

The Effects of *Mianzi* and Professional Relationship *Guanxi* on Auditor Fraud Detection

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The purpose of this study is to examine the efficacy of *mianzi* (pronounced as *myan-zee*) and *guanxi* (pronounced as *gwan-see*) in auditor detection of fraudulent financial reporting (henceforth referred to as fraud). *Mianzi* and *guanxi* are widely recognized in the Asian culture and extensively discussed in the extant literature. *Mianzi* refers to the status, reputation, and respect accorded to a person by his or her group (Ting-Toomey, 1988). *Guanxi* entails the development of a network of relationships that promote accomplishment of business tasks (Lovett et al., 1999). *Mianzi* must be maintained to a certain extent before *guanxi* relationships can be strengthened and expanded (Wong et al., 2007; Yeung and Tung, 1996). Consistent with Su et al.'s (2007) notion of *guanxi* as a beneficial factor, the current study posits that professional relationship *guanxi* enhances mutual cooperation and provides essential resources which facilitate auditor fraud detection. *Guanxi* can be viewed as an extensive network of personal (Kao, 1993) or business relationships that allows parties access to valuable resources (Su et al., 2007). Auditors using *guanxi* are predicted to recognize its beneficial effects in facilitating the audit and providing access to key evidence, resulting in enhanced fraud detection.

Auditing standards require auditors to gather information to facilitate accurate assessment of fraud risk (AICPA, 2002; IAASB, 2009). Specifically, auditors are directed to make inquiries

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of management and others in an entity about the risks of fraud. This is indeed a daunting task considering the ingenuous strategies that may be employed by fraud perpetrators to conceal fraud. Since fraud perpetrators are unlikely to volunteer self-incriminating evidence, it is important for auditors to explore formal as well as informal channels of information pertaining to fraud risks.

This study examines *guanxi* as a strategic action by auditors to obtain information for enhancing fraud risk assessment and detection. *Guanxi* relationships may allow auditors to gather information to facilitate fraud risk assessments. Employees and management at various levels possess the best access to and knowledge of information about the company. If they are not involved directly in fraud, a potentially valuable source of information to auditors is inquiries of such individuals. They are expected to be more forthcoming if they have a professional relationship with the auditors based on trust, cordiality, and respect.

Although abuses of *guanxi* can potentially result in inappropriate actions where one party gains an unfair advantage over another through bribery and corruption (Fan, 2002; Ford, 2002; Hung, 2008; Wright et al., 2002), inappropriate use of *guanxi* is unlikely to be observed in the auditing context because of the severe adverse consequences for the audit firms and individual auditors such as harming the audit firms' reputation, audit quality, and auditor independence. There is widespread recognition in auditing standards and firms' quality control practices in guarding against such actions. Further, there are significant deterrents to inappropriate *guanxi* such as litigation, criminal prosecution, and loss of license to practice.

Auditor use of *guanxi* to enhance professional relationships with client personnel has the potential to significantly improve auditor fraud knowledge. This study explores the value of

maintenance of a professional network of relationships as a strategic resource for auditors to acquire information to enhance fraud detection without compromising auditor independence. Consistent with this expectation, the findings of a field study of 170 audit partners suggest that auditors associate increased audit quality with the length of auditor tenure at the client firms (Daugherty et al., 2012).¹

This study is the first to consider the potential value of *guanxi* and *mianzi* in enhancing auditor fraud detection. *Guanxi* and *mianzi* are important factors with a pervasive influence on business organizations in China (e.g., Luo, 1997; Tsang, 1998). The eastern perspective of relationship *guanxi* is synonymous with the western concept of “social capital” (Peng and Luo, 2000; Xin and Pearce, 1996; Su et al., 2003). A premise of social capital is a network of relationships as a valuable resource that promotes performance of a variety of tasks by members (Bourdieu, 1986). Social capital highlights the importance of relationships that provide a foundation for enhancing trust, cooperation, and collective action (Jacobs, 1965; McEvily and Zaheer, 1999; Trigilia, 2001). Parties in a network can access resources such as information, products, and contacts (Molina-Morales and Martinez-Fernandez, 2010). Social networks promote information dissemination and trust for enhancing relationships between parties (Gambetta, 1988). *Guanxi* can be viewed as social capital that connects the parties in a network to facilitate resource sharing which assists in effectively completing job functions. Thus, auditors can tap into the resources in a *guanxi* network to obtain valuable information to enhance the audit. Since *mianzi* (status) is essentially a precondition for developing strong *guanxi* (relationships), we posit that *mianzi* will moderate auditor use of *guanxi* and its expected

¹ Daugherty et al. (2012) further confirm their findings in conversations with a Big 4 audit partner, who indicates that good relationships with the key executives of a client is critical for promoting an understanding of the client’s business and its associated risks so that an appropriate audit strategy can be devised to respond to identified risks. This partner also states that development and maintenance of good relationships with a client facilitates the audit work, despite the perception of a potential undermining effect on audit quality and auditor independence.

benefits. Specifically, greater benefits will be achieved by the use of *guanxi* when the value placed on *mianzi* is higher rather than lower. We also hypothesize that auditors' view of the expected benefits of *guanxi* mediates the use of *guanxi* in enhancing the perceived likelihood of fraud detection.

The current study's emphasis on the professional relationship concept of *guanxi* hypothesizes its beneficial effects for assisting the audit and increasing fraud detection. If these expectations are supported, audit firms can train their auditors to use the professional relationship feature of *guanxi* to enhance the audit.

An additional important contribution of this study is the development of scales to measure auditor use of *guanxi* and the expected benefits of *guanxi* in an auditing environment based on an extensive review of the literature. We also build on Ang and Leong's four-item *mianzi* scale and develop a comprehensive *mianzi* scale based on the literature. These scales can be used in future research to further our understanding of the roles of *mianzi* and *guanxi* in auditing.

A total of 126 auditors from one Big 4 and two international audit firms in Singapore participated in the study. A structural equation model is developed to test the hypotheses, and the results support our expectations.

