC. The strong negative correlation between Machiavellianism and affective commitment was also anticipated in *H4*.

Interestingly, Machiavellianism was also significantly correlated with three of the ethical context measures. Highly significant negative correlations were found between Machiavellianism and the ethical norms factor, the benevolent/cosmopolitan climate, and the principle/cosmopolitan climate. These three factors in particular measure positive or inspirational aspects of ethical context, such as top management serving as role models for high ethical standards, service of the public interest, and compliance with professional expectations. Given that high Machiavellians tend to be suspicious of others' motives and cynical toward morality and ethics (Christie and Geis, 1970), the negative correlations between Machiavellianism and these factors do not appear surprising. Finally, there was a significant positive correlation between Machiavellianism and OPC. Since high Machiavellians are generally assumed to be less concerned with ethical or moral standards, this correlation appears somewhat counterintuitive.

Regression models

The results of multiple regression models for OPC and OC are reported in Table IV. The independent variables common to the three models include the ethical context measures and Machiavellianism. The collective results indicate that two ethical context factors, obedience to authority and ethical norms, emerged as the most significant influences on both OPC and affective OC. These two factors were the only significant variables in the model for OPC presented in Panel A. As would be expected, greater demands for obedience to authority increased perceived conflict, while more emphasis on ethical norms decreased conflict. This model was highly significant and explained approximately 20 percent of the variance in OPC. The model for OC (Panel B) also indicates that obedience to authority and ethical norms had highly significant effects. Obedience to authority was associated with lower levels of commitment, while a greater emphasis on ethical norms was associated with higher commitment. Both these relationships are consistent with our argument that more positive or supportive ethical cultures should foster higher levels of commitment among professional accountants. The organization type variable was also significant in this model. As previously discussed, employees of international companies reported lower levels of commitment. This model explained approximately 40 percent of the variation in affective commitment. Despite the significant correlations observed in Table III, neither the benevolent/cosmopolitan climate nor Machiavellianism had a significant impact on OPC or OC in the regression models. The Penalties factor also failed to approach significance in either model.

The model in Panel C was used to test whether OPC mediates the relationship between ethical context and OC. Given that the obedience to authority and ethical norms factors had significant effects on both OPC and OC, mediation would be

	Beta	<i>t</i> -statistic	<i>p</i> -value
<i>Panel A: Dependent variable = OPC</i>			
Independent variables			
Benevolent/cosmopolitan climate	-0.015	-0.12	0.903
Principle/cosmopolitan climate	-0.043	-0.39	0.697
Obedience to authority	0.339	2.99	0.004
Ethical norms	-0.331	-2.71	0.008
Penalties	0.138	1.09	0.277
Machiavellianism	0.090	0.84	0.388
Model <i>F</i> -value	4.37		
Model significance	0.001		
Adjusted <i>R</i> ²	0.187		
<i>Panel B: Dependent variable = affective OC</i>			
Independent variables			
Benevolent/cosmopolitan climate	-0.006	-0.06	0.950
Principle/cosmopolitan climate	-0.066	-0.69	0.492
Obedience to authority	-0.302	-3.09	0.003
Ethical norms	0.467	4.45	0.000
Penalties	0.044	0.41	0.684
Machiavellianism	-0.109	-1.22	0.225
Organization type	-0.187	-2.22	0.029
Model <i>F</i> -value	9.46		
Model significance	0.000		
Adjusted <i>R</i> ²	0.402		
<i>Panel C: Dependent variable = affective OC (controlling for OPC)</i>			
Independent variables			
Benevolent/cosmopolitan climate	-0.010	-0.10	0.919
Principle/cosmopolitan climate	-0.076	-0.81	0.419
Obedience to authority	-0.225	-2.26	0.027
Ethical norms	0.393	3.70	0.000
Penalties	0.075	0.71	0.479
Machiavellianism	-0.089	-1.02	0.311
Organization type	-0.190	-2.32	0.023
OPC	-0.224	-2.44	0.017
Model <i>F</i> -value	9.53		
Model significance	0.000		
Adjusted <i>R</i> ²	0.437		

Table IV.
Regression models

indicated if, in a regression of OC on both OPC and ethical context, OPC remained significant and the context variables decreased in significance (Baron and Kenny, 1986). The model results indicate that OPC remained significant, but there was only a negligible decrease in the significance of the ethical norms factor. In contrast, there was a significant decrease in the impact of the obedience to authority factor. These results indicate that OPC does not mediate the relationship between ethical norms and OC, but partially mediates the relationship between obedience to authority and OC.

