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**EFFECTS OF ETHICAL CONTEXT ON EARNINGS
MANAGEMENT, ORGANIZATIONAL-PROFESSIONAL
CONFLICT AND ORGANIZATIONAL COMMITMENT IN
CHINESE ENTERPRISES**

WANG ZHIHONG

MPHIL

LINGNAN UNIVERSITY

2008

**EFFECTS OF ETHICAL CONTEXT ON EARNINGS
MANAGEMENT, ORGANIZATIONAL-PROFESSIONAL
CONFLICT AND ORGANIZATIONAL COMMITMENT IN
CHINESE ENTERPRISES**

**by
WANG Zhihong**

**A thesis
submitted in partial fulfillment
of the requirements for the Degree of
Master of Philosophy in Business
(Accountancy)**

Lingnan University

2008

ABSTRACT

Effects of Ethical Context on Earnings Management, Organizational-Professional Conflict and Organizational Commitment in Chinese Enterprises

By

WANG Zhihong

Master of Philosophy

This study investigates the effects of the organizational ethical context (ethical climate and ethical culture) in Chinese enterprises on accounting professionals' perceptions of earnings management, organizational-professional conflict (OPC) and affective organizational commitment (OC). We also test the effects of Machiavellianism on these factors, and the interactive effects of Machiavellianism and ethical context on OPC and OC. The findings, based on responses from 89 accounting professionals employed by Chinese enterprises at staff, supervisor and manager levels, indicate that in general the perceived ethical context did not affect judgments of the acceptability of earnings management. However, as anticipated, perceptions of a stronger benevolent/cosmopolitan climate (one that places more emphasis on the public interest) were associated with harsher judgments of accounting earnings management. Machiavellianism also had a marginally significant effect on judgments of accounting earnings management and a significant effect on judgments of operating earnings management, with high Machiavellians judging the actions to be more ethical. Two aspects of ethical culture, obedience to authority and ethical norms, were found to be significantly associated with organizational-professional conflict and affective organizational commitment. Contrary to our expectations, high Machiavellians appeared to be more, rather than less, sensitive to the perceived ethical context in their organization. Specifically, the perceived organizational ethical culture had a greater (lesser) impact on affective organizational commitment for high (low) Machiavellians.

Keywords: Ethical climate, Ethical culture, earnings management, organizational-professional conflict, organizational commitment, Machiavellianism, Chinese enterprises

DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

WANG Zhihong

Date:

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Effects of Ethical Context on Earnings Management, Organizational-Professional Conflict and Organizational Commitment in Chinese Enterprises

1 Introduction

This is the first study to examine the effects of organizational ethical climate (Victor and Cullen, 1987, 1988) and ethical culture (Treviño, Butterfield and McCabe, 1998) on attitudes toward earnings management. Earnings management has been a great concern for the accounting profession in the last few decades, with the collapse of corporate giants such as Enron and WorldCom in 2001 and 2002 focusing stakeholders' and researchers' attention on earnings management practices. Many researchers have studied earnings management from a behavioral perspective in Western cultures (e.g., Merchant and Rockness, 1994; Fischer and Rosenzweig, 1995; Kaplan, 2001a, 2001b; Elias, 2002, 2004), but no previous study has investigated the potential effects of multidimensional measures of ethical context (ethical climate and culture) on attitudes toward earnings management. Numerous studies in the management and business ethics literature have demonstrated that the ethical context in an organization will have an important impact on ethical decisions (e.g., Treviño et al., 1998; Parboteeah, Cullen, Victor and Sakano, 2005).

Prior behavioral studies have also not addressed attitudes toward earnings management in China. Many observers argue that unethical behavior has become systemic in the Chinese business community (Tam, 2002; Snell and Tseng, 2002; Wang, 2003). Thus, there is a need to obtain a better understanding of attitudes toward ethical issues in Chinese businesses. From a practical perspective, Chinese companies

may be able to encourage more honest financial reporting if they have a better understanding of what aspects of the organizational ethical climate/culture may foster an atmosphere in which earnings management is viewed as more ethically acceptable. Accordingly, our study extends the literature on ethical context by investigating the effects of perceived ethical context on accounting professionals' perceptions of earnings management in Chinese industry. We also examine the effects of Machiavellianism on perceptions of the acceptability of earnings management.

This is also the first study of organizational-professional conflict (OPC) among professional accountants employed by commercial enterprises in China. Most prior studies of organizational-professional conflict among accountants have focused primarily on two antecedents of OPC: professional and organizational commitment (e.g., Aranya and Ferris, 1984; Harrell, Chewning and Taylor, 1986). However, these studies have only provided weak and inconsistent support for the effects of professional and organizational commitment on organizational-professional conflict. We argue that organizational characteristics such as the perceived ethical context will be a key determinant of organizational-professional conflict, and that OPC will in turn lead to lower levels of affective organizational commitment. Several prior studies (e.g., Shafer et al., 2002; Bamber and Iyer, 2002) have also shown that OPC may lead to dysfunctional outcomes such as reduced organizational commitment, reduced job satisfaction, and increased turnover intentions. These results suggest that organizations may increase employee commitment and satisfaction and reduce turnover by fostering a more positive or supportive organizational ethical context, thus providing practical incentives to obtain a better understanding of the relationships among variables such as ethical context, OPC and OC. We also test the potential interactive effects of Machiavellianism and perceived ethical context on organizational-professional conflict and affective organizational commitment.

The remainder of the paper is organized as follows. Section 2 reviews relevant literature and develops the research hypotheses. Section 3 describes the research methodology. This is followed by discussions of the empirical tests and research findings in section 4. The paper concludes in section 5 with a discussion of the implications of the findings and suggestions for further research.

2 Literature review and hypothesis development

2.1 Ethical Context

2.1.1 Ethical Climate

Denison (1996: 624) observes that organizational climate is “rooted in the organization’s value system”; it represents the organization’s social environment which is consciously perceived by organizational members and affects the members’ behavior. Ethical climate is a subset of organizational climate which focuses on the aspect of ethics. According to Victor and Cullen (1988: 101), ethical climate can be defined as “the prevailing perceptions of typical organizational practices and procedures that have ethical content”. The ethical climate comprises general and pervasive characteristics of organizations which could affect a broad range of decisions. Ethical climate influences both decision-making and subsequent behavior in response to ethical dilemmas (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 ethical climate types, as shown in Figure 1.

[insert Figure 1 here]

Victor and Cullen (1987, 1988) developed the ethical climate questionnaire (ECQ) to empirically test the existence of these nine theoretical types of ethical climate. The ECQ includes 36 statements, four for each of the nine theoretical 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) conclude 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, most authors continue to use Victor and Cullen’s (1987, 1988) seminal theoretical framework as a basis of discussion of organizational ethical climate, as we will do in the current paper.¹

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¹ 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 (in press) found evidence of four distinct climate types: egoistic/local, benevolent/cosmopolitan, principle/individual, and principle/cosmopolitan.