The remainder of the article is divided into four sections. Section II discusses the theoretical framework and hypotheses. Section III describes the method for examining the hypotheses. The final two sections present the results followed by a discussion of the implications of the findings and limitations along with suggestions for future research.

II. THEORETICAL FRAMEWORK AND HYPOTHESES

The theoretical framework is presented in Figure 1 and includes three latent constructs:² *mianzi*, auditor use of *guanxi*, and the expected benefits of *guanxi* in conducting an audit. The continuous manifest variable³ is fraud detection. Each of these variables is discussed below.

[insert Figure 1 about here]

Guanxi

As discussed earlier, *guanxi* refers to connections or relationships (Su and Littlefield, 2001; Tsang, 1998). While *guanxi* embodies networking characteristics, it has distinctive attributes that go beyond the networking concept (Pearce and Robinson, 2000). For instance, trust and cordiality are important features of *guanxi* (Pearce and Robinson, 2000; Pye, 1992; Su and Littlefield, 2001; Wong, 1998).

Guanxi has generated substantial research interest and is viewed from different perspectives. Some scholars question the ethicality of *guanxi* (e.g., Chan et al., 2002; Dunfee and Warren, 2001) or associate *guanxi* with bureaucratic bribery and corruption (e.g., Fan, 2002; Li and Wright, 1999; Lovett et al., 1999; Snell, 1999; Su and Littlefield, 2001; Su et al., 2003) while others have highlighted the beneficial effects of *guanxi* [e.g., providing a competitive edge for businesses (Tsang, 1998), decreasing transaction costs (Standifird and Marshall, 2000; Wong and Leung, 2001), and improving business performance (Su et al., 2007)].

Since *guanxi* has a reciprocal favor exchange characteristic (e.g., Hong and Speece, 1998; Luo, 1997; Tsang, 1998), inappropriate *guanxi* can lead to unethical behavior, especially when a

2 A latent construct is a theoretical construct measured by multiple indicators. A latent construct cannot be measured directly.

3 A manifest (observed) variable can be observed directly; therefore, it does not behave like an indicator of a latent construct.

person within the *guanxi* network gains at the expense of others and *guanxi* involves the exchange of money, power, or opportunistic behavior (Fan, 2002). For example, one may engage in *guanxi* with a person of power or authority by paying a substantial sum of money in exchange for an unfair advantage. Another example is payment of a considerable amount of money to governmental officials (a bribe) to bypass rules to obtain scarce resources (e.g., winning bids for governmental contracts). The presence of privileged treatments or “under the table” transactions resulting from bribery and corruption present a negative portrayal of *guanxi* (Millington et al., 2005).

However, *guanxi* is not inherently negative or unethical. *Guanxi* can have positive ethical and pragmatic implications which do not involve bribery or corruption (Hoivik, 2007; Su et al., 2007; Xin and Pearce, 1996). For example, one study finds that *guanxi* per se does not appear to be associated with illicit behavior (Millington et al., 2005). Another study also reports lack of a relationship between *guanxi* orientation [measured via the 9-item *guanxi* scale developed by Ang and Leong (2000)] and ethical reasoning [measured via the Defining Issues Test (Su et al., 2003)]. These findings suggest that individuals high in *guanxi* orientation may not necessarily be unethical and vice versa (Su et al., 2003). *Guanxi* can stimulate appropriate behavior by providing a moral and ethical structure that highlights trust and maintenance of relationships on a long-term basis (Wong and Chan, 1999). Further, *guanxi* can be disassociated from transaction-focused corruption when the involved parties in a relationship network focus on the positive effects of *guanxi* (Vanhonacker, 2004).

Researchers have examined the use of *guanxi* in the performance of business activities (Kao, 1993; Lovett et al., 1999) and reported that it is viewed as a critical resource that provides competitive advantages for businesses (Tsang, 1998). *Guanxi* may be effective when long-term

and sustainable relationships among stakeholders are developed for the purpose of competitive advantage-based survival (Su et al., 2007). The concept of development and maintenance of a network of relationships that underlie *guanxi* suggests that *guanxi* can be considered as a positive management strategy for both eastern and western businesses (Lin, 2010).

Guanxi also facilitates business transactions and acts as a substitute for a formal legal structure (Xin and Pearce, 1996). *Guanxi* may be more effective in conveying trust than formal legal contracts (Lovett et al., 1999), reducing transaction costs (Standifird and Marshall, 2000; Wong and Leung, 2001), and promoting business performance (Su et al., 2007). Thus, *guanxi* may be an effective option for ensuring the smooth operation of activities (Fan, 2002). In summary, *guanxi* can contribute to organizational efficiency and effectiveness and also help to maintain existing competitive advantages by enabling long-term cooperation among individuals or organizations (Lovett et al., 1999; Tsang, 1998).

***Guanxi* in the Audit Environment**

Few studies have extended the concept of use of *guanxi* in business to the context of accounting and auditing. The limited number of studies that examine *guanxi* in the auditing context has addressed the negative effects of *guanxi* on auditors' judgment. For example, *guanxi* is postulated to influence auditor's ethical decision-making in an auditor-client conflict situation (Au and Wong, 2000) and harm auditor independence (Hwang and Staley, 2005). However, these assertions have not been supported by empirical evidence, and, as discussed previously, we argue that abuses of *guanxi* are unlikely to be observed in the auditing context.

The current study focuses on the professional relationship feature of *guanxi*. This positive attribute of *guanxi* is posited to result in sustainable long-term benefits such as enhancing auditors' capabilities to detect fraud. The emphasis on the relationship aspect of *guanxi* entails

the need for adoption of appropriate social attitudes (Zhang and Zhang, 2006). Resourcefulness and self-reflection are critical factors that determine appropriate behavioral norms which regulate the interactions of the parties involved in a *guanxi* relationship (Tan and Snell, 2002). Auditors exhibit appropriate behavioral norms when they show honesty, sincerity, and righteousness in their interactions with employees and management at various levels. Social interactions provide an avenue for parties to obtain, decipher, and disseminate knowledge resources such as information and ideas (Molina-Morales and Martinez-Fernandez, 2010). Auditors with strong communication skills are expected to be successful in building and maintaining a network of relationships including a good relationship with employees and management at various levels, knowing the right people, and developing the right contacts which promote efficient and effective audit work.

