

# AN EXPERIMENTAL EXAMINATION OF JUDGMENTS OF CHINESE PROFESSIONAL AUDITORS IN EVALUATING INTERNAL CONTROL SYSTEMS

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## Abstract

Researchers have tended to assume that Anglo-American theories and practices are equally applicable to other countries with their unique contextual environments. The aim of this research is to show that the theoretical model and empirical research findings in Anglo-American countries, with respect to evaluation of internal control systems, are not applicable to China. Specifically, there are two approaches to evaluate internal control systems: one is a risk-based audit approach, and the other is a control-based audit approach. Morrill, Morrill, and Kopp (2012) show that Canadian accountants who relied on a risk-first approach identified significantly more internal control deficiencies than accountants who relied on a control-first approach. Contrary to the research findings in Canada, this study provides experimental evidence that Chinese auditors who relied on a control-first approach identified significantly more internal control deficiencies than auditors who relied on a risk-first approach. The findings have implications for global convergence of auditing practices.

**Keywords:** Auditor Judgments, Internal Control Evaluation, Internal Auditing, Risk-Based Audit Approach, Control-Based Audit Approach, Chinese Culture, Confucianism, Legalism, “Face”

**Data Availability:** Data are available from the authors upon request

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## 1 Introduction

Findings from prior studies in international convergence of accounting and auditing standards and practices suggest an Anglo-American bias (Chand, Cummings and Patel, 2012; Chand and Patel, 2011; Heinz, Patel and Hellmann, 2013; Patel, Harrison and McKinnon, 2002). Researchers have tended to assume that Anglo-American auditing theories, models and practices are equally applicable to other countries that have their own unique social, political and economic environment (Chand et al., 2012; Heidhues and Patel, 2011; Patel, 2006). These are simplistic assumptions, and the purpose of this research is to contest them by examining an important topic in auditing, namely, the influence of cultural values on the evaluation of internal control systems. China has been selected because there are significant cultural differences between China and Anglo-American countries. Specifically, this paper aims to show that the theoretical model and empirical research findings in Anglo-American countries, with respect to evaluation of internal control systems, may not apply to China. Our study investigates the following research question: are Chinese professional auditors who rely on a control-first approach more likely to identify

significantly more internal control deficiencies than auditors who rely on a risk-first approach.

An internal control system is a communication system from the top of the organization to the bottom, and a response system from the bottom of the organization to the top (Gay and Simnett, 2006, p. 354). Internal control is defined by International Standards on Auditing (ISA) 315.4 as, “the process designed and implemented by those charged with governance, management and other personnel to provide reasonable assurance regarding the achievement of the entity’s objectives concerning financial reporting, the effectiveness and efficiency of operations, and compliance with laws and regulations.” Additionally, this standard indicates that internal control is designed and implemented to address business risks that threaten the reliability of the entity’s financial reporting, effectiveness and efficiency of the entity’s operations, and compliance with applicable laws and regulations. Further, in the aftermath of corporate scandals and the global financial crisis, internal control systems have been increasingly recognized as an important research topic to enhance corporate governance and accountability (Kim, Song and Zhang, 2011; Lloyd and Goldschmidt, 2003; Pridgen and Wang, 2012). In response to these corporate scandals and the global financial crisis,

global and national standards setters and regulators have focused on designing and evaluating effective and efficient internal control systems across countries (Pridgen and Wang, 2012).

Specifically, there are two approaches to evaluate internal control systems: one is a risk-based audit approach, and the other is a control-based audit approach (Bierstaker et al., 2012; Morrill, Morrill and Kopp, 2012). The risk-based approach requires the auditor first to understand the entity and its environment to identify risks that may result in material misstatements in the financial report. In other words, when auditors evaluate internal control systems, they first identify appropriate risk and then analyze the control weakness in the internal control system (Akresh, 2010; Coetzee and Lubbe, 2014; Piercey, 2011). This assessment involves considering factors such as the nature of the risks, relevant internal controls and the required level of audit evidence. In order to identify risks that are relevant to the audit of the financial report, the auditor needs to obtain an appropriate understanding of the entity and the environment in which it operates (Akresh, 2010; Allegrini and D'Onza, 2003; Fukukawa and Mock, 2011; Lloyd and Goldschmidt, 2003). Auditors exercise professional judgment in evaluating specific risks in the internal control system (Coetzee and Lubbe, 2014; Piercey, 2011). A risk-based audit approach is designed for use throughout the audit to efficiently and effectively focus on the nature, timing and extent of audit procedures in those areas that have the most potential for causing material misstatements in the financial report (Mock et al., 2009; Morrill et al., 2012).

In contrast, the control-based audit approach first analyzes the controls in the internal control system and then examines what risks have been detected by those controls. Controls should always be designed, implemented, and applied as a response to specific risks (Bierstaker et al., 2012; Morrill et al., 2012). Appropriate controls should be put in place to modify risks so that the level becomes acceptable. The effort to design, plan, execute, and monitor controls must be properly balanced with the effort to plan, execute, and monitor the organizational business plan (Akresh, 2010; Allegrini and D'Onza, 2003; Coetzee and Lubbe, 2014). With too little attention on controls, business objectives will not be achieved. On the other hand, overly stringent control requirements are likely to lead to ineffective and inefficient internal control systems (Gramling, O'Donnell and Vandervelde, 2013; Piercey, 2011; Smith, Tiras and Vichitlekarn, 2000). Therefore, organizations must consider the balance between risk and control, avoid over-control, and not become overly bureaucratic.