Many researchers have discussed the potential relationship between organizational ethical climate and employee behavior. Indeed, Victor and Cullen (1987) suggest that the most critical issues relating to ethical climate concern the influence of the perceived organizational climate on employee behavior. They suggest that the phenomenon of corporate crime might be viewed as a function of the ethical climate in the firm. Victor and Cullen (1988) also note that the ethical climate in a firm will guide organizational decision making processes and have a significant impact on employees' ethical behavior. Wimbush and Shepard (1994) proposed that in general egoistic or instrumental climate types will lead to less ethical behavior due to their emphasis on self-interest, while benevolent and principled climates will lead to more ethical behavior. The findings of Treviño et al. (1998) generally supported this argument, with stronger egoistic (benevolent and principled) climates being associated with higher (lower) rates of observed unethical behavior. Other studies have reported similar findings. For instance, Peterson (2002) found that the self-interest (egoistic/individual) and company-profit (egoistic/local) climate types was positively and significantly correlated with unethical behavior. Martin and Cullen's (2006) meta-analysis of ethical climate studies also found that instrumental (benevolent and principled) climates tend to be positively (negatively) correlated with dysfunctional or unethical employee behavior.

Considering these findings, we may conclude that self-interest (egoistic/individual) and firm-interest (egoistic/local) climates are more likely to be associated with unethical behavior, whereas benevolent and principled climates are more likely to be associated with ethical behavior.

2.1.2 Ethical Culture

In addition to ethical climate, we were also interested in the potential effects of organizational ethical culture on attitudes toward earnings management and affective outcomes such as organizational commitment. The concept of ethical culture is similar to, but distinct from the ethical climate construct. As noted by Treviño et al. (1998), the ethical climate construct is more conceptual or ideational in nature, relying on the theoretical climate types specified in the Victor and Cullen (1987, 1988) typology. In contrast, the concept of ethical culture is more *phenomenal*, focusing on employee perceptions of organizational policies and practices such as rewards (punishments) for ethical (unethical) behavior.

Treviño (1986) initially suggested the possible influence of ethical culture on ethical/unethical conduct. Treviño (1990) further developed the ethical culture construct and proposed direct influences of ethical culture on individual conduct. She suggested that if the organizational ethical culture supports ethical conduct, this influence should be reflected in individual behavior throughout the organization. In order to tap an organization's ethical culture, Treviño (1990) designed questionnaire items to measure such constructs as (1) the extent to which organizational norms support ethical conduct, (2) the extent to which ethical behavior is rewarded, (3) the extent to which unethical behavior is punished, (4) the extent to which organizational leaders act as models of ethical conduct, (5) the extent to which employees are expected to obey authority figures without question, and (6) the extent to which employees report unethical behavior when it occurs. Using this instrument, Treviño et al. (1998) found evidence of three distinct dimensions of ethical culture based on their factor analysis: (1) a general ethical environment factor, (2) obedience to authority and (3) ethics code implementation. Treviño et al.'s (1998) regression results indicated that the general ethical environment and a focus on strict obedience to authority were significantly associated with observed unethical behavior, but code implementation

was not. Based on the findings of Treviño et al. (1998), the ethical culture instrument shows promise as a predictor of unethical/dysfunctional behavior, suggesting that if the ethical culture in an organization is perceived as being more supportive of ethical values, individuals' behavior will be more ethical. However, the instrument has not previously been used in an accounting context.

2.2 Earnings management

Earnings management, or the intentional manipulation of reported earnings, raises questions about accountants' and/or managers' integrity (Bruns and Merchant, 1990). In fact, researchers have suggested that earnings management is one of the most significant ethical issues facing the accounting profession (Merchant and Rockness, 1994). Earnings management obviously has important implications for the stakeholders who rely on financial statements. If the financial statements are manipulated so that they do not accurately reflect the true financial situation, the stockholders might make incorrect investment decisions; banks may make incorrect loan decisions, etc. The stakeholders' trust is then violated. In this study, following Fischer and Rosenzweig (1995), we define earnings management as actions by management which serve to manipulate current reported earnings of a unit, but might detrimental to the long-term economic profitability of the unit.

Much prior research suggests that managers do manage earnings for many purposes. Healy (1985) contends that managers manage earnings through accounting accruals to meet their earnings-related bonus plans. Merchant (1990) found that a large proportion of profit center managers boosted earnings in recessionary years in order to meet their budget targets. Hand (1989) found that firms undertake debt-equity swaps to smooth earnings and thus conceal the fluctuation of actual earnings. Jones (1991)

suggested that firms managed earnings during import relief investigations by the United States International Trade Commission to enhance their benefits from import relief.

Recently, many studies have investigated evidence of earnings management in the Chinese stock market. By examining a sample of 83 initial public offerings of stock (IPOs) completed in China between 1992 and 1995, Aharony, Lee and Wong (2000) suggest that Chinese IPO firms engage in earnings management, and the pattern of earnings management depends on each firm's relation with the government and on where its shares are listed. According to Haw, Qi, Wu and Wu (2005), listed Chinese firms manage earnings to meet regulatory benchmarks.² All these empirical studies indicate that earnings management has been widespread in China and as a consequence damaged stakeholders' interests.

There have also been widely publicized scandals involving earnings management by Chinese companies in recent years. For instance, Shandong Juli, a listed company on the ShenZhen Stock Exchange that produces diesel generators, boosted profit by over 160 million Yuan through earnings management in 1999 to obtain the right to issue stock, and then raised approximately 16 million Yuan from the stock market. Later Juli was sued when it was discovered that their earnings had been highly overstated (Shanghai Securities, 2005). Many similar cases have also occurred, such as Qiong Minyuan's fabricated profit in 1997, and Hongguang's substantive deficit after their IPO in 1998 (China Economic Times, 2001). Public confidence has been shaken by these scandals, and thus earnings management in China has received more and more attention from investors and analysts.

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² From 1996-1998, Chinese security regulations required firms to achieve accounting rates of return on equity greater than 10 percent for three consecutive years in order to be qualified to issue stock to the public.

Many studies have measured accountants' and managers' attitudes toward the acceptability of earnings management to obtain a better understanding of this practice from an ethical perspective. Merchant (1989) distinguished two basic types of earnings management: accounting earnings management and operating earnings management. The former uses the flexibility of accounting standards to manage earnings in order to meet targeted earnings numbers, while the latter method manages earnings by changing operating decisions such as offering liberal payment terms to increase current period sales. Merchant (1989) also developed a questionnaire comprised of 13 potentially questionable earnings management activities to test earnings management behavior. Among these activities, six of them refer to operating earnings management, while the other seven refer to accounting earnings management.

By examining responses to this questionnaire, Merchant and Rockness (1994) found that the acceptability of earnings management behavior was judged to vary with the type, size, timing, and purpose of the actions. For example, accounting earnings management methods were judged significantly less acceptable than operating earnings management and year-end manipulations were judged as less acceptable than quarter-end manipulations. Bruns and Merchant (1990), who collected data from 649 managers using the Merchant (1989) instrument, had previously reached similar conclusions. Again using the Merchant (1989) instrument, Fischer and Rosenzweig (1995) surveyed three groups of participants, including undergraduate accounting students, MBA students and accounting practitioners. All three groups judged operating earnings management more acceptable than accounting earnings management. Differences in attitudes based on variations in experience and accounting knowledge were also reported. For instance, accounting practitioners viewed accounting earnings management as more unethical than students, but viewed operating manipulations as much more ethical than did the undergraduate accounting students.