It is very difficult for auditors to detect fraud because fraud perpetrators intentionally conceal their behavior and are unlikely to share useful information. One potential valuable source of evidence auditors can turn to is a wide network of sources (e.g., employees and management at various levels) to increase fraud detection. Auditors can access tacit knowledge to acquire invaluable information by building and developing effective professional relationships with parties in the network. Efficiency gains ensue when a party is able to access resources to share high quality information and tacit knowledge via cooperative exchange (Molina-Morales and Martinez-Fernandez, 2010).

Expected Benefits of *Guanxi* in Auditing

This study extends the extant literature on the expected benefits of *guanxi* in business to the auditing context where auditor use of appropriate *guanxi* is expected to enhance fraud detection. Although auditing standards (AICPA, 2002; IAASB, 2009) recommend or mandate certain

forensic audit procedures, the intentional and strategic nature of fraud necessitates the design and adoption of effective audit strategies for discovering fraud. We propose *guanxi* as a unique strategic opportunity for auditors to obtain information or access to key resources otherwise not available during the normal course of an audit. Specifically, auditors can use *guanxi* to gain access to the right people (e.g., employees and management at various levels) to obtain their trust, cordiality, respect, and information sharing to facilitate fraud detection.

Guanxi built on trust, an important feature of a professional relationship in the auditing context, is expected to lead to positive performance effects. In contrast to the western emphasis on formal contracts in exchanges, *guanxi* places a higher value on trust, which depends on relationships, more than contracts (Ramstrom, 2005). Trust provides a channel for regulating embedded relationships (Uzzi, 1996) and promotes cooperative behavior and sharing of resources (Molina-Morales and Martinez-Fernandez, 2010). Hence, trust, an underlying attribute of *guanxi*, increases the willingness of employees and management at various levels to share valuable information with the auditors, leading to improved auditor performance.

Further, prior research has examined the impact of human and social capital on organizational performance (e.g., Bates, 1990; Bruderl et al., 1992; Uzzi, 1996). Auditors may obtain industry-specific human capital; that is, knowledge of complex audit procedures and financial reporting of a specific industry such as banking from professional education and industry experience. They may also acquire firm-specific human capital from their firms' training programs and on-the-job experience. In addition to human capital, social capital formed via *guanxi* (Pennings and Lee, 1998) appears critical for fraud detection. Through *guanxi*, resources including scarce or key resources not generally available can be obtained (Su et al., 2003, 2007; Tsang, 1998). Some researchers value *guanxi* and suggest treating it as a strategic resource (Luo,

1997; Tsang, 1998; Wall, 1990). Indeed, *guanxi* is considered as an essential business asset (Ahlstrom et al., 2000; Pearce and Robinson, 2000; Tsang, 1998; Wall, 1990). Thus, *guanxi* can provide the means for auditors to obtain valuable information from a wide network of resources to assess inherent and fraud risks and then detect fraud.

Mianzi

The notion of *mianzi* (*face*) was initially discussed by Goffman (1955) and a distinction is made between positive and negative *face* (image) by Brown and Levinson (1987). Positive *face* signifies an individual's inclination to be acknowledged by his or her social group. *Mianzi* means *face* in Mandarin and can be regarded as similar to positive *face* (Yang, 1994). One's *face* can be elevated (saving or gaining *face*) or impaired (losing *face*) in the course of engagement in a series of social interactions; therefore, the extent of a person's *face* can be considered to be dynamic (Ho, 1976). For example, a person can maintain *mianzi* by honoring obligations in social contexts and perpetuating credibility. One's *mianzi* can also be enhanced when respect, compliment, or flattery is offered to enhance one's self-esteem (Seligman, 1999). A severe loss of *mianzi* occurs when one suffers a public insult, chastise, and indignity.

Attainment of *mianzi* enhances a person's control over the dynamics in social interactions. When *mianzi* is put into practice, it can be considered as impression management employed by a person to obtain a favorable impression from others (Lin, 2010). One may view *mianzi* to be important because it reflects self-esteem, power, social status, reputation, and public image (Lin, 2010). While *mianzi* is highly desirable, compromising *mianzi* can debilitate long-term business relationships (Barnes et al., 2010). *Mianzi* is critical for finalizing business transactions, interpersonal interactions at work, and resolution of disagreements (Hu, 1944; Redding and Ng, 1983; Hwang et al., 2003). Although Asians tend to place a higher value on *mianzi* because of

their focus on interpersonal relationships and self-image than other cultures (Ho, 1976), this concept is not limited to the Asian culture. *Mianzi* has been posited to exist in many cultures (Ho, 1976; Pharr, 1989; Ting-Toomey, 2005).

This study draws on the extant literature on *mianzi* examined in the business context and extends the implications of prior research findings to the context of auditing. A certain degree of *mianzi* is necessary for the development of a feasible *guanxi* web (Tsang, 1998). Since *mianzi* is preeminent for the development and maintenance of *guanxi* (Wong et al., 2007; Yeung and Tung, 1996), a good relationship is unlikely to exist in the absence of *mianzi*. This study postulates that employees and management at various levels may be more willing to share valuable information with auditors whom they respect and accord status and reputation (i.e., *mianzi*). Auditors are expected to also recognize the value of *mianzi* as a prerequisite for building *guanxi*. Hence, enhanced understanding of auditors' value of *mianzi* provides valuable insight into the auditors' ability to use *guanxi* to develop and maintain a network of professional relationships to facilitate the audit.

Fraud Detection

Dyck et al. (2010) examine reported fraud cases in large U.S. companies from 1996 to 2004 and find that auditors rarely detect financial reporting fraud. However, the public has high expectations of auditors with respect to fraud detection; therefore, a number of auditing standards (e.g., AICPA 2002) and a considerable amount of research have been devoted to provide insight into this issue (Hogan et al., 2008). Fraudulent reporting leads to extensive damage and negative impact on companies, audit firms, financial statement users, and other stakeholders (e.g., Beneish, 1999; Desai et al., 2006). Thus, auditing standards (AICPA, 2002; AICPA, 2006; IAASB, 2009) mandate that auditors integrate fraud risk factors into their assessment of fraud

risk and then respond to fraud risks by modifying audit tests when necessary. IAS No. 240 and SAS No. 99 also provide increased guidance and specify the auditors' responsibilities for fraud discovery.