The ISA advocates a risk-based theoretical model for all countries. ISA 315 states that “all the risk assessment procedures are performed by the auditor in the course of obtaining the required

understanding” (paragraph 7). Researchers also have relied on a risk-based theoretical model in their evaluation of internal control systems (Akresh, 2010; Bierstaker et al., 2012; Hoitash, Hoitash and Bedard, 2008). Of particular relevance to our research is a recent study by Morrill et al., (2012), who examined the influence of a risk-based audit approach and a control-based audit approach in evaluating internal control systems. They provided experimental evidence that Canadian accountants, who relied on a risk-first approach, identified significantly more internal control deficiencies than accountants who relied on a control-first approach. This risk-based theoretical model is based on research findings from Anglo-American models, with little discussion that takes into account country-specific contextual factors. We suggest that evidence from Anglo-American countries is not likely to apply to other countries that have their unique contextual factors. Further, we argue that the risk-based theoretical model used by researchers, and advocated by global standard setters, may not apply to China because of its unique social, political and economic environment. Therefore, this study extends Morrill et al.'s (2012) Canadian experimental study by providing a more holistic insight into various factors that may influence auditors' professional judgments in China when evaluating internal control systems.

China is the focus of our study because evidence shows that Chinese organizations emphasize “control”, “submission”, “subordination”, “obedience” and “hierarchical orders” (Li et al., 2013; Liu and Wang, 2013; Wang and Fulop, 2007). Prior research has shown that, as a result of being submissive to the hierarchical order, decisions in China tend to be passed to higher levels, and the organizational hierarchy is overloaded (Boisot and Liang, 1992; Javidan et al., 2006; Lockett, 1988). Higher level managers feel that their authority and power is challenged if they do not endorse anything before implementation. As a result, higher level managers are quickly overloaded with routine decisions, signatures and relatively minor disputes between departments (Chow, Chau and Gray, 1995; Li et al., 2013; Lockett, 1988; Lu, Ji and Aiken, 2009; Wei et al., 2010; Westwood, 1997; Zhang and Spicer, 2014). This focus on control, checks and balances in Chinese organizations is likely to influence the design and evaluation of internal control systems. We suggest that when evaluating internal control systems, auditors in Chinese organizations are more likely to suggest placing additional internal control measures than may be appropriate.

Contrary to the research findings by Morrill et al., (2012), our findings show that Chinese auditors who relied on a control-first approach identified significantly more internal control deficiencies than auditors who relied on a risk-first approach. Despite the importance of a risk-first approach, Chinese auditors continue to focus on a control-first approach

in evaluating internal control systems. We suggest that auditing research will be enhanced by a critical examination of contextual environments of countries rather than simply assuming that evidence from Anglo-American countries is equally applicable to other countries such as China.

The remainder of the paper is organized as follows. The next section formulates the hypothesis concerning the influence of culture on Chinese auditors' judgments by drawing on the philosophies of Confucianism and Legalism and relevant aspects of Chinese core cultural values. The third section outlines the research method and explains the strategies employed to enhance the reliability and validity of the results. The fourth section presents the results while the fifth section summarizes the conclusions and implications of the study. Finally, this paper acknowledges the limitations and provides suggestions for further research.

## 2 Theory development and hypothesis formulation

### 2.1 Confucianism

Confucianism, which is derived from the teachings of the Chinese philosopher Confucius (551-479 B.C.E.), is seen as the traditional root of Chinese culture (Hofstede and Bond, 1988; Hwang, 2015; Wang, 2013). Confucianism is a complex system of moral, social, political and philosophical thought that has a profound influence on Chinese culture (Hwang, 2015). Confucianism was formally adopted as the "official moral and political ideology" of the state during the Han Dynasty (Yee, 2012, p. 431). Confucianism advocates benevolence (仁), righteousness (义), wisdom (智), loyalty (信), self-sacrifice (牺牲), filial piety (孝) and rites (礼). These core Confucian moral teachings constitute the fundamental social values and norms that have been shared by society in ancient China for over two thousand years (Fu and Chiu, 2007; Lin and Ho, 2009). The Confucian "way of thinking" has captured self-understanding and ideology of the Chinese people and remains dominant in contemporary Chinese Society (Hwang et al., 2008; Hwang, 2013; Lin and Ho, 2009; Yee, 2009, 2012; Yeh et al., 2013).

One of the most important aspects of Confucianism is the focus on complete subordination by expressing "love and piety towards superiors, as well as observance of rites and rules of propriety" (Lang, 1968, p. 9). Complete subordination and control are expected not only from public officials but ordinary people as well. It has been particularly emphasized by Confucian scholars throughout Chinese history as regulating interpersonal, especially intergenerational, relationships among Chinese people. Also, Confucianism emphasizes filial piety, which requires, "subordination of personal desires to a hierarchy of deference that reaches up to the father, back to the ancestors, and up to heaven" (Cornberg, 1994, p. 138). Filial piety is one of the paramount guiding ethics, which

govern social behavior in Chinese societies. Filial piety surpasses all other cultural ethics with respect to its historical continuity (Zhang and Bond, 1998). Filial piety prescribes how children should behave towards their parents, living or dead, as well as towards their ancestors. It justifies not only absolute parental authority over children, but also by extension, the authority of those senior in generational rank over those junior in rank (Zhang and Bond, 1998). Filial piety also shows the importance of obedience, submission, and subordination in regulation Chinese society (Hsiao et al., 2006; Yeh et al., 2013).