To test *H5*, we divided the sample into high and low Machiavellians based on a median split, and ran the regression models for OPC and OC separately for each group. The models for OPC, presented in Table V Panel A, reveal no significant differences in the results for high and low Machiavellians. For both groups, the obedience to authority factor remained significant and the ethical norms factor remained marginally

		Beta	t-statistic	p-value
<i>Panel A: Dependent variable = OPC</i>				
<i>High Machiavellians</i>				
Independent variables				
	Benevolent/cosmopolitan climate	-0.060	-0.35	0.726
	Principle/cosmopolitan climate	-0.019	-0.11	0.912
	Obedience to authority	0.330	2.08	0.044
	Ethical norms	-0.321	-1.89	0.066
	Penalties	0.052	0.29	0.774
	Model F-value	2.67		
	Model significance	0.036		
	Adjusted R ²	0.157		
<i>Low Machiavellians</i>				
Independent variables				
	Benevolent/cosmopolitan climate	-0.021	-0.12	0.907
	Principle/cosmopolitan climate	-0.059	-0.38	0.703
	Obedience to authority	0.401	2.24	0.031
	Ethical norms	-0.336	-1.96	0.058
	Penalties	0.270	1.42	0.163
	Model F-value	1.98		
	Model significance	0.103		
	Adjusted R ²	0.124		
<i>Panel B: Dependent variable = OC</i>				
<i>High Machiavellians</i>				
Independent variables				
	Benevolent/cosmopolitan climate	0.023	0.18	0.857
	Principle/cosmopolitan climate	-0.146	-1.12	0.268
	Obedience to authority	-0.273	-2.23	0.032
	Ethical norms	0.574	4.42	0.000
	Penalties	0.185	1.37	0.178
	Organization type	-0.172	-1.55	0.131
	Model F-value	8.69		
	Model significance	0.000		
	Adjusted R ²	0.529		
<i>Low Machiavellians</i>				
Independent variables				
	Benevolent/cosmopolitan climate	0.021	-0.12	0.906
	Principle/cosmopolitan climate	-0.034	-0.22	0.829
	Obedience to authority	-0.374	-2.09	0.043
	Ethical norms	0.322	1.87	0.069
	Penalties	-0.106	-0.56	0.579
	Organization type	-0.171	-1.18	0.244
	Model F-value	1.90		
	Model significance	0.110		
	Adjusted R ²	0.113		
<i>Panel C: Dependent variable = OC (controlling for OPC)</i>				
<i>High Machiavellians</i>				
Independent variables				
	Benevolent/cosmopolitan climate	0.023	0.18	0.861
	Principle/cosmopolitan climate	-0.146	-1.11	0.274
	Obedience to authority	-0.270	-2.08	0.045

Table V.
Regression models for
Machiavellianism/ethical
context interactions

(continued)

		Beta	<i>t</i> -statistic	<i>p</i> -value
Ethical norms		0.571	4.18	0.000
Penalties		0.185	1.36	0.184
Organization type		-0.173	-1.53	0.136
OPC		-0.008	-0.07	0.946
Model <i>F</i> -value	8.20			
Model significance	0.000			
Adjusted <i>R</i> ²	0.517			
<i>Low Machiavellians</i>				
Independent variables				
Benevolent/cosmopolitan climate		0.012	0.08	.941
Principle/cosmopolitan climate		-0.060	-0.42	0.674
Obedience to authority		-0.199	-1.15	0.257
Ethical norms		0.175	1.07	0.292
Penalties		0.012	0.07	0.946
Organization type		-0.170	-1.30	0.203
OPC		-0.438	-3.01	0.005
Model <i>F</i> -value	3.17			
Model significance	0.010			
Adjusted <i>R</i> ²		0.317		