However, the goal of unearthing fraud is a daunting task considering the low base rate of fraud occurrence which inhibits the provision of a repertoire of fraud cases to enhance the experience of auditors in fraud detection (Grazioli et al., 2006; Jaenicke and Wright, 1993; Nieschwietz et al., 2000). In addition, prior research suggests that auditors need to possess knowledge of deception as well as technical knowledge of accounting and auditing to improve their ability to detect fraud (Grazioli et al., 2006).

Researchers have investigated the issue of fraud detection from various perspectives. For example, auditors' fraud risk assessments have been examined via decomposition of fraud risks using the fraud triangle as a framework with external (e.g., Wilks and Zimbelman, 2004) and internal (e.g., Norman et al., 2010) auditors. The impact of auditors' fraud experience and individual traits such as trust and professional skepticism on auditors' attention to aggressive reporting and subsequent judgment of intentional misstatement has also been investigated (Rose, 2007). Further, auditors' fraud risk assessments have been explored in the context of decision support systems (DSS). Song et al. (2014) investigate the impact of a fit between the DSS display format based on task requirements and the auditors' preference for information display on fraud risk assessments. Although prior research has examined the issue of fraud detection from various perspectives, the present study is unique in that it adopts a cultural perspective which includes *guanxi* and *mianzi* to provide insight into their impact on auditor fraud detection.

Hypotheses

Auditors focusing on the professional relationship aspect of *guanxi* are expected to recognize the beneficial outcomes of *guanxi* in auditing. One benefit is that *guanxi* allows auditors to be in the “inner circle” which gives them preferential treatment that can enhance audit effectiveness and efficiency. *Guanxi* is also likely to provide auditors with access to key resources (e.g., access to important information). Another positive feature is the complementary role of *guanxi* in the formal institutional framework. *Guanxi* emphasizes connections rather than the authoritative framework and organizational associations (Wang et al., 2005). Given its potential advantages, auditors are expected to perceive that *guanxi* facilitates completion of the audit.

Mianzi is an important determinant of *guanxi* (Kipnis, 1997). As discussed, *mianzi* can impel a person to cultivate *guanxi* (Wong et al., 2007). Indeed, *mianzi* must be maintained to a certain extent before *guanxi* can be strengthened and expanded (Wong et al., 2007; Yeung and Tung, 1996). By virtue of membership in the network, one can obtain social capital (*guanxi*) in the form of social status or reputation (Bourdieu, 1986; Burt, 1992). Individuals who are conscious about *mianzi* recognize its pivotal role in supporting business relationships (Huwang, 1987). We posit that auditors recognize the value of *mianzi* for the development of a viable *guanxi* network which allows them to reap the benefits of *guanxi*. In particular, the expected benefits will be greater from the use of *guanxi* when the value placed on *mianzi* is higher instead of lower. Therefore,

H1: Auditors’ perceived value of *mianzi* moderates the expected benefits achieved from use of *guanxi*.

As discussed earlier, auditors focusing on the professional relationship aspect of *guanxi* are expected to experience beneficial effects. Specifically, auditors may develop *guanxi* in the following ways: creating and maintaining a network of relationships including a good

relationship with management, making efforts to know the right people, and developing the right contacts. Auditors may engage in *guanxi* because they believe and have found that it results in positive outcomes such as enhancement of the audit work, audit effectiveness and efficiency, preferential treatment by client personnel for being in the inner circle which facilitates the audit, access to key resources, and the complementary role of *guanxi* in the formal institutional framework. Additionally, the expected benefits of *guanxi* in auditing are postulated to enhance fraud detection, for instance, by providing access to information possessed by managers and other personnel within the client. We propose that the expected benefits of *guanxi* in auditing explain why auditor use of *guanxi* is viewed as a significant means of enhancing the predicted likelihood of fraud detection. These expectations form the basis for the mediating hypothesis as follows:

H2: The expected benefits of *guanxi* mediate its predicted value in fraud detection.

III. RESEARCH METHOD

Task

Due to differences in availability, participants completed the research instrument either during their audit firm's training sessions (n=74) or at scheduled sessions at their audit firm's conference rooms (n=52).⁴ Participation was voluntary and confidentiality of the auditors' responses was assured. All participants gave their informed consent before they took part in the study. The estimated completion time for the study was 15 minutes. The auditors provided their responses to a series of questions pertaining to items in the *mianzi*, auditor use of *guanxi*, and the

⁴ The administration mode of data collection does not have an effect on the results.

expected benefits of *guanxi* in auditing. Participants also indicated the value of *guanxi* in the likelihood of fraud detection. Finally, they provided demographic information.⁵

Participants

A total of 126 auditors from a Big 4 and two international audit firms in Singapore participated in the study.⁶ The sample comprised the following -- staff auditors 44.4 percent; audit seniors 35.7 percent; audit managers 17.5 percent; and senior audit managers 2.4 percent. Since auditors at all levels are involved in some aspect of fraud detection (e.g., fraud brainstorming), we sought the responses of a broad spectrum of experience levels. Further, Singapore is a country with a western market based outlook and well-established auditing profession (Central Intelligence Agency, 2012; Foo, 1992; Ministry of Trade and Industry Singapore, www.mti.gov.sg). Thus, the responses are likely to be reflective of a broad spectrum of similar countries. The demographics of the auditors are shown in Table 1.

[insert Table 1 about here]

Scale Development

Mianzi

Mianzi is a latent construct measured by eight items on a 7-point scale (1=strongly disagree, 7=strongly agree). The following five items in the *mianzi* construct are adapted from the four-item *mianzi* scale developed by Ang and Leong (2000): respect for elders, respect for superiors, avoiding embarrassment in social interactions, avoiding public confrontation, and

⁵ The research instrument was pretested for content validity and was revised based on the comments and suggestions received from audit professionals and academics. The pretest participants include three academics, one regional controller with previous Big 4 audit experience, one audit senior at a Big 4 audit firm, and one staff auditor at a Big 4 audit firm.