While these early studies merely assessed attitudes toward earnings management, several subsequent studies have examined in more depth the determinants of such attitudes, such as whether earnings management is intended to benefit the company or is intended for the personal benefit of the managers involved (Kaplan, 2001a), and the role of observers of earnings management (e.g., degree of familiarity of observers with the perpetrators) (Kaplan, 2001b). Elias (2002) surveyed a sample of 763 accounting practitioners, faculty and students to examine the relationship between corporate social responsibility, personal moral philosophies and ethical perceptions of earnings management. He found that individuals who believed more strongly in corporate social responsibility and long-term gains rated earnings management actions as more unethical while individuals who placed more emphasis on short-term gains rated them as more ethical.

Elias (2004) appears to be the only previous study to investigate the potential effects of corporate ethical culture on earnings management. This study measured corporate ethical values with the uni-dimensional five-item scale developed by Hunt, Wood, and Chonko (1989). The effects of perceived ethical values on perceptions of earnings management were assessed based on a survey of CPAs in public accounting, industry, and academia. Elias (2004, 89) suggested that “Accountants employed in organizations with high (low) ethical values will perceive earnings management actions as more unethical (ethical)”. The empirical results supported this contention, showing significant relationships between perceived corporate ethical values and judgments of the ethicality of earnings management among all the groups surveyed. Thus, there has been some recognition of the potential influence of corporate ethical values or culture on earnings management behavior. The current study extends this line of research using more refined measures of corporate ethical context. The findings of Elias (2004), along with our previous discussion of the potential effects of ethical climate and culture on

employees' behavior, suggest the following hypotheses:

Hypothesis 1:

- a: Accountants employed in organizations with a perceived emphasis on self-interest (egoistic/individual) and firm interest (egoistic/local) will perceive earnings management actions as more ethical
- b: Accountants employed in organizations with a perceived emphasis on the public interest (benevolent/cosmopolitan) and ethical principles established by the organization or the accounting profession (principle/local and principle/cosmopolitan) will perceive earnings management actions as more unethical

Hypothesis 2: Accountants employed in organizations in which the ethical culture is perceived to be more (less) supportive of ethical behavior will perceive earnings management as more unethical (ethical)

2.3 Organizational-Professional Conflict and Organizational Commitment

Accounting researchers have often 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 (e.g., Aranya, Pollock and Amernic, 1981; Aranya and Ferris, 1984; Harrell et al., 1986; Shafer, Park and Liao, 2002). In their influential study, Aranya and Ferris (1984) refer to this potential discord between professional and organizational expectations as *organizational-professional conflict* (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.

Although the concept of organizational-professional conflict has important practical implications, this is clearly an under-studied area in accounting. For example, Hall, Smith and Langfield-Smith (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.

For instance, Aranya et al. (1981) modeled organizational commitment and OPC as potential antecedents of professional commitment. They found a significant positive correlation between organizational and professional commitment, suggesting that these two types of commitment were not necessarily incompatible. As anticipated, they found a negative correlation between OPC and professional commitment, but this relationship was only significant for one of their three sub-samples (seniors). In contrast to the model proposed by Aranya et al. (1981), Aranya and Ferris (1984) assumed that organizational and professional commitment are the two primary antecedents of organizational-professional conflict, and that the interaction of these two forms of commitment led to OPC. Based on a survey of over 2,000 U.S. and Canadian accountants they found (consistent with Aranya et al., 1981) that the commitment variables were positively correlated and thus not necessarily conflicting. However, they also concluded that the interaction of organizational and professional commitments was only responsible for a small portion of observed organizational-professional conflict.

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 organizational-professional conflict. Their results supported each of these hypotheses. On the contrary, based on a sample of 201 management accountants, McGregor, Killough and Brown (1989) found that organizational commitment was negatively, rather than positively, correlated with organizational-professional conflict. 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 organizational-professional conflict, which would in turn lead to lower levels of affective organizational commitment 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 organizational-professional conflict and organizational commitment.

The variation in theoretical assumptions and results in these prior studies give us an indication that other variables may have a significant impact on organizational-professional conflict. These past studies all focused on individual differences in commitment variables, but we argue that the primary determinants of organizational-professional conflict should be organizational factors such as the perceived organizational ethical context. 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 climate or culture that the professional finds themselves in.

This contention is supported by the results of several qualitative studies which

suggest that the organizational context might be a source of conflict between organizational and professional goals for accountants. For example, McNair (1991) suggests that systems of formal norms which support appropriate behavior and informal counternorms which support inappropriate behavior exist in public accounting firms, and that such norms create “ethical ambivalence” for professional accountants. Such norms may be viewed as part of the organizational ethical context, and obviously may create tension between organizational and professional expectations. Covaleski, Dirsmith, Heian, and Samuel (1998) found that although accounting firms try to control individual autonomous professionals through regulation and discipline and transform them into business entrepreneurs, autonomous professionals often resist such control, again suggesting the presence of conflict between the organization and individual professionals. Gibbins and Newton (1994) also suggest that auditors employed by public accounting firms often face pressure to comply with the wishes of various parties such as superiors and clients, and that auditors often choose to engage in “defensive noncompliance” in such situations. All these studies indicate that the organizational ethical context may create tension or conflict between organizations and individual professionals. Thus, in the current study we were interested in investigating the effects of the perceived ethical context on organizational-professional conflict.

With respect to ethical climate, a perceived egoistic or instrumental climate should clearly be positively associated with organizational-professional conflict 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

organizational-professional conflict. In contrast, climate types that are supportive of or consistent with professional standards, such as benevolent/cosmopolitan, principle/local, and principle/cosmopolitan climates, should be negatively associated with organizational-professional conflict. This discussion leads to the following hypothesis:

Hypothesis 3: Self-interest (egoistic/individual) and firm interest (egoistic/local) climates will be positively associated with organizational-professional conflict (OPC), while public interest (benevolent/cosmopolitan) and principled (principle/local and principle/cosmopolitan) climates will be negatively associated with organizational-professional conflict (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 organizational-professional conflict. 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 hypothesis:

Hypothesis 4: An ethical culture which provides stronger (weaker) support for ethical/professional behavior will be negatively (positively) associated with organizational-professional conflict (OPC).

Traditionally, researchers (Porter, Steers, Mowday and Boulian, 1974; Aranya, et al., 1981; Aranya and Ferris, 1984, Harrell et al., 1986) defined organizational commitment as (1) a belief in and acceptance of the goals and values of the

organization; (2) a willingness to contribute considerable effort to the organization and (3) a strong desire to stay in the organization. Based on the influential work of Meyer and Allen (1991), organizational behavior researchers commonly recognize three distinct components of organizational commitment: 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.