Table V.

significant; thus, *H5* is not supported in the case of the relationship between ethical context and OPC. The models for affective commitment in Panel B of the Table indicate that, in contrast with *H5*, high Machiavellians appear to be more sensitive to the perceived ethical culture in their organization, particularly in the case of the ethical norms variable. The obedience to authority factor was significant for both groups, but the ethical norms factor was highly significant for high Machiavellians and only marginally significant for low Machiavellians. In addition, the regression model for high Machiavellians was highly significant and explained in excess of half the variation in OC.

Panel C reports regression results for OC while controlling for OPC, and provides an interesting contrast in results for high and low Machiavellians. Consistent with the results in Panel B, the model for high Machiavellians explained in excess of half the variation in affective commitment, and the significance levels of the obedience to authority and ethical norms factors were very similar in the two models. However, the OPC factor had a negligible effect on commitment and did not approach significance, indicating that no mediation effects were present. For low Machiavellians, however, the ethical culture factors were no longer significant, but the OPC variable was highly significant. These results indicate that for low Machiavellians, OPC fully mediates the effects of ethical culture on affective commitment. That is, OPC may be viewed as a mechanism through which ethical culture influences affective commitment (Baron and Kenny, 1986). Although high Machiavellians' affective commitment appears very sensitive to the perceived ethical culture in their organization, in their case OPC does not mediate this relationship.

Conclusions and discussion

The anticipated effects of ethical culture on OPC and affective OC were generally supported by our findings. Consistent with our hypotheses, two of the three culture

factors (obedience to authority and ethical norms) had highly significant effects on both conflict and commitment. The significant positive (negative) relationship between obedience to authority and OPC (OC) implies that organizational pressure to acquiesce with the demands of superiors may conflict with accounting professionals' expectations of autonomy, resulting in higher levels of conflict and lower levels of affective commitment. In contrast, an organizational culture characterized by high norms and expectations/rewards for ethical behavior was associated with lower levels of conflict and greater commitment. These findings illustrate the importance of a supportive ethical culture to an organization's ability to foster commitment from professional employees such as accountants.

It is interesting that the two ethical culture factors referred to above (obedience to authority and ethical norms) emerged as the dominant influences on conflict and commitment rather than the ethical climate measures. The benevolent/cosmopolitan climate exhibited highly significant correlations with the conflict and commitment measures as anticipated, but did not approach significance in the multivariate models. Contrary to expectations, the principle/cosmopolitan climate was not significantly correlated with conflict or commitment. In a recent study, of auditors employed by public accounting firms in China, Shafer (2009) found that the principle/cosmopolitan climate had a highly significant effect on OPC, and both the benevolent/cosmopolitan and principle/cosmopolitan climates had highly significant effects on OC. The disparity in the findings of the two studies may indicate that traditional professional values such as serving the public interest (benevolent/cosmopolitan) and adhering to the standards of one's profession receive more emphasis in the context of public accounting practice and thus are internalized to a greater extent by employees of accounting firms.

As hypothesized, there was a highly significant negative relationship between OPC and OC. For the sample as a whole, OPC partially mediated the relationship between obedience to authority and commitment, but did not mediate the relationships between ethical norms and commitment. Consistent with our hypothesis, there was a significant negative correlation between Machiavellianism and affective commitment; however, the effects of Machiavellianism on commitment were not significant in the multivariate models. We also found significant negative correlations between Machiavellianism and three of the four ethical context factors, which we conjectured to be due to high Machiavellians' cynical views toward ethical or moral issues. For example, high Machiavellians may view organizational attempts to develop or promote a positive ethical context as disingenuous, and assume such actions are motivated by the self-interest of organizational superiors. If this is the case, it seems likely they will dismiss organizational rhetoric or policies relating to ethics and view the climate more negatively than low Machiavellians.