⁶ We also collected data from auditors in China to examine generalizability of the findings to a country with a different cultural, legal and economic environment compared to Singapore. This issue is outside of the primary focus of the current paper and, thus, is reported in a separate manuscript (identity withheld to protect anonymity, 2014).

consideration of others' feelings. The remaining three items (feeling important when given respect by others, avoiding disrespect from others in social interactions, and obtaining honor through success or social position) are derived from the *mianzi* literature (e.g., Goffman, 1972; Lin, 2010; Steidlmeier, 1999). Ang and Leong (2000) attribute the relatively low Cronbach's alpha of 0.62 for their four-item *mianzi* scale to the limited number of items and the exploratory nature of the scale. Further, respect for elders and superiors are combined as one item in the scale. Hence, we develop a comprehensive eight-item *mianzi* scale (found in Table 2) that can be used in a variety of settings including auditing. As will be reported later, the tests show acceptable validity and reliability for this scale, as well as for the auditor use of *guanxi* and expected benefits of *guanxi* scales discussed in the following sections.

[insert Table 2 about here]

Auditor Use of Guanxi

Auditor use of *guanxi* is a latent construct comprising four items. These items are adapted from the nine-item *guanxi* scale developed by Ang and Leong (2000) pertaining to *guanxi* in the business context. Four items in the original *guanxi* scale are adapted in wording to fit the auditing context of this study. In addition, these items are adapted to focus on the positive aspect of the professional relationship concept of *guanxi* in the auditing environment. Some items in the Ang and Leong *guanxi* scale do not apply to this study because they do not focus on the positive aspect of the professional relationship concept of *guanxi*. In particular, Ang and Leong's *guanxi* scale includes items such as gift-giving and returning favor for favor which are inappropriate in the auditing context. The auditors provided responses to the following items on a 7-point scale (1=strongly disagree, 7=strongly agree): maintaining a network of relationships; maintaining a

good relationship with management; knowing the right people; and developing the right contacts to facilitate the audit. The items in the auditor use of *guanxi* scale are presented in Table 3.

[insert Table 3 about here]

Expected Benefits of Guanxi in Auditing

The expected benefits of *guanxi* in auditing are a latent construct measured by six items. Since this specific construct has not been measured in prior research, we consulted the literature to develop an appropriate scale. One item, preferential treatment given to auditors in the inner circle, is adapted from the *guanxi* scale developed by Ang and Leong (2000). Auditors' access to key resources and the complementary role of *guanxi* in the formal institutional framework are obtained from the conceptual framework proposed by Zhang and Zhang (2006). *Guanxi* as a mechanism that promotes audit efficiency is based on the contention by Zhang and Zhang (2006) that *guanxi* helps to attenuate deficiencies in critical resources and enhances economic exchanges. The role of *guanxi* in audit effectiveness is derived from the reasoning process put forth by Su et al. (2007) in obtaining important resources for the smooth operation of business. The facilitating role of *guanxi* in an audit implied in prior studies (e.g., Bedford, 2011; Yeung and Tung, 1996) is included to extend the above concepts of audit effectiveness and efficiency.

The auditors specified their responses to the following items on a 7-point scale (1=strongly disagree, 7=strongly agree) designed to measure the expected benefits of *guanxi* in auditing: role of *guanxi* in an audit; role of *guanxi* in audit effectiveness; role of *guanxi* in audit efficiency; enhancement of audit work due to preferential treatment given to auditors in the inner circle; auditors' access to key resources; and the complementary role of *guanxi* in the formal institutional framework. Table 4 contains the items for the expected benefits of *guanxi* in auditing scale.

[insert Table 4 about here]

Scale Validation

Since the *mianzi*, auditor use of *guanxi*, and expected benefits of *guanxi* in auditing scales are developed for this study, exploratory factor analyses (EFA) are necessary for determining the number of dimensions/factors underlying each scale.⁷ Using the maximum likelihood method, the EFA results show that *mianzi*, auditor use of *guanxi*, and the expected benefits of *guanxi* in auditing are one-factor constructs.⁸ As indicated in Tables 2, 3 and 4, the EFA factor loadings are sufficiently high.⁹ In addition, the means of the items are above 4 on a 7-point scale.

Scale Reliability

Reliability analysis is conducted to evaluate whether the scale produces consistent results. Coefficient (Cronbach's) alpha, a measure of internal consistency of a set of items, is recommended as the first measure for assessing reliability (Churchill, 1979). A reliable Cronbach's alpha indicates that the set of items performs well in capturing the construct (scale) underlying the measure. A Cronbach's alpha above 0.65 is considered to be acceptable (Cortina, 1993). The Cronbach's alphas for the *mianzi*, auditor use of *guanxi*, and expected benefits of *guanxi* in auditing are 0.74, 0.68, and 0.85 respectively, suggesting acceptable scale reliabilities.

Fraud Detection

⁷According to a rule of thumb (Hair et al., 1998), for each item, a minimum of five participants is needed to conduct the EFA test. The *mianzi*, auditor use of *guanxi*, and expected benefits of *guanxi* in auditing scales contain eight, four, and six items respectively. Therefore, the current sample of 126 is sufficient for testing each scale.

⁸According to the Henry Kaiser rule, the number of factors needed to explain a construct should equal the number of Eigenvalues greater than 1. The EFA results yield one factor with an Eigenvalue greater than 1 for each of the three scales. Thus, each scale is a one-factor construct.

⁹A factor loading above 0.3 is considered acceptable (Muthen and Muthen, 2007).

Fraud detection is an observed variable which captures the auditors' responses (on a 7-point scale with 1=strongly disagree and 7=strongly agree) to the following item: Auditors are more likely to detect management fraud if they have appropriate *guanxi*¹⁰ to help them in their work.