Several previous studies have investigated the relationship between ethical climate and organizational commitment, based on the intuitive idea that if the organizational climate is perceived to be more supportive of employees and their values, they will be more committed to the organization. The ethical climate construct appears to have particular relevance for affective organizational commitment, since a positive or supportive climate should create “positive affect” toward the organization among its members (Martin and Cullen, 2006, 181). Martin and Cullen (2006) observe that several studies have found that benevolent/local climates (in which the organization is perceived to care for its employees) in particular are associated with organizational commitment. Based on their meta-analysis, Martin and Cullen (2006) found that, as would be anticipated, egoistic climates were negatively associated with organizational commitment, while benevolent and principled climates were positively associated with commitment. Treviño et al. (1998) also found that both ethical climate and ethical culture had significant effects on employees’ organizational commitment.

We would suggest that climates that are supportive of ethical standards or professional ideals, such as benevolent/cosmopolitan, principle/local and principle/cosmopolitan climates should be particularly relevant to professional employees. Consistent with this argument, Cullen, Parboteeah and Victor (2003) hypothesized that egoistic (benevolent) climates are negatively (positively) associated with organizational

commitment, and that principled climates would be positively associated with organizational commitment only for professional workers. They surveyed seven departments within a telephone company and four accounting firms, with the results supporting their hypotheses. These results suggest that principled climates are especially salient to professional employees such as Certified Public Accountants. Based on the accumulated evidence regarding the relationships between ethical climate/culture and organizational commitment, we propose the following hypotheses:

Hypothesis 5: Self-interest (egoistic/individual) and firm interest (egoistic/local) climates will be negatively associated with affective organizational commitment (OC), while benevolent (benevolent/local and benevolent/cosmopolitan) and principled (principle/local and principle/cosmopolitan) climates will be positively associated with affective organizational commitment (OC).

Hypothesis 6: An ethical culture which provides stronger (weaker) support for ethical/professional behavior will be positively (negatively) associated with affective organizational commitment (OC).

Based on the previously discussed findings of McGregor et al. (1989) and Shafer et al. (2002), we also anticipated a negative association between organizational-professional conflict and affective organizational commitment. This contention is also 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, organizational commitment will be greater (e.g., Finegan, 2000; Kristof, 1996; Chatman, 1991, 1989). This line of reasoning is reflected in the

following hypothesis:

Hypothesis 7: Organizational-professional conflict (OPC) will be negatively associated with affective organization commitment (OC).

A summary of the hypothesized relationships among ethical context, organizational-professional conflict, and organizational commitment is provided in Figure 2. As indicated in the figure, we are hypothesizing that ethical context will directly affect both OPC and OC, and will also indirectly affect OC through its effect on OPC. Thus, the hypothesized relationships suggest that OPC should mediate the relationship between ethical context and affective organizational commitment (cf. Baron and Kenny, 1986).

[insert Figure 2 here]

2.4 Machiavellianism

In addition to organizational factors such as ethical climate and ethical culture, we were also interested in investigating the role of individual personality traits on earnings management. We felt that Machiavellianism would be of particular relevance to this context due to the manipulative nature of earnings management activities. The Machiavellianism construct has been broadly used as a surrogate of the propensity to engage in manipulative or deceitful tactics.

Indeed, the Machiavellianism construct was initially developed by Christie (1970) to describe a manipulative personality with relatively little concern for conventional standards of morality. Early research on Machiavellianism focused primarily on the use of manipulation or deceit in interpersonal relations (Christie and Geis, 1970). High

Machiavellians have also traditionally been viewed as relatively aggressive and possessing a strong desire to pursue “winning” even at the expense of morality or ethics. (Geis, Weinheimer, and Berger, 1970). The Machiavellianism construct has been widely studied in the social sciences, and research also 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 tax reporting. Similarly, Ross and Robertson (2000) surveyed professional salespeople and found that high Machiavellians were less likely to have clear ethical guidelines and more likely to mislead potential clients. Wirtz and Kum (2004) found that high Machiavellian consumers were more likely to cheat on product service guarantees, and Winter, Stylianou and Giacalone, (2004) concluded 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 Machiavellianism is associated with a propensity for professional tax practitioners to condone overly aggressive tax avoidance strategies (Shafer and Simmons, in press). Thus, there appears to be ample support for the proposition that high Machiavellians will be more likely to perceive manipulative earnings management practices as ethically acceptable, as indicated in the following hypothesis:

Hypothesis 8: Accountants with stronger Machiavellian orientations will perceive earnings management as more ethical.

We also felt that Machiavellianism and the organizational ethical context would have potential interactive effects on organizational-professional conflict and affective

organizational commitment. Organizational-professional conflict 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, because they are less concerned with conventional standards of morality or ethics and also tend to be more resistant to social influence, should be less likely to be influenced by the perceived ethical context in their organization. Consequently, they should be less likely to experience OPC and reduced organizational commitment 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. However, if high Machiavellians feel that the ethical context in their organization is more supportive of ethical/professional behavior, they should be less likely to experience positive affective responses, i.e., they should be less likely to report low (high) levels of OPC (OC) in response to an ethical context that supports or establishes expectations for ethical behavior. This argument leads to the following hypothesis:

Hypothesis 9: The relationships between the perceived organizational ethical context, organizational-professional conflict, and affective organizational commitment will be weaker (stronger) for high (low) Machiavellians.

3 Research method

3.1 Survey instrument

The survey instrument consisted of the earnings management scenarios, the Machiavellianism scale, the ethical climate and ethical culture scales, the measures of organizational-professional conflict and affective organizational commitment, and a demographic questionnaire. All these scales have been used extensively in previous business research and have been shown to possess acceptable reliability and validity. Each of these scales will be discussed in greater detail below.

In order to assess perceptions of the ethical acceptability of various types of earnings management, participants completed the earnings management instrument developed by Merchant (1989) (see Appendix A). This instrument consists of 13 earnings management scenarios classified as either operating manipulations (six cases) or accounting manipulations (seven cases). The instrument places participants in the role of a supervisor of a manager who engages in earnings management, and they record their ethical perception of the manager's action on a five-point scale, from (1) "ethical" to (5) "totally unethical". The Merchant (1989) instrument has been widely used in previous studies of earnings management (e.g., Merchant and Rockness, 1994; Fischer and Rosenzweig, 1995; Elias, 2004).

The Machiavellianism scale (see Appendix B) developed by Christie and Geis (1970) has been widely used in research in the social sciences and business ethics. The scale consists of 20 items, with responses provided on seven-point scale from "disagree strongly" (1) to "agree strongly" (7). Consistent with Christie and Geis (1970), we computed a single score for Machiavellianism by summing all the responses and adding a constant of 20 to the summation.

To assess the perceived ethical climate in their organization, participants

completed the version of the ethical climate questionnaire developed by Cullen, Victor and Bronson (1993) (see Appendix B). The questionnaire 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). Participants also completed the ethical culture scale developed by Treviño et al. (1998). The version of the scale used in the current study (see Appendix B) included 12 items and used the same six-point scale used for the ethical climate questionnaire. We excluded the ethical culture items relating to organizational codes of ethics because local Chinese firms seldom have a formal code of conduct or code of ethics.

We used the three-item version of the organizational-professional conflict scale adapted from the original Aranya and Ferris (1984) instrument by Shafer et al. (2002). The organizational commitment 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 demographic information obtained included age, gender, professional certifications, type of enterprise worked for (local non-listed, local listed or multinational company), position, educational background and accounting experience in years.