Confucianism advocates hierarchical relationships to achieve harmony (Lam, 2003). The focus is on people accepting a hierarchical order in which everybody has a rightful place (Patel, 2004). Furthermore, the fundamental assumption of Confucianism is that an individual, as a social or relational being, exists in relation to others. A person is seen, "as a relational being, socially situated and defined within an interactive context" (Bond and Hwang, 1986, p. 215). Confucianism emphasizes that an individual is an integrated part of a submissive and controlling society to which he or she belongs (Bond and Hwang, 1986). Chinese societies often regard themselves as being interdependent rather than being independent of their surrounding social context (Hamamura, Xu and Du, 2013). As such, Chinese culture mostly emphasizes the interdependent view of self in social interactions. This perspective stems from a Confucian belief about the interdependence of events in the universe; that all things can be described only in relation to each other (Chen et al., 2013). In other words, any event or individual does not stand alone and must be explained in relation to others. This fundamental concept of interdependence in Confucianism has a profound influence on how Chinese view themselves and interact with others. Confucianism shows that the ruler needs to identify a proper hierarchical order and to be managed through benevolence (Fung, Chan and Chien, 2013; Lu et al., 2009). To respect a hierarchical order is important and needs no justification (Liu, 2015; Matsumoto, 2007; Schwartz, 1990). As such, individual perceptions and judgments are discouraged and replaced by collective consensus and submission to judgments of powerful leaders.

Hierarchy in an organization is seen as reflecting inherent inequalities, centralization is popular, subordinates expect to be told what to do, and communication is patriarchal and driven from the top-down (Fang, 2012; Fang and Faure, 2011). One of the functions of hierarchies is to identify and confer status and power to individuals. Individuals with higher status often have more power (Matsumoto, 2007). As a result of being submissive to a hierarchical order, decisions tend to be passed to higher levels, and the organizational hierarchy is overloaded (Boisot and Liang, 1992; Javidan et al., 2006; Lockett, 1988). In the system, to exercise any rule it must be checked by higher level managers. If anything is not endorsed by the leaders before implementation, they will feel that their authority and power is challenged. As a

result, higher level managers are quickly overloaded with routine decisions, signatures and relatively minor disputes between departments (Chow et al., 1995; Li et al., 2013; Lockett, 1988; Lu et al., 2009; Wei et al., 2010; Westwood, 1997; Zhang and Spicer, 2014). For example, Lockett (1988) provides evidence to show that there are too many bureaucratic and hierarchical levels in organizations, procedures are very complex, excessive numbers of people are involved, the work drags on, and productivity may be affected. Finally, there is an inability to resolve the smallest concrete problem by low hierarchical level members. To achieve anything, it is necessary to have a written agreement and approval of a dozen people and units, the procedures can drag on for several months, sometimes even for a year or two, without reaching a solution (Beh and Kennan, 2013, p. 25; Lockett, 1988). Also, leaders are more likely to make decisions autocratically and paternalistically, and subordinates usually show a preference for this type of managerial decision-making style. Subordinates are further expected to be told what to do and not to question authority figures. As a result, employees are fearful of authority figures and not likely to disagree with them. This pattern is particularly applicable to Chinese-based organizations with their emphasis on higher degrees of authoritarianism and rigid hierarchies (Bond, 1991; Bu, McKeen and Shen, 2011; Liu and Wang, 2013; Sinha and Sinha, 1990).

The ultimate goal of Confucianism is familial, social and political stability and “hexie” (harmony) (Huang and Wang, 2011; Mahoney, 2008, p. 120). For a collectivist culture the maintenance of social harmony within hierarchical order and relationships is paramount (Kwan, Bond and Singelis, 1997; Lai, Lam and Lam, 2013; Triandis, 1995). In Chinese culture, “hexie” (harmony) refers to a state of being in which there is no conflict or friction, and everything is balanced and at peace (Schaefer-Faix, 2008). Interpersonal disagreements and clashes frequently occur in daily life and, in the West, are typically analyzed through a conflict framework (Patel et al., 2002). Evidence shows that Chinese reported a higher level of conflict avoidance in interpersonal disagreements and clashes than did Anglo-Americans (Fang and Faure, 2011; Li and Thurston, 1994, p. 127).

Chinese Communist discipline further compounds this traditional Chinese “listening-centered” propensity. In the words of Mao Tse-Tung (1966, p. 255), “We must affirm anew the discipline of the Party, namely: (1) the individual is subordinate to the organization; (2) the minority is subordinate to the majority; (3) the lower level is subordinate to the higher level; and (4) the entire membership is subordinate to the Central Committee. Whoever violates these articles of discipline disrupts Party unity.” In China, the tendency to avoid conflict is typically attributed to the influence of the Confucian value of harmony, which encourages people to tolerate interpersonal disagreement and transgression (Chen and Tjosvold, 2013; Huang, 2012; Leung et al., 2011). In order to achieve harmony, people must follow the correct

behavior, or “li”, which is behavior appropriate to one’s role (Fang, 2012; Friedman, Chi and Liu, 2006; Patel et al., 2002). Correct behavior includes controlling overt expressions of thoughts and emotions, so that the cultivated person strives to maintain self-control regardless of the situation and thus conforms to the ideal of “xinpinqie” (心平气和) – “being perfectly calm” (Fang, 2012; Friedman et al., 2006; Shenkar and Ronen, 1987). As such, the importance of harmony within hierarchy in Chinese society and organizations discourages individual judgments and focuses more on submission and control.