IV. DATA ANALYSIS AND RESULTS

Structural equation modeling (SEM) is used to test the hypotheses. SEM involves testing the measurement and structural models. The measurement model examines the relationships among the latent constructs and the indicators of these constructs. SEM helps to evaluate whether the underlying theoretical constructs are well-defined by a combination of their respective indicators (Weston and Gore, 2006). That is, SEM tests the reliability and validity of the constructs' measurements (Cheng, 2001) assessed by confirmatory factor analysis (CFA). Assessment of the measurement model is a prerequisite for testing the structural model (Anderson and Gerbing, 1988). The structural model tests the hypothesized relationships among the latent constructs as well as the relationships among the latent constructs and other manifest variables (Edwards and Bagozzi, 2000). A valid and reliable measurement model provides assurance of the validity of the relationships indicated in the structural model.

The Mplus Version 6.0 software recommended by Muthen and Muthen (2007) is used to test the measurement and structural models in this study. The model fit indices¹¹ reveal an

10 Use of the term "appropriate *guanxi*" is intended to capture the professional relationship aspect of *guanxi*, the focus of the current study. Auditor use of appropriate *guanxi* is defined in a comprehensive manner in the auditor use of *guanxi* and expected benefits of *guanxi* in auditing scales.

11 Consistent with previous research, the following three indices are used to measure model fit: comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). The criteria of good model fit are: CFI of 0.90 and above, (Hu and Bentler, 1999; Kline, 2005), RMSEA of 0.06 or below (Steiger, 1990; Steiger and Lind, 1980), and SRMR of 0.09 or below (Browne and Cudeck, 1993; Hu and Bentler, 1999).

excellent fit for the measurement model¹² (with the three latent constructs and their measures). In addition, the CFA factor loadings of the three latent constructs (i.e., *mianzi*, auditor use of *guanxi*, and the expected benefits of *guanxi* in auditing) are sufficiently high (see Tables 2, 3 and 4). These results demonstrate a highly reliable measurement model and assure the quality of the subsequent structural model.

Next, the hypothesized relationships in the research model depicted in Figure 1 are evaluated and the results are shown in Figure 2. The model fit indices (i.e., chi-square, CFI, RMSEA and SRMR) are not available because the model involves an interaction between two latent constructs. Hence, the model fit for the structural model is assessed by comparing the Akaike information criterion (AIC) and Bayesian information criterion (BIC) values of the model with and without the latent interaction term. Specifically, smaller AIC and BIC values indicate a better model fit (Burnham and Anderson, 2004). The fit indices for the model without the interaction term (CFI=0.955, RMSEA=0.048 and SRMR=0.073) suggest a good model fit. The AIC (6197.668) and BIC (6416.062) values for the model with the interaction term (i.e., the structural model in Figure 1) are smaller than the AIC (6206.577) and BIC (6422.135) values for the model without the interaction terms, indicating a better model fit. Thus, the structural model meets the requirements of a good model fit.

Hypothesis 1 states that auditor's perceived value of *mianzi* moderates the expected benefits achieved by the use of *guanxi*. This hypothesis is tested by SEM involving an interaction term of two latent constructs (i.e., *mianzi* and auditor use of *guanxi*). The significant positive path (coefficient=0.453, p=0.026) provides support for hypothesis 1.

¹² The model fit indices for the measurement model are: CFI=0.955, RMSEA=0.048 and SRMR=0.073.

Specifically, the positive path suggests that a stronger relationship is established when the value placed on *mianzi* is higher instead of lower.

Hypothesis 2 proposes that the expected benefits of *guanxi* mediate auditor use of *guanxi* in enhancing the predicted likelihood of fraud detection. This mediation effect is tested using the SEM indirect effect function. Specifically, an indirect effect tests the mediating effect of one or more variables on the relationship between two variables (Weston and Gore, 2006). This indirect effect method is consistent with the theoretical logic of Baron and Kenny's (1986) three-step process illustrated below.

As shown in Figure 2, the path from auditor use of *guanxi* to the expected benefits of *guanxi* in auditing is significant (coefficient=0.473; p=0.000). The path from the expected benefits of *guanxi* in auditing to fraud detection is also significant (coefficient= 0.278; p=0.010). Further, the indirect effect of auditor use of *guanxi* on fraud detection via the expected benefits of *guanxi* in auditing is significant (coefficient=0.131; p-value=0.023) while the direct effect of auditor use of *guanxi* on fraud detection is no longer significant (coefficient= 0.056; p-value=0.627). The results demonstrate the full mediating effect of the expected benefits of *guanxi* in auditing in the relationship between auditor use of *guanxi* and the predicted likelihood of fraud detection.¹³ Therefore, hypothesis 2 is supported.

[insert Figure 2 about here]

Additional Analysis

An important issue is the generalizability of the findings on the effect of *guanxi* and *mianzi* across auditors with different backgrounds. To address this issue, a supplementary analysis is performed by including the participants' age, gender, ethnicity, professional certification, current

¹³ About 73 percent of the auditors indicated 4 and above (on a 7-point scale) on the role of *guanxi* in fraud detection, indicating a strong positive effect.

position in the audit firm, work experience, and the type of audit firm they were working for at the time of the study (Big 4, international firm, or local firm) as covariates in the research model. These variables do not have a significant effect (untabulated) on the results of the research model.

V. CONCLUSION

This study is the first to examine the impact of *guanxi* and *mianzi* on auditor fraud detection. We propose and test a research model that investigates the extent to which *mianzi* strengthens the positive effect of auditor use of *guanxi* on the expected benefits of *guanxi*, and whether the expected benefits of *guanxi* explains the impact of auditor use of *guanxi* on the predicted likelihood of fraud detection. The results show that the positive effect of auditor use of *guanxi* on the expected benefits of *guanxi* is stronger when the auditors' value of *mianzi* is higher than lower. When the value placed on *mianzi* is low, the benefits derived from use of *guanxi* are limited because client personnel are less likely to be forthcoming with useful information. These findings indicate the potential value of *mianzi* in fraud detection via its influence on *guanxi*. The attributes of social status, reputation, and respect that underlie *mianzi* are believed to increase the auditors' ability to use *guanxi* to obtain beneficial outcomes. Additionally, the mediation results demonstrate the significance of the expected benefits of *guanxi* in promoting understanding of how auditor use of *guanxi* enhances fraud detection. In sum, the findings suggest that the development and maintenance of *guanxi* is an important means for auditors to acquire useful information in situations where traditional audit procedures (e.g., observation, confirmation, reconciliation, recomputation, etc.) may not be effective in detecting fraud.