All of these scales were translated from the original English version to Chinese using a back-translation procedure. Two graduate business students translated the English versions to Chinese, and then slight adjustments were made to the Chinese versions to the mutual satisfaction of the two translators. After this, a professional translator performed the back-translation of the Chinese instruments into English. The original and back-translated English versions were compared and adjusted, and the final Chinese version was agreed upon by all the 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.

3.2 Sample and data collection

The instrument was distributed to accountants from junior to senior manager levels 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. From early June through the end of August 2007, we distributed a total of 120 instruments, and received 89 useable responses. The response rate was approximately 74 percent which is relatively high for survey research.

Table 1 provides a summary of demographic data. As indicated in the table, the mean age of participants was 34, and they had an average accounting working 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 masters degrees and more than 70 percent held a professional accounting certification (e.g., Certified Public Accountant or Chartered Accountant).

[insert table 1 here]

4 Findings

4.1 Preliminary analysis

Exploratory principal components factor analyses were used to test the dimensionality of the ethical climate and ethical culture scales. The results for the ethical climate scale revealed only 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 .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 .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 the ethical culture scale revealed four factors with eigenvalues in excess of one. However, one of these factors had a relatively low coefficient alpha of .61 and was thus excluded from further analysis. 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 .87, .81, and .93 respectively, indicating relatively strong internal reliabilities. Due to the fact that reliable factors were not identified for all the variables³, not all the hypothesized relationships can be tested in the subsequent analyses.

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 .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 .64. Due to this relatively low internal reliability, our results for OPC should be interpreted with caution. The coefficient alpha for the OC scale was .88, indicating strong internal reliability.

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³ As discussed, only two ethical climate types and three ethical culture types were identified for ethical context variables through exploratory factor analysis.

Scales were constructed for all the continuous measures by taking the mean of the items included in the scale. Consistent with prior research (e.g., Merchant, 1989; Merchant and Rockness, 1994; Fischer and Rosenzweig, 1995; Elias 2004), we also constructed separate scales for accounting earnings management and operating earnings management by taking the mean of participants' ethical judgments for the items included in each scale.

Correlation analysis was conducted for the continuous measures of earnings management, OPC, OC and ethical context. As indicated in table 2, the correlations between the two earnings management variables and the ethical context factors were generally not significant, suggesting that Hypotheses 1 and 2 were not supported. The only exception was the correlation between the benevolent/cosmopolitan climate and judgments of accounting earnings management. As anticipated, participants who perceived a stronger benevolent/cosmopolitan climate in their organization judged accounting manipulations to be more unethical. Also as anticipated, the correlations between Machiavellianism and earnings management are significant and negative, consistent with Hypothesis 8.

[insert table 2 here]

The correlations for organizational-professional conflict and affective organizational commitment were generally supportive of our hypotheses. We found a significant negative relationship between OPC and OC, which was consistent with Hypothesis 7. We also found that the perceived benevolent/cosmopolitan climate had a significant negative (positive) relationship with OPC (OC), consistent with Hypotheses 3 and 5. In contrast, however, the principle/cosmopolitan climate was not significantly correlated with either OPC or OC. The three ethical culture factors in general showed significant correlations with OPC and OC, consistent with Hypotheses 4 and 6. The first factor, Obedience to Authority, was positively correlated with OPC and negatively

correlated with OC as would be expected, since demands for obedience to authority may conflict with professional ethical standards, thus leading to lower affective organizational commitment. The Ethical Norms factor had a significant negative (positive) correlation with OPC (OC), also in line with our expectations. The Penalties factor was not significantly correlated with OPC, but showed a significant positive correlation with OC. The latter relationship would also be expected, since a culture that enforces penalties for unethical behavior should be perceived positively and thus be associated with higher levels of affective commitment.

Although not hypothesized, Machiavellianism was significantly correlated with organizational-professional conflict, organizational commitment and three of the ethical context factors. High Machiavellians tended to report higher levels of OPC and lower levels of OC.⁴ Since high Machiavellians are assumed to be less concerned with ethical or moral standards, the positive correlation with OPC seems somewhat counterintuitive. However, it is perhaps not surprising that Machiavellianism is negatively correlated with affective commitment, since high Machiavellians are generally viewed as being somewhat emotionally detached (Christie and Geis, 1970). Highly significantly negative correlations were observed between Machiavellianism and the Ethical Norms factor, the benevolent/cosmopolitan climate, and the principle/cosmopolitan climate. Again the explanation for these relationships is not obvious, but may be attributable to the fact that high Machiavellians tend to have more cynical views toward ethical issues.

Correlation and univariate ANOVA analyses were conducted to test the potential effects of the demographic variables. In general, the demographic variables had few significant effects on our dependent measures. Somewhat surprisingly, we found that

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⁴ Due to the significant correlations between Machiavellianism, OPC and OC, alternative versions of our subsequently reported regression models for OPC and OC that included Machiavellianism were also ran. However, in these multivariate models, Machiavellianism did not have a significant effect on either OPC or OC.

females tended to perceive operating earnings management as more ethical than males. Interestingly, the ANOVA analysis showed that certification had a significant effect on attitudes toward accounting earnings management. In our study, accountants who held professional certifications (e.g., Certified Public Accountants, Chartered Accountants) were more likely to perceive earnings management as unethical behavior than non-certified accountants. This result is not surprising, since professionally certified accountants have more professional training on ethics and have experienced socialization processes that emphasize the ethical obligations of the profession. ANOVA analysis also indicated that organization type had a significant impact on organizational commitment; in this case we found that accountants working for local companies had higher levels of affective organizational commitment than those employed by multinational companies. 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. In our study, neither education level nor age was significantly associated with any of our dependent measures. Where appropriate, the demographic variables with significant effects are included in our multivariate models reported below.

4.2 Regression analysis

4.2.1 Regression models for earnings management

Regression models were conducted to formally test the research hypotheses.^{5,6} The models for accounting and operating earnings management are reported in table 3. The independent variables in the model include the ethical climate and ethical culture measures, Machiavellianism and professional certification. Gender was also included in the model for operating earnings management due to its significant effect in our univariate tests. The model for accounting earnings management (Panel A) provides only limited support for Hypothesis 1, with the benevolent/cosmopolitan climate having a significant effect on ethical judgments. As anticipated, when the benevolent/cosmopolitan climate was perceived to be stronger, accounting earnings management was viewed as less ethical. Consistent with hypothesis 8, we found a marginally significant negative association between Machiavellianism and ethical judgments, indicating that high Machiavellians were more likely to perceive accounting manipulations as ethically acceptable. We also found a significant association between certification and perceptions of accounting earnings management, consistent with the correlation analysis. As previously discussed, certified accountants viewed accounting

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⁵ Consistent with prior research, this study uses OLS regression as the main regression analysis to test the research hypotheses. However, due to the fact that the dependent variables in these regression models are all ordinal variables, the OLS method might be problematic because the assumptions of OLS are violated when it is used with non-interval variables. Consequently, we also conducted ordinal logistic regression analysis to test the robustness of the results. The ordinal regression models revealed qualitatively similar results with the original OLS models - most of the significance levels of variables in the ordinal logistic models were slightly increased compared with those in OLS models. One exception was the regression model for the Machiavellianism/ Ethical Context interaction with the dependent variable OPC. In the ordinal logistic model, the results indicated that low Machiavellians were more sensitive to the perceived ethical context in the organization and more likely to be influenced by it. This is consistent with our hypothesis 9, while the OLS model didn't provide such support for this hypothesis.