One of the core Confucian moral values that constitute the fundamental social values and norms is “tinghua” (listening-centered communication) (Fang and Faure, 2011; Gao and Ting-Toomey, 1998, p. 41). “Tinghua” translates literally as, “listen talks.” Chinese culture encourages listening not speaking, “To Chinese, there are conditions associated with speaking, and not everyone is entitled to speak. Thus, a spoken ‘voice’ is equated with seniority, authority, age, experience, knowledge, and expertise. As a result, listening becomes a predominant mode of communication” (Gao and Ting-Toomey, 1998, p. 42). This study argues that traditional Chinese culture is a “listening-centered” (“tinghua”) communication where not everyone is entitled to speak. Speaking is associated with seniority, leadership, hierarchy, and expertise. Chinese culture typically encourages respect and obedience and places more importance on submissive norms as determinants of behavior than do Western cultures. Therefore, divergence from familial expectations and expression of personal goals over in-group goals is actively discouraged (Stipek, 1998). In Chinese society and organizations, “tinghua” reinforces that individual judgments are discouraged, and the focus is more on submission and control.

## 2.2 Philosophy of Legalism

The essence of the philosophy of Legalism is using the law (法), authority or power (势), and mechanism (术) to ensure that leaders are in complete and absolute control of subjects and subordinates (Chang, 1976; Schneider, 2011). Legalism has permeated the Chinese mind from the time of the Qin Dynasty since 221 B.C.E. and has continued to influence contemporary Chinese society in politics, business and social domains (Faure and Fang, 2008; Lu et al., 2009; Redding and Witt, 2009). Historically, the philosophy of Legalism overtime merged with mainstream Confucianism and continued to have a strong influence on Chinese society (Nielsen, 2014; Pan, Rowney and Peterson, 2012). Both philosophies emphasize the importance of control in managing political and economic affairs (Lu et al., 2009). In contrast to Confucianism, which suggests ruling a state with humaneness, Legalism advocates to rule a state with serious penal law and strong punishment (Wu and Vander, 2012). Legalists believe that all divided powers should be consolidated under “one power” in order to

establish a centralized powerful and wealthy state where one person is the ruling authority (Moise, 2013, p. 13). This “one power” has to design an effective government with strong control to assist in maintaining power (Wu and Vander, 2012; Yu, 2014). Indeed, the purpose of the legal system and the effective control system is to maintain power and punish those who do not show complete obedience to the authority.

Philosophy of Legalism still remains powerful in contemporary Chinese organizations (Goldin, 2011; Greif and Tabellini, 2010; Moise, 2013, p. 31; Yu, 2014). Consistent with Confucianism, Legalism advocates hierarchical relationships, and the focus is on subordinates’ complete obedience in order to maintain power and authority (Faure and Fang, 2008; Hwang, 2013, p. 1021). Legalism has resulted in higher level managers in organizations often making decisions autocratically, and subordinates are expected to follow strictly the orders. Subordinates generally do not question superiors’ decisions. Control systems and hierarchical levels in organizations are designed to force subordinates in lower levels to maintain and unconditionally follow the orders from superiors in higher levels (Busch et al., 2013; Hwang, 2013, p. 1021). The philosophy of Legalism in Chinese society and organizations strongly focuses on control, subordination, obedience, and hierarchical orders are likely to influence the design and evaluation of internal control systems (Faure and Fang, 2008; Yu, 2014). It is suggested that auditors in Chinese organizations are more likely to be guided by detailed, bureaucratic, prescriptive rules and regulations in evaluating internal control systems.

### 2.3 “Face”

The concept of “face” has two aspects. The first is “mien-tzu”, which stands for a reputation achieved in life through success and ostentation. For this type of recognition, one’s ego is dependent at all times on one’s external environment (Hu, 1944, p. 45; Patel, 2006; Qi, 2011; Wan, 2013). The second is the concept of “lien”, which is the respect of a group for the integrity of a person’s moral character (Hu, 1944; Patel, 2006; Wan, 2013). “Face” is at the centre of Chinese social psychology (Bond, 1991; Qi, 2011, 2013). Chinese communication is “face-directed” communication (Liao and Bond, 2011; Patel, 2004; Qi, 2011). Evidence shows that “losing face” is more important to a Chinese manager than to a Western one, and it is felt much more deeply (Cardon and Scott, 2003; Li and Su, 2007; Patel et al., 2002).

For example, subordinates who fail to carry out successfully the orders of their superiors feel “they have no lien” (Hu, 1944, p. 45). Also, a higher social standing of a person is associated with maintaining greater dignity, and, as a result, his or her “lien” is more vulnerable (Ho, 1976, p. 867). Therefore, protecting “mien-tzu” (“saving face”) is important for Chinese (Ho, 1976) and means “face” can be lost either due to one’s own actions or the

treatment received from others. People in Chinese society are discouraged from saying a direct “no” and being negative which would be perceived as “face-losing” in communication (Fang and Faure, 2011). Therefore, subordinates in organizations are expected to follow exactly the orders from higher level managers to save “face”.

“Face” permeates every aspect of interpersonal relationships in Chinese communication because of Chinese culture’s overarching relational orientation (Cardon and Scott, 2003; Li and Su, 2007; Qi, 2011). As a result, individuals learn from an early age that the infringement of this social code will bring shame not only to the individuals concerned, but also to the extended families, including those who educated and promoted the individual (Bond and Hwang, 1986; Lu et al., 2009; Patel, 2003). From an early age, children are admonished, “don’t lose ‘lien’ for us” (Hu, 1944, p. 46). This admonition not only implants in the mind of a young person the concept of “lien”, but also gives him or her consciousness of the collective responsibility, which the family bears in regard to his or her behavior. An individual is taught that his or her character should befit the standing of the family (Spector et al., 2004; Yang et al., 2000). “Loss of face” results when an individual’s behavior shames his or her reference group. “Loss of face” functions to guide individual behavior to maintain group harmony (Eap et al., 2008).