Tests of differences between high and low Machiavellians revealed some interesting findings. Regarding the effects of ethical context on OPC, there were no significant differences in the results for the two groups. In the case of OC, however, the ethical norms factor had a much stronger effect for high Machiavellians. For high Machiavellians, the model for the effects of ethical context on OC explained over 50 percent of the variation in commitment, while the comparable model for low Machiavellians explained only 11 percent of the variation. This pattern of results is essentially the opposite of what we anticipated. In the tests for mediation effects again an interesting contrast was noted. In the case of high Machiavellians, the effects of OPC

on OC were negligible, while the culture factors remained significant (in particular, the ethical norms factor remained highly significant) and the model again explained over 50 percent of the variation in commitment. The model for low Machiavellians indicated that OPC fully mediates the relationship between ethical context and affective commitment: the OPC variable was highly significant while none of the context variables approached significance. This pattern of results suggests that, for low Machiavellians, perceived conflict between organizational and professional expectations/standards is a mechanism through which the organizational ethical context affects commitment. For high Machiavellians, ethical context has a very strong direct influence on affective commitment, but perceptions of OPC are less salient. The latter finding seems to suggest that professional ideals and the compromising of those ideals are less important to high Machiavellians.

As discussed previously, the results of many prior studies support the contention that organizational ethical context significantly impacts employee attitudes and behavior (Martin and Cullen, 2006). The findings of the current study provide additional support for the influence of ethical context on OC. In light of such findings, managers should be interested in approaches for developing a positive or supportive ethical context in accounting organizations/departments. It is often recognized that the creation and maintenance of an ethical organizational environment depends critically on the “tone at the top” set by upper level managers, and that attempts to manage an organization’s ethical context are not likely to be effective unless the actions of managers are consistent with formal policies that encourage ethical behavior (Treviño *et al.*, 1999; Grojean *et al.*, 2004). Grojean *et al.* (2004) discuss several tactics that organizational leaders may adopt to promote an ethical work climate, such as adopting values-based leadership; serving as positive role models; establishing clear expectations throughout the organization for ethical behavior; providing feedback, coaching, and support for ethical behavior; and formally recognizing and rewarding behavior that is consistent with organizational values. Schminke *et al.* (2007) argue that managers often neglect relatively informal control systems such as organizational ethical culture, but prudent managers should not simply sit by and allow a consensus to emerge (or be perpetuated) as to what constitutes acceptable organizational behavior. Rather, they should take a proactive approach that involves first assessing the organizational ethical context, then developing needs-based training on the basis of this assessment. Thus, there are strategies that managers may adopt to promote a positive or supportive organizational ethical culture.

In summary, the findings of the current study have important implications for both practising managers and academic researchers. The significant effect of the perceived ethical culture on OPC and affective OC illustrates the importance of strategically managing an organization’s ethical culture. Both OPC and OC have been found to be significantly correlated with job satisfaction and turnover intentions among professional accountants (Shafer *et al.*, 2002); thus, our findings imply that managers of accounting and auditing departments may increase satisfaction and reduce turnover through effective management of the organizational ethical culture. Our findings also suggest that the Treviño *et al.* (1998) measure of organizational ethical culture may be more relevant to the study of ethical context in industry settings than the more widely used ECQ. Although relatively few studies have used the culture instrument, our results indicate that ethical culture is a much stronger predictor of OPC and affective OC among industry

accountants. We found complex relationships among ethical culture, Machiavellianism, OPC and OC. OPC appeared to have a much stronger influence on affective commitment among low Machiavellians, serving as a mechanism through which ethical context affects commitment. However, high Machiavellians appeared much more sensitive to the perceived ethical norms in their organization. The counter-intuitive nature of the latter finding suggests that future studies should further examine these relationships.