⁶ Because several of the independent variables included in the regression models were significantly correlated, we tested for multicollinearity by examining the variance inflation factors in all of the models. The highest VIF was 1.89, indicating that multicollinearity should not influence the least squares estimates.

earnings management to be more unethical. The model was highly significant and explained approximately 23 percent of the variation in ethical judgments.

[insert table 3 here]

In the model for operating earnings management (Panel B), only Machiavellianism and gender had significant effects on ethical judgments. Again, high Machiavellians viewed earnings management to be more ethically acceptable. Consistent with our correlation analysis, females also viewed operating earnings management more leniently. However, the overall regression model in this case was not significant, and explained only 12 percent of the variation.

4.2.2 Regression models for OPC and OC

To test Hypotheses 3 and 4, organizational-professional conflict was regressed on the ethical climate and culture factors. As presented in Table 4 Panel A, the results of this model indicate that two of the three ethical culture factors, Obedience to Authority and Ethical Norms, had highly significant impacts on OPC. Obedience to Authority was positively associated with OPC while Ethical Norms were negatively associated with OPC. As previously discussed, a focus on strict obedience to authority may pressure professionals to compromise their professional values, resulting in higher levels of OPC. In contrast, a perceived organizational emphasis on ethical norms and rewards for ethical behavior should reduce OPC, as reflected in the significant negative coefficient for the Ethical Norms variable. Neither the benevolent/cosmopolitan nor principle/cosmopolitan climate variables approached significance in the model. Thus, the results do not support Hypothesis 3 (regarding the influence of ethical climate on OPC), but are generally supportive of Hypothesis 4 (regarding the influence of ethical culture on OPC). The overall model was highly significant and explained 24 percent of

the variation in organizational-professional conflict.

[insert table 4 here]

To test Hypotheses 5, 6 and 7, we regressed organizational commitment on the ethical context factors and organizational-professional conflict. The results, also presented in Table 4, provide partial support for these hypotheses. In the first regression model (Panel B), the Obedience to Authority and Ethical Norms factors again had highly significant effects in the anticipated directions, which provides support for Hypothesis 6. As in the model for OPC, the ethical climate factors did not approach significance; thus, Hypothesis 5 was not supported. The organizational type variable was also significant, again suggesting lower levels of affective commitment among employees of multinational companies. An alternative model is reported in Panel C which also includes OPC as an independent variable. The results of this model are similar to those reported in the previous model, except that the significance level for the Obedience to Authority factor declined somewhat. Consistent with Hypothesis 7 the OPC variable also had a significant negative impact on affective commitment. These findings suggest that the perceived organizational ethical culture and organizational-professional conflict both have significant direct effects on accounting professionals' affective organizational commitment. The decrease in significance for the Obedience to Authority factor, combined with the significant effect of OPC, also suggests that OPC partially mediates the impact of ethical culture on affective organizational commitment (cf. Baron and Kenny, 1986). That is, not surprisingly, OPC appears to act as a mechanism through which Obedience to Authority affects commitment. Both regression models for OC were highly significant and explained in excess of 40 percent of the variation in the dependent measure.

4.2.3 Regression models for Machiavellianism/Ethical Context Interaction

To test Hypothesis 9, 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 results of these models are presented in Table 5. Panel A of the table reports the model for OPC. As indicated in the Table, the results were consistent with Hypothesis 9 for the Obedience to Authority factor, but not for the Ethical Norms factor. Specifically, the Obedience to Authority factor had a significant effect on OPC for low Machiavellians ($p=.031$), but only a marginally significant effect for high Machiavellians ($p=.06$). However, the Ethical Norms factor was only marginally significant for both groups. Overall, these results provide relatively little support for the hypothesized interactive effects of Machiavellianism and ethical context on OPC.

[insert table 5 here]

The models for affective organizational commitment shown in Panel B indicate that, in contrast with Hypothesis 9, high Machiavellians appeared to be significantly 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 the high Machiavellians and only marginally significant for the low Machiavellians. In addition, the regression model for the high Machiavellians explained a high percentage (approximately 66 percent) of the variation in affective commitment.

Panel C reports regression results for OC while controlling for OPC, and provides an interesting contrast in results for the high and low Machiavellians. Consistent with the model in Panel B, the regression for high Machiavellians explained a large percentage of the variation in affective commitment (approximately 61 percent), and the significance levels of the Obedience to Authority and Ethical Norms factors were very similar. For the low Machiavellians, however, the ethical

culture factors were no longer significant, but the OPC variable was highly significant. These results suggest that for low Machiavellians, organizational-professional conflict fully mediates the effects of ethical culture on affective commitment. That is, OPC may be viewed as the mechanism through which ethical culture influences affective commitment. Although high Machiavellians appear to be very sensitive to the perceived ethical culture in their organization, in their case OPC does not mediate this relationship.

5 Conclusions and Discussion

The results of the current study provide partial support for the research hypotheses. In general the perceived ethical context did not affect judgments of the acceptability of earnings management; however, one exception was that perceptions of a stronger benevolent/cosmopolitan climate were found to be associated with significantly harsher judgments of accounting earnings management. This finding suggests that efforts to promote awareness of the public interest obligation (enhance the benevolent/cosmopolitan climate) of accountants in industry may discourage earnings management behavior. This is an important finding, because although the “public interest” obligations of CPAs in public accounting firms are often emphasized, there is not much discussion in the accounting literature of the public interest obligations of CPAs in private industry.

Consistent with prior business studies (e.g., Ghosh and Crain, 1995; Ross and Robertson, 2000; Wirtz and Kum, 2004), we found at least partial support for our hypothesis that high Machiavellians would judge earnings management to be more acceptable. In the current study the effects of Machiavellianism were stronger for operating manipulations, which are generally viewed as more ethical than accounting

manipulations (e.g., Merchant and Rockness, 1994) but are clearly done with manipulative intent. This result is perhaps not surprising, given that the Machiavellianism construct is closely associated with a propensity for manipulative tactics.

The findings also indicate that two of the three ethical culture factors, Obedience to Authority and Ethical Norms, were significantly associated with organizational-professional conflict and affective organizational commitment. As we anticipated, there was a significant positive (negative) relationship between organizational demands for obedience to authority and perceived OPC (OC). We suggest that an ethical culture which demands strict obedience to authority will conflict with accounting professionals' expectations of autonomy in applying their judgment. Also as expected, an organizational culture characterized by high norms and expectations/rewards for ethical behavior was associated with lower levels of perceived organizational-professional conflict and a stronger emotional attachment to the organization. Contrary to our expectations; however, the organizational ethical climate was not associated with OPC or OC.