An additional important contribution of this study is the development of scales to measure auditor use of *guanxi* and expected benefits of *guanxi* in auditing designed specifically for the audit environment based on a review of the *guanxi* literature. These scales are based on the professional relationship concept of *guanxi* in the auditing context. Further, our *mianzi* scale is more comprehensive than the *mianzi* scale of Ang and Leong (2000). This generic *mianzi* scale can be used in a variety of settings including auditing. All the scales are also shown to have good reliability, and the results of the SEM measurement model indicate the unidimensionality of these latent variables. The scales may thus benefit future research in considering the value of the cultural factors of *guanxi* and *mianzi* in enhancing auditor performance.

The paucity of research on *guanxi* in the auditing context might create the perception that *guanxi* has a negative impact on audit quality and auditor independence (Hwang and Staley, 2005). This perception could be due to potential abuses of *guanxi* which undermine auditors' ethical judgments (Au and Wong, 2000), likely attributed to the reciprocal favor exchange characteristic inherent in *guanxi* which leads to the prevalent association of *guanxi* with influence, bribery, and corruption. However, this study's focus on the professional relationship concept of *guanxi* provides a different perspective for understanding the positive aspects of *guanxi*. The findings suggest that use of the professional relationship concept of *guanxi* in auditing is beneficial for enhancing fraud detection.

Although *guanxi*, a Chinese word, is a cultural factor frequently associated with China, the concept of *guanxi* as a social relationship network exists in different cultures; thus, it is not confined to China (Gold et al., 2002). Prior research reveals that *guanxi* is not a factor unique to China because it exists in economically advanced countries and regions such as Singapore, Hong Kong, Japan, and South Korea where a strong legal framework is in place (Vanhonacker, 2004;

Yeung and Tung, 1996). Also, as noted, *guanxi* can be associated with the widely known value of “networking” prevalent in many western countries. Specifically, the auditor participants of the current study are based in Singapore, a country that embraces western values. Future research is needed to corroborate the findings of this study in other countries and other cultural settings. For example, researchers can extend this study to other western countries or China, an eastern culture with a different cultural, legal, and economic environment, to further our understanding of the generalizability of the results obtained in this study.

As for any research, this study has some limitations. Since this is the first study that examines auditors’ consideration of *mianzi* and *guanxi*, we gather auditors’ general assessments based on their broad experiences. Specifically, the fraud detection construct focuses on the positive feature of *guanxi* and auditor use of appropriate *guanxi*. Future work can provide additional insight into the findings of this study by focusing on a specific fraud context and examining the effects of *mianzi* and auditor use of *guanxi* on fraud detection (e.g., fraud risk assessment and program planning of fraud effectiveness tests).

Although most prior studies have adopted a broad and general definition of *guanxi* without defining clearly the type of *guanxi* under examination (Fan, 2002), some researchers have identified different types of *guanxi*. Yang (1994) explains three types of *guanxi*: *jia-ren* (family members), *shou-ren* (relatives, friends, neighbors, colleagues, classmates, etc.), and *sheng-ren* (acquaintances or strangers) *guanxi*. This classification is similar to the types of *guanxi* based on the relationships of the parties proposed by Fan (2002): family, helper, and business *guanxi*. Su and Littlefield (2001) introduce two types of *guanxi* based on the intent of the involved parties: favor-seeking and rent-seeking *guanxi* while Bedford (2011) proposes the working *guanxi* concept to increase understanding of development and maintenance of *guanxi* in the workplace.

Consistent with the specific type of professional relationship concept of *guanxi* identified in this study, researchers should provide a distinct identification of the types of *guanxi* used in the context of their studies to promote accurate interpretation of the research findings and formation of insightful conclusions based on the findings. As noted, this study focuses on professional relationship *guanxi*. Hence, future work needs to recognize the existence of different types of *guanxi* and suggest appropriate forms of *guanxi* that facilitate the audit. Researchers can thus inform auditors about the potential beneficial effects of *guanxi* and increase the auditors' awareness of the role of *guanxi* in auditing.