Given the higher level of respect for authority and “face” in Chinese culture, hierarchical control in Chinese organizations is much stronger than in Anglo-American organizations (Li and Su, 2007; Walder, 1995; Zhang and Spicer, 2014). Bosses are likely to punish those who do not respect authority or “face”. Vollbrecht, Roloff, and Paulson (1997) suggest that confrontations would be even more threatening if the person who did the confronting was at a higher status level. Chinese experience greater status differentiation and a greater sense that others are authority and “face” figures (Friedman et al., 2006). Therefore, in actual practice, they are likely to build more control processes, not because they are useful or necessary but to protect a leader’s authority and “face”. As a result of respecting authority and “face”, if an explicit rule has been set in the system, the exercise of that rule must be agreed by higher level managers to protect their “face” and to respect their authority and power. As a result, higher level managers are quickly overloaded with routine decisions, signatures and relatively minor disputes between departments (Lu et al., 2009; Zhang and Spicer, 2014). Therefore, excessive focus is placed on control measures.

### 2.4 Trust

Trust is the essential element in social relations (Bachmann and Inkpen, 2011; Evans and Krueger, 2011; Lewicki, McAllister and Bies, 1998). Chinese society is considered to be a low-trust society (Fang, 2011; Fukuyama, 1995; Kim and Wright, 2011). Because of the

centrality of the family embedded in Chinese culture, which prioritizes family relations over all the other social obligations, the level of trust within families and extended kinship groups is high (Fukuyama, 1995), while trust among people who are unrelated is low (Fukuyama, 1995; Kim and Wright, 2011). In other words, the high level of trust within kinship groups comes at the expense of trust between people who are unrelated. This low level of trust among non-kinship relationships in Chinese society has implications for organizational interactions and has implications for designing control systems.

In many Chinese organizations, there is a particularly low level of interpersonal trust between management and employees (Chen, Chen, and Xin, 2004; Huff and Kelley, 2003; Muethel and Bond, 2013). Such low-trust relationships encourage organizations to adopt tight controls such as contracts, bureaucratic procedures, or legal requirements as a way to restore trust (Searle et al., 2011; Simons and Peterson, 2000). For example, because of the low trust in out-group members, there is always a fear that employees will steal assets that belong to the organization. Therefore, organizations are likely to increase controls to monitor and guard assets, to discourage stealing by employees. As the level of distrust increases, management is likely to implement tighter control. Such stringent and legalistic actions are typically adopted not only to facilitate coordination in the organization, but also used to restore trust that is necessary for business activities to continue (Atuahene-Gima and Li, 2002; Muethel and Bond, 2013; Pearce, Branyiczki and Bigley, 2000).

## 2.5 Hypothesis formulation

Our evaluation of Confucianism, Legalism, “face” and trust show the importance of “control”, “submission”, “subordination”, “obedience” and “hierarchical orders” in Chinese cultural values (Bhappu, 2000; Chen and Chung, 1994; Liu and Wang, 2013; Tweed and Lehman, 2002). We show that “harmony within hierarchy” is one of the core Chinese cultural values. Our earlier discussions show that there are excessive bureaucratic and hierarchical levels, work drags on, and productivity may be affected. Low hierarchical level members are not allowed to resolve even the smallest problem, and often it is necessary to have written agreement and approval of a dozen people and units from high hierarchical level members to get anything done. Procedures can drag on for several months, sometimes even for a year or two, without reaching a solution (Beh and Kennan, 2013, p. 25; Chen and Chung, 1994; Lockett, 1988). Leaders are also more likely to make decisions autocratically and paternalistically, and subordinates usually show a preference for this type of managerial decision-making style. As a result, employees are fearful of authority figures and not likely to disagree with them. Emphasis on higher degrees of authoritarianism, rigid hierarchies and a strong

focus on control are essential features of Chinese organizations (Liu and Wang, 2013).

Additionally, avoidance of conflict is typically attributed to the influence of the Confucian value of harmony, which encourages people to tolerate interpersonal disagreement and transgression (Chen et al., 2013; Hamamura et al., 2013; Liu, 2015). To achieve harmony, people must follow correct behavior, or “li”, which is behavior appropriate to one’s role (Fang, 2012; Patel et al., 2002). As such, the importance of harmony within hierarchy in Chinese society and organizations discourages individual judgments and focuses more on submission and control. Also, “tinghua” reinforces that, in Chinese society and organizations, individual judgments are discouraged, and the focus is more on submission and control. Employees are likely to abide firmly by the control measures imposed by top managers to protect a manager’s “face” and respect his/her authority and power. Furthermore, because of a low level of trust between management and employees, it is likely that more controls such as bureaucratic procedures and legal requirements are put in place, to restore trust back to the level that is necessary for a business to continue.