Organizational-professional conflict exhibited a highly significant negative relationship with affective organizational commitment, consistent with our hypothesis and the results of prior studies such as McGregor et al. (1989) and Shafer et al. (2002). In light of these research findings, we suggest that organizations that employ professional accountants should have a strong incentive to promote a positive or supportive organizational ethical culture in order to foster employee commitment and satisfaction and reduce turnover.

Our hypothesis regarding the potential interactive effects of Machiavellianism and ethical context on OPC and OC was generally not supported, although low Machiavellians did appear to be more likely to experience organizational-professional

conflict in response to a stronger organizational emphasis on obedience to authority. With respect to affective commitment, contrary to our hypothesis high Machiavellians appear to be more rather than less sensitive to the perceived ethical culture in their organization. In particular, the Ethical Norms factor had a highly significant effect on high Machiavellians' affective organizational commitment, and the perceived organizational ethical culture explained a high percentage of the variation in affective commitment for high Machiavellians. It is unclear why high Machiavellians would exhibit a stronger negative reaction to a perceived unethical organizational culture; thus, this is an issue that perhaps should be addressed further in future research.

An interesting contrast was also found between the high and low Machiavellians regarding the potential mediating effect of OPC. Specifically, for low Machiavellians OPC fully mediated the relationship between ethical culture and affective commitment, suggesting that the perceived ethical culture primarily affects organizational commitment through its impact on perceived organizational-professional conflict. No mediation effects were found for the high Machiavellians. These findings suggest that organizational-professional conflict is more salient to the affective responses of low vs. high Machiavellians.

This study raises questions regarding the utility of the Victor and Cullen (1988, 1987) ethical climate construct for the study of organizational-professional conflict and organizational commitment among professional accountants working in private industry. Only two of the nine theoretical climate types emerged in our study, and they were not significantly associated with either OPC or OC. In contrast, two of Treviño's (1990) ethical culture factors had highly significant effects on perceptions of both conflict and commitment. Thus, it appears that the conceptual ethical climate types we identified (benevolent/cosmopolitan and principle/cosmopolitan), with their emphasis on serving the public interest and following professional standards, are less relevant to

perceived OPC and OC among industry accountants. However, these results may differ between accountants working in private industry and public accounting firms. It seems reasonable to expect that conceptual notions such as serving the public interest will be perceived as more relevant in public accounting, particularly among auditors. Consequently, future studies may wish to compare the effects of the various elements of organizational ethical context on accountants working in different professional environments.

There are additional issues that could be addressed in future studies. For example, future studies could examine the potential differences in ethical context and its impact across countries and cultures. Parboteeah et al. (2005) hypothesized that national culture would affect the ethical climate in public accounting firms, and based on their comparison of Japanese and U.S. firms they found significant differences in perceptions of principled climates. Several additional studies have found cross-cultural differences in ethical decision making in public accounting firms (e.g., Ponemon and Gabhart, 1993; Tsui and Windsor, 2001), but research is also needed on potential cross-cultural differences in the ethical decisions of professional accountants employed in private industry. Due to ongoing concern regarding the state of business ethics in China, one fruitful area of research may be comparisons of the ethical context and its effects in commercial enterprises in Chinese vs. Western cultures.

Like most studies of this type, the current study is subject to significant limitations. The relatively small sample size limits the reliability and generalizability of our 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 (e.g., local non-listed vs. local listed vs. multinational companies). Due 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.

Figure 1: Theoretical Climate Types

		LOCUS OF ANALYSIS		
		Individual	Local	Cosmopolitan
ETHICAL CRITERION	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)

Figure 2: Hypothesized Relationships among Ethical Climate, OPC and OC

Table 1: Demographic Summary

Mean age: 34

Mean accounting working experience: 5.5

Gender:

Male: 43.8%

Female: 56.2%

Organization type:

Local company: 52.8%

Local listed company: 14.6%

Multinational company: 32.6%

Position:

General and senior staff: 62.9%

Supervisor and manager: 37.1%

Certificate:

CPA and ACCA: 16.8%

CA: 56.2%

None: 27%

Table 2: Correlation Coefficients

	ACEM	OPC	OC	OA	ETHNORM	PENA	BCCLIM	PCCLIM	MACH
OPEM	.418**	-0.002	-0.025	-0.083	0.112	0.11	0.122	0.007	-.239*
ACEM		-0.054	0.037	-0.003	0.025	-0.112	.252*	-0.011	-.212*
OPC			-.470**	.344**	-.362**	-0.192	-.285**	-0.169	.243*
OC				-.414**	.528**	.371**	.368**	0.137	-.307**
OA					-0.128	-.418**	-.243*	-0.023	0.138
ETHNORM						.464**	.518**	.462**	-.335**
PENA							.398**	.47**	-0.127
BCCLIM								.518**	-.326**
PCCLIM									-.276**
** Correlation is significant at the 0.01 level (2-tailed).									
* Correlation is significant at the 0.05 level (2-tailed).									

Legend:

OPEM: operating earnings management

ACEM: accounting earnings management

OPC: organizational-professional conflict

OC: affective organizational commitment

OA: obedience to authority

ETHNORM: ethical norms

PENA: penalties

BCCLIM: benevolence/cosmopolitan ethical climate

PCCLIM: principle/cosmopolitan ethical climate

MACH: Machiavellianism

Table 3: Regression Models for Earnings Management***Panel A: Dependent variable = Ethical judgments for accounting earnings management***

Independent variables:		Std. Beta	t-statistic	p-value
Benevolent / cosmopolitan climate		.305	2.492	.015
Principle / cosmopolitan climate		-.014	-.118	.906
Obedience to authority		.103	.885	.379
Ethical norms		-.058	-.467	.642
Penalties		-.196	-1.520	.132
Machiavellianism		-.203	-1.917	.059
Certificate		-.290	-2.798	.006
Model F-value	3.368			
Model significance	.003			
Model R ²	.225			

Panel B: Dependent variable = Ethical judgments for operating earnings management

Independent variables:		Std. Beta	t-statistic	p-value
Benevolent / cosmopolitan climate		.046	.351	.727
Principle / cosmopolitan climate		-.052	-.419	.677
Obedience to authority		.024	.189	.850
Ethical norms		.021	.159	.874
Penalties		.078	.561	.576
Machiavellianism		-.253	-2.215	.030
Certificate		-.048	.431	.668
Gender		.236	2.197	.031
Model F-value	1.367			
Model significance	.224			
Model R ²	.120			

Table 4: Regression Models for OPC and OC***Panel A: Dependent variable = Organizational- professional conflict***

Independent variables:		Std. Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		-.025	-.208	.836
Principle/cosmopolitan climate		-.053	-.481	.632
Obedience to authority		.349	3.105	.003
Ethical norms		-.358	-3.037	.003
Penalties		.151	1.210	.230
Model F-value	5.104			
Model significance	.000			
Model R ²	.235			

Panel B: Dependent variable = Organizational commitment

Independent variables:		Std. Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		-.005	-.048	.962
Principle/cosmopolitan climate		-.054	-.565	.574
Obedience to authority		-.314	-3.223	.002
Ethical norms		.500	4.916	.000
Penalties		.028	.264	.793
Organization type		-.192	-2.269	.026
Model F-value	10.727			
Model significance	.000			
Model R ²	.440			