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Figure 1
Research Model

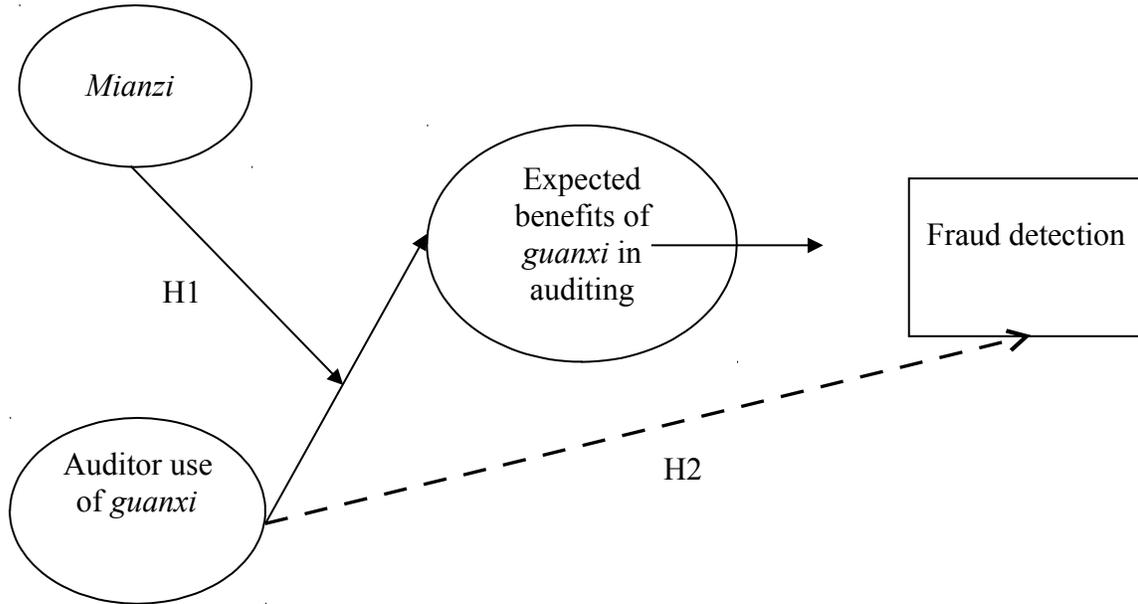


Figure 2
Results of Hypotheses

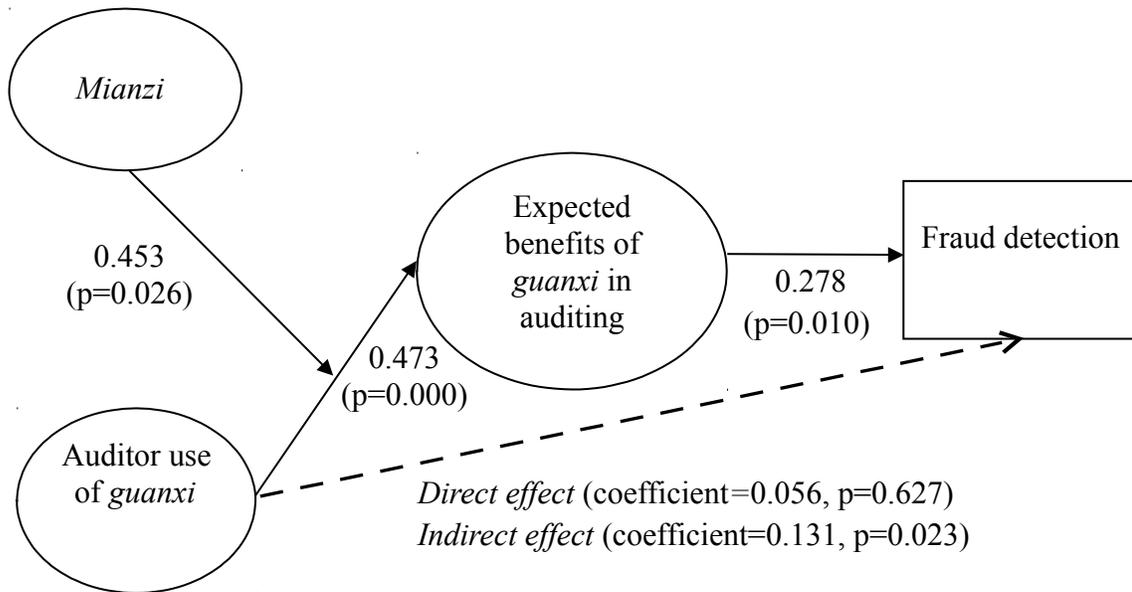


TABLE 1

Demographic Information

Panel A: Professional certification	
Type of certification	Auditors n=126
Certified Public Accountant	35 (27.8%)
Chartered Accountant	10 (7.9%)
Certified Management Accountant	1 (0.8%)
Certified Internal Auditor	1 (0.8%)
Other	22 (17.5%)
None	57 (45.2%)
Panel B: Current position	
Position	Auditors n=126
Staff auditor	56 (44.4%)
Audit senior	45 (35.7%)
Audit manager	22 (17.5%)
Senior audit manager	3 (2.4%)
Panel C: Current audit firm	
Type of audit firm	Auditors n=126
Big 4	74 (58.7%)
International (other than Big 4)	50 (39.7%)
Singaporean audit firm	2 (1.6%)

Note: The participants' age, gender, ethnicity, professional certification, current position in the audit firm, work experience, and the audit firms they were working for at the time of the study (Big 4, international firm, local firm) were included as covariates in the research model. These variables do not have a significant effect on the results of the research model.

TABLE 2

Factor Loadings and Descriptive Statistics of the *Mianzi* Scale

Items	Factor loadings	Mean (Std)
1. I believe it is important to respect my elders.	0.506	5.53 (1.09)
2. I believe it is important to respect my superiors.	0.620	5.52 (0.81)
3. I try to avoid being	0.486	4.98 (1.15)

	embarrassed in social interactions.		
4.	I try to avoid public confrontation.	0.323	4.81(1.09)
5.	I try to be considerate of other people's feelings.	0.586	5.32(0.68)
6.	I feel important when someone treats me with courtesy or respect.	0.655	5.28 (0.95)
7.	I try to avoid being discredited, openly criticized, or shown disrespect by someone in social interactions.	0.353	5.16 (1.05)
8.	It is important for me to obtain honor through my success or social position.	0.664	5.02 (0.97)

TABLE 3

Factor Loadings and Descriptive Statistics of the Auditor Use of *Guanxi*

Scale		
Items	Factor Loadings	Mean (Std)
1.	0.754	5.67 (0.64)
2.	0.772	5.52 (0.82)
3.	0.453	4.97 (1.17)

<p>involves knowing the right people.</p> <p>4. Developing the right contacts helps in the smooth running of an audit.</p>	0.552	5.42 (0.82)
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Table 4: Factor Loadings and Descriptive Statistics of the Expected Benefits of *Guanxi* in Auditing Scale

Items	Factor loadings	Mean (Std)
1. I believe that <i>guanxi</i> facilitates my audit work.	0.742	4.21(1.24)
2. In general, <i>guanxi</i> helps me to conduct an effective audit.	0.775	4.48 (1.03)
3. In general, <i>guanxi</i> helps me to conduct an efficient audit.	0.814	4.46 (1.06)
4. Being in the “inside” circle gives me	0.487	4.10(1.20)

preferential treatment
that facilitates my audit
work.

5. *Guanxi* provides me with access to key resources for my audit

0.737	4.51(1.06)
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work.
6. I believe that *guanxi* complements the formal institutional framework.