The current research contributes to the small but growing body of literature on ethics among professional accountants in the People's Republic of China. Many concerns have been expressed during the past decade regarding the state of ethics in China (Wang, 2003; Snell and Tseng, 2002; Tam, 2002); thus, we feel that future studies should compare the ethical context in accounting organizations/departments in China and Western contexts. Parboteeah *et al.* (2005) found significant differences in perceptions of principled ethical climates between Japanese and US public accounting firms, which suggests that national culture may influence organizational ethical context. However, no prior studies have addressed potential differences in organizational ethical contexts between China and other countries.

Like most research of this type, the current study is subject to significant limitations. Our reliance on a non-random sample obtained through personal contacts limits the generalizability of the findings. The relatively small sample size also limits the reliability and generalizability of the data; thus, additional studies should be conducted in the Chinese context using larger data sets if possible. For example, our sample size limits our ability to conduct meaningful tests of the effects of organizational type. Owing to practical limitations on the length of the research instrument, we also did not explicitly measure or control for social desirability response bias; thus, there is a possibility that the results were biased due to the sensitive nature of the ethical issues addressed in the survey.

Notes

1. As discussed herein, prior research has investigated the effects of both ethical climate (Victor and Cullen, 1987, 1988) and ethical culture (Treviño *et al.*, 1998) in organizations. These constructs are similar yet distinct in certain ways. Treviño *et al.* (1998) refer to ethical climate and culture collectively as ethical context, a term we will also adopt.
2. There has been significant variation in the specific climate types identified. For instance, Peterson (2002) found evidence of all nine climate types. In his recent study of public accounting firms in China, Shafer (2008) found evidence of four distinct climate types: egoistic/local, benevolent/cosmopolitan, principle/individual, and principle/cosmopolitan.
3. This contention draws general support from influential theories of ethical decision making in organizations, which recognize that the organizational culture or environment should influence employee attitudes, beliefs and behaviors (e.g. Hunt and Vitell, 1991, 1986; Treviño, 1986; Ferrell and Gresham, 1985).
4. We acknowledge that the large number of highly publicized corporate frauds involving accountants and auditors during the last decade raises serious doubts about the ethical standards of the accounting profession. However, we are only suggesting that accountants, by virtue of their professional training, may possess higher ethical standards than employees that do not receive similar training, such as general managers and salespeople.
5. We did not keep records of the exact number of instruments distributed at each company; consequently, we cannot determine the response rate by company or industry.

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Appendix. Scale items

Ethical climate

- (1) In this organization, people are mostly out for themselves (EI).
- (2) The major responsibility for people in this organization is to consider efficiency first (EC).
- (3) In this organization, people are expected to follow their own personal and moral beliefs (PI).
- (4) People are expected to do anything to further the organization's interests (EL).

- (5) In this organization, people look out for each other's good (BI).
- (6) There is no room for one's own personal morals or ethics in this organization* (EI).
- (7) It is very important to follow strictly the organization's rules and procedures here (PL).
- (8) Work is considered sub-standard only when it hurts the organization's interests (EL).
- (9) Each person in this organization decides for himself what is right and wrong (PI).
- (10) In this organization, people protect their own interest above other considerations (EI).
- (11) The most important consideration in this organization is each person's sense of right and wrong (PI).
- (12) The most important concern is the good of all the people in the organization (BL).
- (13) The first consideration is whether a decision violates any law (PC).
- (14) People are expected to comply with the law and professional standards over and above other considerations (PC).
- (15) Everyone is expected to stick by organizational rules and procedures (PL).
- (16) In this organization, our major concern is always what is best for the other person (BI).
- (17) People are concerned with the organization's interests – to the exclusion of all else (EL).
- (18) Successful people in this organization go by the book (PL).
- (19) The most efficient way is always the right way, in this organization (EC).
- (20) In this organization, people are expected to strictly follow legal or professional standards (PC).
- (21) Our major consideration is what is best for everyone in the organization (BL).
- (22) In this organization, people are guided by their own personal ethics (PI).
- (23) Successful people in this organization strictly obey the organizational policies (PL).
- (24) In this organization, the law or ethical code of the profession is the major consideration (PC).
- (25) In this organization, each person is expected, above all, to work efficiently (EC).
- (26) It is expected that you will always do what is right for the public (BC).
- (27) People in this organization view team spirit as important (BL).
- (28) People in this organization have a strong sense of responsibility to the outside community (BC).
- (29) Decisions here are primarily viewed in terms of contribution to profit (EL).
- (30) People in this organization are actively concerned about the public interest (BC).
- (31) People are very concerned about what is generally best for employees in the organization (BL).
- (32) What is best for each individual is a primary concern in this organization (BI).
- (33) People in this organization are very concerned about what is best for themselves (EI).
- (34) The effects of decisions on the public are a primary concern in this organization (BC).
- (35) It is expected that each individual is cared for when making decisions here (BI).
- (36) Efficient solutions to problems are always sought here (EC).