In addition, evidence shows that Chinese culture, which values “social harmony”, “integration”, “collectivism” and “face” has a higher desire for social approval when compared with Anglo-American countries, where there is a low need for social approval (Adams et al., 2005; Crowl, 2001; Sosik and Dinger, 2007). Social approval means desirability to seek approval from relevant others (Crowne and Marlowe, 1960). We suggest that people in a cultural context characterized by a higher desire for social approval, are more concerned with securing acceptance from others, and they are likely to act in a manner that will secure approval of relevant others. That is, people who rank higher on the need for social approval scale indicate a stronger desire to conform, a higher concern with others’ opinions, and the urge to be socially acceptable (Izuma, Saito and Sadato, 2010; Lemay Jr and Ashmore, 2006; Sosik and Dinger, 2007). As such, Chinese are more likely to adopt a socially acceptable and compliant position (Izuma et al., 2010; Qi, 2011; Singh, Huang and Thompson, 1962).

Therefore, when Chinese auditors are asked to evaluate internal control systems, we suggest that they are likely to adopt simplistic approaches, such as designing a “check-list” of controls to secure acceptance from others, rather than exercising professional judgment. This focus on control, checks, and balances in Chinese organizations is likely to influence the design and evaluation of internal control systems. It is suggested that when evaluating internal control systems, auditors in Chinese organizations are more likely to suggest placing more additional internal

control measures than may be appropriate, which leads to the formulation of our hypothesis:

Hypothesis: Chinese auditors who rely on a control-first approach are likely to identify significantly more internal control deficiencies than auditors who rely on a risk-first approach.

### 3 Research method

#### 3.1 Research instrument and measurement of variables

The research instrument was extensively pilot tested and refined as a result of testing (See Appendix A for details). The instrument is comprised three sections. The first section contained answer sheets where participants were asked to provide their judgments on a scenario, which was initially developed by Kopp and Bierstaker (2006), and pilot tested and used by Morrill et al., (2012). The scenario involved the evaluation of internal controls of the purchases/ payables/ payments cycle of a medical supply company. The second and third sections of the research instrument collected participants’ feedback and demographic information.

An important step in the research instrument design was to develop an equivalent version of the research instrument in the simplified Chinese language. The English version was translated first into Simplified Chinese by one of the authors. The Simplified Chinese version was then translated back into English by an independent auditing academic who

is expert in both English and Simplified Chinese. The discrepancies between different versions of the instrument were discussed and modified, and this process was repeated until all discrepancies were eliminated. Also, the translation was also reviewed by two auditing bilingual experts who were given both the English and Chinese versions of the instrument. They further confirmed that the scenario was realistic and appropriate for China. They also confirmed that the research instrument scored high on measures of understandability, and the semantic equivalence. These procedures were important to enhance the validity of the research instrument in China.

The independent variables in this study are risk-first and control-first groups (presented in Figure 1). The dependent variable is measured by counting the number of internal control deficiencies identified in the risk-first group and control-first group.

#### 3.2 Data collection

The data to test the hypothesis were collected using a research instrument administered to 120 auditors who attended a training program at Nanjing Auditing University (NAU) in China. NAU holds a high reputation for the academic quality of its auditing degrees and is directly supervised by China National Audit Office (CNAO, 2014; NAU, 2014). All participants in our study are professional auditors, who are members of the Chinese Institute of Certified Public Accountants (CICPA).

Figure 1. Order of steps in experimental tasks

<u>Risk-First Group</u>	<u>Control-First Group</u>
1. Read sample task	1. Read sample task
2. Read preliminary description of business	2. Read preliminary description of business
3. Generate transaction risks	3. Read control description and identify controls
4. Read control description and identify controls	4. Determine risks addressed
5. Determine risks addressed	5. Generate transaction risks
6. Assess deficiencies	6. Assess deficiencies

Source: Morrill et al., (2012)

Our study followed the same experiment steps as Morrill et al., (2012) (presented in Figure 1) with participants in both groups being provided first with an example of experimental task (Mai He Noodle Restaurant example) before completing the main experimental task (Lucky Medical Supplies Internal Control Evaluation). Participants were told to read carefully the example of Mai He Noodle Restaurant. This example outlines the risk-first and control-first procedures for performing an internal control evaluation for the two groups. After studying the example of Mai He Noodle Restaurant, participants proceeded to the main experimental task.

Participants were assigned randomly to one of two groups. Participants in the risk-first group were

required first to identify the risks in the internal control system, which may result in material misstatements in the financial report. Then they received the detailed description of the internal control system (Lucky Medical Supplies Internal Control Evaluation). Finally, they were required to identify the controls in the system and identify any deficiencies.

Participants in the control-first group first received a detailed description of the internal control system. Then they were asked to analyse the controls in the internal control system. Finally, they were required to examine what risks those controls had detected, and to identify any internal control deficiencies in the system. See Appendix B for details of the procedures to ensure adherence to the proper

order of the experimental task to be completed by the subjects.

## 4 Results and discussion

### 4.1 Participants' profiles

One hundred and six valid questionnaires were received, which represents a response rate of 88 percent. Fifty-one completed respondents are from risk-first group and 55 from the control-first group. The demographic details of respondents are reported in Table 1. In the risk-first group, 57 percent of the respondents were females, 80 percent were between

the ages of 30-49, 63 percent had over four years' professional experience in auditing and 49 percent were staff. In the control-first group, 44 percent of the respondents were females, 75 percent were between the ages of 30-49, 64 percent had over four years' professional experience in auditing and 33 percent were staff. Statistical tests show that the demographic variables of gender, age, years of professional work experience, and organizational position are no statistically significant differences between the two experimental groups