Table 4
Regression Models for OPC and OC
(continued)

Panel C: Dependent variable = Organizational commitment (controlling for OPC)

Independent variables:		Std. Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		-.001	-.011	.991
Principle/cosmopolitan climate		-.066	-.715	.477
Obedience to authority		-.232	-2.331	.022
Ethical norms		.417	4.016	.000
Penalties		.064	.607	.546
Organization type		-.194	-2.371	.020
Organizational-professional conflict		-.233	-2.549	.013
Model F-value		10.739		
Model significance		.000		
Model R ²		.481		

Table 5: Regression Models for Machiavellianism/**Ethical Context Interactions*****Panel A: Dependent variable = Organizational-professional conflict***

High Machiavellians		Std.		
Independent variables:		Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		-.037	-.213	.832
Principle/cosmopolitan climate		-.018	-.099	.922
Obedience to authority		.318	1.940	.060
Ethical norms		-.326	-1.853	.072
Penalties		.030	.162	.873

Model F-value	2.418
Model significance	.053
Model R ²	.241

Low Machiavellians		Std.		
Independent variables:		Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		-.021	-.118	.907
Principle/cosmopolitan climate		-.059	-.384	.703
Obedience to authority		.401	2.244	.031
Ethical norms		-.336	-1.956	.058
Penalties		.270	1.424	.163

Model F-value	1.982
Model significance	.103
Model R ²	.203

Table 5
Regression Models for Machiavellianism/
Ethical Context Interactions
(continued)

Panel B: Dependent variable = Organizational commitment

High Machiavellians		Std.		
Independent variables:		Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		.023	.182	.857
Principle/cosmopolitan climate		-.146	-1.125	.268
Obedience to authority		-.273	-2.234	.032
Ethical norms		.574	4.424	.000
Penalties		.185	1.373	.178
Organization type		-.172	-1.546	.131

Model F-value	8.694
Model significance	.000
Model R ²	.665

Low Machiavellians		Std.		
Independent variables:		Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		.021	-.119	.906
Principle/cosmopolitan climate		-.034	-.217	.829
Obedience to authority		-.374	-2.091	.043
Ethical norms		.322	1.872	.069
Penalties		-.106	-.559	.579
Organization type		-.171	-1.184	.244

Model F-value	1.811
Model significance	.123
Model R ²	.222

Table 5
Regression Models for Machiavellianism/
Ethical Context Interactions
(continued)

Panel C: Dependent variable = Organizational commitment (controlling for OPC)

High Machiavellians		Std.		
Independent variables:		Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		.023	.176	.861
Principle/cosmopolitan climate		-.146	-1.110	.274
Obedience to authority		-.270	-2.078	.045
Ethical norms		.571	4.180	.000
Penalties		.185	1.355	.184
Organization type		-.173	-1.526	.136
Organizational-professional conflict		-.008	-.068	.946

Model F-value	8.198
Model significance	.000
Model R ²	.614

Low Machiavellians		Std.		
Independent variables:		Beta	t-statistic	p-value
Benevolent/cosmopolitan climate		.012	.075	.941
Principle/cosmopolitan climate		-.060	-.423	.674
Obedience to authority		-.199	-1.151	.257
Ethical norms		.175	1.069	.292
Penalties		.012	.068	.946
Organization type		-.170	-1.297	.203
Organizational-professional conflict		-.438	-3.007	.005

Model F-value	3.173
Model significance	.010
Model R ²	.375

Appendix A: Earnings Management Scenarios

1. The division's headquarters building was scheduled to be painted in 1999. But since profit performance was way ahead of budget in 1998, the division general manager (GM) decided to have the work done in 1998. Amount: \$150,000
2. The GM ordered his employees to defer all discretionary expenditures (e.g., travel, advertising, hiring, and maintenance) into the next accounting period, so his division could make its budgeted profit targets. Expected amounts of deferrals: \$150,000
  - a. The expenses were postponed from February and March until April in order to make the first quarter target.
  - b. The expenses were postponed from November and December until January in order to make the annual target.
3. On December 15, a clerk ordered \$3,000 of office supplies, and the supplies were delivered on December 29. This order was a mistake because the GM had ordered that no discretionary expenses be incurred for the remainder of the fiscal year, and the supplies were not urgently needed. The company's accounting policy manual states that office supplies are to be recorded as an expense when delivered. The GM learned what had happened, and to correct the mistake, he asked the accounting department not to record the invoice until February.
4. In September, the GM realized the division would need strong performance in the fourth quarter to reach its budget targets.
  - a. He decided to implement a sales program offering liberal payment terms to pull some sales that would normally occur next year into the current year; customers accepting delivery in the fourth quarter would not have to pay the invoice for 120 days.
  - b. He ordered manufacturing to work overtime in December so that everything possible could be shipped by the end of the year.
  - c. He sold some excess assets and realized profit of \$40,000.
5. At the beginning of December 1998, the GM realized the division would exceed its budgeted profit targets for the year.
  - a. He ordered his controller to prepay some expenses (e.g., hotel rooms, exhibit expense) for a major trade show to be held in March 1999 and to book them as 1998 expenses. Amount: \$60,000
  - b. He ordered his controller to develop the rationale for increasing the reserve for inventory obsolescence. By taking a pessimistic view of future market prospects, the controller was able to identify \$700,000 worth of finished goods that conservative accounting would say should be fully reserved (i.e., written off), even though the GM was fairly confident the inventory would still be sold at a later date at close to full price.
6. The next year, the division sold 70% of the written-off inventory, and a customer had indicated some interest in buying the rest of that inventory the following year. The GM ordered his controller to prepare the rationale for reducing the reserve for obsolescence by \$210,000 (i.e., writing up the previously written-off goods to full cost). The GM's motivation for recapturing the profit was:
  - a. To be able to continue working on some important product development projects that might have been delayed due to budget constraints.
  - b. To make budgeted profit targets.
7. In November 1998, the division was straining to meet budget. The GM called the engagement partner of a consulting firm that was doing some work for the division and asked that the firm not send an invoice until next year. The partner agreed. Estimated work done but not invoiced:
  - a. \$30,000
  - b. \$500,000

Appendix B: 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

37. Management in this organization disciplines unethical behavior when it occurs.
38. Employees in this organization perceive that people who violate the professional code of ethics still get formal organizational rewards.
39. Penalties for unethical behavior are strictly enforced in this organization.
40. Unethical behavior is punished in this organization.
41. The top managers of this organization represent high ethical standards.
42. People of integrity are rewarded in this organization.
43. Top managers of this organization regularly show that they care about ethics.
44. Top managers of this organization are models of unethical behavior.
45. Ethical behavior is the norm in this organization.
46. Top managers of this organization guide decision making in an ethical direction.
47. Ethical behavior is rewarded in this organization.
48. Professional ethics code requirements are consistent with informal organizational norms.
49. This organization demands obedience to authority figures, without question.
50. People in this organization are expected to do as they're told.
51. The boss is always right in this organization.

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're forced to do so.
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.

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 be successful.

* = Reverse scored.

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