Ethical culture

- (1) Management in this organization disciplines unethical behavior when it occurs.
- (2) Employees in this organization perceive that people who violate the professional code of ethics still get formal organizational rewards*.

- (3) Penalties for unethical behavior are strictly enforced in this organization.
- (4) Unethical behavior is punished in this organization.
- (5) The top managers of this organization represent high ethical standards.
- (6) People of integrity are rewarded in this organization.
- (7) Top managers of this organization regularly show that they care about ethics.
- (8) Top managers of this organization are models of unethical behavior*.
- (9) Ethical behavior is the norm in this organization.
- (10) Top managers of this organization guide decision making in an ethical direction.
- (11) Ethical behavior is rewarded in this organization.
- (12) Professional ethics code requirements are consistent with informal organizational norms.
- (13) This organization demands obedience to authority figures, without question.
- (14) People in this organization are expected to do as they are told.
- (15) The boss is always right in this organization.

Organizational-professional conflict

- (1) My current employment situation gives me the opportunity to express myself fully as a professional*.
- (2) In my organization, there is a conflict between the work standards and procedures of the organization and my ability to act according to my professional judgment.
- (3) I often have to choose between following professional standards and doing what is best for my organization.

Affective organizational commitment

- (1) I do not feel a strong sense of belonging to my organization*.
- (2) I do not feel “emotionally attached” to this organization*.
- (3) This organization has a great deal of personal meaning to me.
- (4) I do not feel like “part of the family” at this organization*.
- (5) I really feel as if this organization’s problems are my own.
- (6) I could easily become as attached to another organization as I am to this one*.
- (7) I am willing to put in a great deal of effort beyond that normally expected in order to help this organization to be successful.

Machiavellianism

- (1) Never tell anyone the real reason you did something unless it is useful to do so.
- (2) The best way to handle people is to tell them what they want to hear.
- (3) One should take action only when sure it is morally right*.
- (4) Most people are basically good and kind*.
- (5) It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
- (6) Honesty is the best policy in all cases*.
- (7) There is no excuse for lying to someone else*.
- (8) Generally speaking people won’t work hard unless they are forced to do so.

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- (9) All in all, it is better to be humble and honest than to be important and dishonest*.
 - (10) When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight*.
 - (11) Most people who get ahead in the world lead clean, moral lives*.
 - (12) Anyone who completely trusts anyone else is asking for trouble.
 - (13) The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.
 - (14) Most people are brave*.
 - (15) It is wise to flatter important people.
 - (16) It is possible to be good in all respects*.
 - (17) The man who said "There's a sucker born every minute" was wrong*.
 - (18) It is hard to get ahead without cutting corners here and there.
 - (19) People suffering from incurable diseases should have the choice of being put painlessly to death.
 - (20) Most people forget more easily the death of a parent than the loss of their property.

Legend

- EI = Egoistic/individual climate.
EL = Egoistic/local climate.
EC = Egoistic/cosmopolitan climate.
BI = Benevolent/individual climate.
BL = Benevolent/local climate.
BC = Benevolent/cosmopolitan climate.
PI = Principle/individual climate.
PL = Principle/local climate.
PC = Principle/cosmopolitan climate.

*Reverse scored.

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