**Table 1.** Demographic data

	Auditor in Risk-first Group		Auditor in Control-first Group		Total	
	N	Percentage	N	Percentage	N	Percentage
<b>Gender</b>						
Males	22	43.14%	31	56.36%	53	50.00%
Females	29	56.86%	24	43.64%	53	50.00%
Total	51	100.00%	55	100.00%	106	100.00%
<b>Age</b>						
20-24	0	0.00%	0	0.00%	0	0.00%
25-29	7	13.73%	12	21.82%	19	17.92%
30-34	15	29.41%	13	23.64%	28	26.42%
35-39	11	21.57%	15	27.27%	26	24.53%
40-49	15	29.41%	13	23.64%	28	26.42%
50-59	3	5.88%	2	3.64%	5	4.72%
Over 60	0	0.00%	0	0.00%	0	0.00%
Total	51	100.00%	55	100.00%	106	100.00%
<b>Professional Work Experience</b>						
Less than 1 year	4	7.84%	6	10.91%	10	9.43%
1-3	15	29.41%	14	25.45%	29	27.36%
4-6	17	33.33%	16	29.09%	33	31.13%
7-9	4	7.84%	6	10.91%	10	9.43%
10-12	5	9.80%	3	5.45%	8	7.55%
over 12	6	11.76%	10	18.18%	16	15.09%
Total	51	100.00%	55	100.00%	106	100.00%
<b>Organisational Position</b>						
Staff	25	49.02%	18	32.73%	43	40.57%
Supervisor	13	25.49%	20	36.36%	33	31.13%
Senior	1	1.96%	3	5.45%	4	3.77%
Manager	10	19.61%	12	21.82%	22	20.75%
Partner	2	3.92%	2	3.64%	4	3.77%
Total	51	100.00%	55	100.00%	106	100.00%



Participants were asked about the difficulty of the task; how realistic they found the task; how difficult they found the ordering of the task; and how different they found the performance of the task compared to the way they usually performed equivalent tasks. Further, they were asked about the

difference between the internal control questionnaire included with the case material and the questionnaires they usually used in evaluating internal control systems. Table 2 Feedback on the Task provides the results of the above variables.

**Table 2.** Feedback on the Task

	<b>Auditor in Risk-first Group</b>	<b>Auditor in Control-first Group</b>	<b>Total</b>
	N=51	N=55	N=106
<b>Panel A: Difficulty of task (1=not, 11=very)</b>			
Mean	7	7	7
Standard Deviation	2	2	2
<i>Mann-Whitney U P value</i>			0.676
<b>Panel B: Realism of task (1=not, 11=very)</b>			
Mean	8	7	8
Standard Deviation	3	2	3
<i>Mann-Whitney U P value</i>			0.059
<b>Panel C: Difficulty of ordering of task steps (1=not, 11=very)</b>			
Mean	7	7	7
Standard Deviation	3	2	2
<i>Mann-Whitney U P value</i>			0.814
<b>Panel D: Difference between performance of the task and how they usually perform it (1=not,11=very)</b>			
Mean	6	6	6
Standard Deviation	3	2	2
<i>Mann-Whitney U P value</i>			0.766
<b>Panel E: Different between the internal control questionnaire included with the case material and the questionnaires they usually used (1=not,11=very)</b>			
Mean	6	7	7
Standard Deviation	3	2	3
<i>Mann-Whitney U P value</i>			0.071

Table 2 shows that there are no statistically significant differences between the two experimental groups. These results indicate that random assignment of participants into two groups was effective in controlling for potentially confounding variables.

#### 4.2 Results of the hypothesis

A one-way Analysis of Variance (ANOVA) test was used to examine whether the number of internal control deficiencies identified by Chinese auditors is influenced by control-first or risk-first conditions. Data to examine the hypothesis were obtained by

comparing the number of internal control deficiencies identified by each group.

Results in Table 3 show that there are significant differences in the number of internal control deficiencies identified between the control-first and risk-first groups ( $p = 0.000$ ). Descriptive statistics in Table 3 show that the number of internal control deficiencies identified by the risk-first condition, with a mean of 2.08, are significantly lower than the number of internal control deficiencies identified by a control-first condition with a mean of 6.25.

**Table 3.** Hypothesis results

Descriptive statistics for the number of deficiencies identified by each group

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Risk- first	51	<b>2.08</b>	2.415	0.338	1.4	2.76	0	9
Control- first	55	<b>6.25</b>	4.781	0.645	4.96	7.55	0	20
Total	106	4.25	4.351	0.423	3.41	5.08	0	20

Results of one-way ANOVA for number of deficiencies identified by each group

		Sum of Squares	df.	Mean square	F	Sig.
<b>Parametric one-way ANOVA</b>	Between Groups	461.5	1	461.5	31.45	<b>0.000</b>
	Within Groups	1526.123	104	14.674		
	Total	1987.623	105			
<b>Nonparametric KruskalWallis one-way ANOVA</b>						<b>0.000</b>

To confirm the results, a nonparametric KruskalWallis one-way ANOVA was also used. Results from this test also confirm that the number of internal control deficiencies identified by Chinese auditors in the control-first group and the risk-first group is significantly different ( $p = 0.000$ ). Therefore, these results show that Chinese auditors who rely on a control-first approach identified significantly more internal control deficiencies than auditors who rely on a risk-first approach.

## 5 Conclusions, implications, and limitations

Researchers have relied mainly on the risk-based theoretical model in their evaluation of internal control systems. Morrill et al., (2012) provided experimental evidence that Canadian accountants who relied on a risk-first approach identified significantly more internal control deficiencies than accountants who relied on a control-first approach. Contrary to their findings, our results show that Chinese auditors who relied on a control-first approach identified significantly more internal control deficiencies than auditors who relied on a risk-first approach. Furthermore, these findings support the premise that Chinese auditors focus on control measures when evaluating internal control systems, and they are likely to concentrate on including more internal control measures than may be appropriate. This focus on control is likely to lead Chinese auditors to find more problems and, therefore, develop more control measures. Therefore, we argue that the empirical evidence on the evaluation of internal controls from Anglo-American countries may not apply to the Chinese context. Importantly, the findings

of this study suggest that cultural factors cannot be ignored in research on audit judgments.

The findings of this study have implications for global standard setters and national regulators. The International Standards on Auditing (ISA) have advocated the risk-based theoretical model for all countries. The move towards convergence is driven largely by the assumptions and assertions based on claims of enhancing international comparability of auditing information. However, this risk-based theoretical model is based primarily on research findings from Anglo-American models, with little discussion that takes into account country-specific contextual factors. Importantly, ISA and the International Auditing and Assurance Board provide no discussion of cultural influences on interpreting auditing standards in various countries. Our study provides evidence that the adoption of ISA may not ensure consistency in auditors' judgments across countries. Accordingly, standard setters and regulators may consider placing greater emphasis on various national contextual factors that may influence auditors' professional judgments.

Also, our findings have particular implications for multinational enterprises in designing and evaluating appropriate internal control systems. Their focus has largely been on technical aspects rather than on cultural factors that may influence the evaluation of internal control systems. Overly stringent control requirements are likely to lead to ineffective and inefficient systems. Therefore, we suggest that organizations in countries, such as China, may also consider the balance between risk and control, and not be overly bureaucratic.

Our findings also have implications for the auditing profession. Greater insights into the

various factors that may influence professional judgment across countries may improve audit quality and consistency of practices. Furthermore, audit firms may benefit from these insights that may be used to enhance auditors' abilities to exercise their professional judgment. Also, the growing pace of internationalisation of audit firms' operations has a growing influence on audit teams that are increasingly composed of auditors from different cultural backgrounds. Thus, understanding the cultural background of auditors is necessary to understand differences in their judgments.

Our findings are also likely to benefit auditing educators in China because almost all the auditing textbooks focus strongly on technical aspects of evaluation of internal controls. However, detailed technical auditing knowledge alone is of limited use. The results of our study suggest that educators need to ensure that auditors' judgments in its appropriate cultural contexts are communicated effectively to students. Case studies, which incorporate our findings, will be useful for enhancing students' understanding of professional judgments across countries.

## 6 Limitations and suggestions for further research

The results and findings of this study must be considered in light of its limitations. As in most experimental studies, a limited number of factors have been examined without consideration of other aspects during an audit. We acknowledge that in actual auditing practice, professional judgment will be influenced by a combination of numerous interrelating factors. Indeed, it should be emphasised that professional judgment, which is influenced by a variety of situational and personality variables, is a complex and dynamic feature in designing internal control systems. Consequently, future studies may focus on examining other contextual factors such as personality values and organizational culture, which may influence auditors' professional judgments.

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## Appendices

### Appendix A Pilot testing

To ensure the appropriateness of the research instrument design, a pilot study was conducted in five stages before data collection. The first stage involved testing the research instrument among auditing academics with expertise in the area of the study at a university in Australia. After incorporating their suggestions, the next stage was the administration of the revised research instrument among three professors who had extensive experience in professional auditing firms. During this stage, we changed the name from "Hefty Hamburger Inc." to "Mai He Noodle Restaurant", and changed "Wittim Medical Supplies Internal Control Evaluation" to "Lucky Medical Supplies Internal Control Evaluation" respectively, in order to make sure that internal control scenarios used in the case study were realistic example of such names in China. The third stage involved gaining feedback on the research instrument from a Chinese professor visiting a university in Sydney. During the fourth stage, a revised version of the Chinese research instruments was tested among six Chinese final year Ph.D. students from five top universities in China who had expertise in the area of auditing. After incorporating their suggestions, the fifth and final stage was the administration of the revised research instrument among five professors at a university in China who had expertise in the area of auditing. They confirmed that the case scenario would be realistic in the Chinese context. They further confirmed readability and understandability of the instrument.

### Appendix B . Ordering of the experimental task completion

To ensure that the groups adhered to the proper order of the experimental task completion, three procedures were implemented. First, before the tasks, the professor strongly advised participants that they must follow the steps given in the tasks: they should not skip any steps. Second, during the tasks, participants had to complete their case on the answer sheets consisting of a three-column table, with columns for risks, controls, and deficiencies. The order varied according to the groups. Each row of the table contained a risk and a control that addressed that risk; or a deficiency if no control existed. That first column was entitled "Risks" for the risk-first group, and was entitled "Controls" for the control-first group. The introduction part of the research instrument requested that, "It is **CRITICAL** that you proceed through the steps in the Lucky Medical Supplies task in the order given (directions are provided in the tasks), even if you would prefer to do it another way. **DO NOT SKIP STEPS.**" These instructions were a means of assuring that participants did not skip steps. As an additional control, participants in the risk-first group

were told to request the detailed narrative description part way through the tasks, and there was a check that they had attempted to identify risks if they were in the risk-first group before distributing the narrative section of the research instrument. Hence, there was an assurance that all participants completed the tasks in the order prescribed. Importantly, both methods of collection of completed research instruments assured respondents of the guarantee of anonymity and confidentiality.