

**The effects of generalized trust and civic cooperation on the Big N presence and audit fees
across the globe**

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Abstract: We examine the impact of informal cultural attributes, such as generalized trust in a society (hereafter “trust”) and civic cooperation, on audit fees and Big N presence in country-specific audit markets. The relation between trust (civic cooperation) and audit fees/Big N presence is ambiguous. On one hand, higher trust and civic cooperation are associated with lower levels of agency problems, thereby reducing the demand and price of audit services. On the other hand, higher trust (civic cooperation) societies may place more value on a strong audit function due to higher societal costs of inappropriate behavior, resulting in a relatively higher demand and cost of audit services. We find that the presence of Big N auditors is stronger in countries with higher levels of civic cooperation, and that audit fees are higher in countries with higher trust and civic cooperation. The positive impact of societal trust and civic cooperation on audit fees and Big N presence is weakened in countries with stronger levels of investor protection. These results suggest that both formal and informal institutions can act as substitutes in determining the demand and supply for audit services.

JEL Codes: M40, M41

Key Words: Audit markets, audit fees, trust, culture, civic cooperation

1. INTRODUCTION

In this paper, we investigate how country-level cultural attributes affect provision of auditing services across the globe. Specifically, we examine the impact of generalized societal trust (hereafter “trust”) and the degree of civic cooperation on the presence of Big N firms and the magnitude of audit fees. “Generalized trust” is commonly defined as a “trust in strangers”, while civic cooperation reflects people’s trust in collective arrangements (Knack and Keefer 1997).

Recent research has documented the importance of societal trust in financial reporting. Firms in countries with higher societal trust have been documented to have higher quality of earnings (Nanda and Wysocki 2013) as well as higher earnings response coefficients (Pevzner et al. 2015). Furthermore, stakeholders in societies with higher generalized trust place higher value on management disclosures, and such attitude consequently results in a greater financial reporting transparency (Nanda and Wysocki 2013). Supporting the notion of importance of trust in capital markets, PCAOB Chairman Jim Doty states:

“As sophisticated as our markets and economy are, they are dependent on trust. We cannot take trust for granted. Independent audits provide that trust, and thus bridge the gap between entrepreneurs who need capital and lenders and investors who can provide capital.”¹

Such traditional view of auditing, rooted in agency theory, stresses the crucial role of assurance services in maintaining public confidence in financial reporting. This view implies the defining role of independent monitoring in formation and enhancement of societal trust as well as of civic cooperation. According to this traditional perspective, to boost public trust in financial information, societies just need to create the strong audit function as well as other relevant enforcement institutions. Recent research in economics and sociology, however, suggests that such view is too simplistic since trust and civic cooperation are sticky and are very resistant to change.

¹ http://pcaobus.org/News/Speech/Pages/12092013_Doty_AICPA.aspx

According to these emerging perspectives, societal trust and civic cooperation are *fundamental* cultural attributes of economic exchange² and biologically defined products of the human evolution (Fukuyama 2000; Harari 2014; Robinson and Robinson 2015). Therefore, these ingrained and relatively stable cultural features do themselves shape society's attitudes towards the audit value.³ For instance, in countries characterized by low trust/civic cooperation, members of society might not trust the quality of audit services. As such, despite agency problems, we are unlikely to see a high demand for audit services in these societies.

Given these potential influences, the purpose of this paper is to explore how broad societal trust influences certain features of the existing audit function. Specifically, we examine how the attributes of generalized trust and civic cooperation affect the likelihood of a company being audited by a Big N audit firm and the level of audit fees in the country-specific market. Both of these constructs are widely used in empirical research as attributes of audit markets which proxy for the societal value and quality of auditing (e.g., Teoh and Wong 1993; Francis 2004; Francis and Wang 2008; Choi et al. 2008, 2009). Because prior work shows that formal and informal institutions may play substitute roles in capital markets, we also examine whether the strength of

² Generalized trust and civic cooperation are related but not identical constructs: generalized trust reflects non-specific personal beliefs about trustworthiness of others, while civic cooperation construct is more specific in that it captures respondents' *acceptance of specific deviations from social norms*. Both of these cultural attributes have been linked to a variety of economic outcomes and formal institutions (Knack and Keefer 1997; Pevzner et al. 2015).

³ This conjecture is consistent with emerging empirical evidence about the overall role of cultural attributes in shaping the business environment of individual countries (e.g., Beck et al. 2003; Stulz and Williamson 2003; Licht et al. 2005; Guiso et al. 2006; Guiso et al. 2009). For example, Stulz and Williamson (2003) argue that religion affects not only the legal rules related to creditor rights but also the manner in which they are enforced. Beck et al. (2003) suggest that the legal environment itself is the product of the evolution of cultural factors. Licht et al. (2005) warn that cultural influences continue to "persist in the face of formal legal reforms" (p. 232) and should be carefully considered by reformers. Prior research also concludes that cultural attributes often serve as *informal* protection mechanisms against "predatory behavior by those in control of the firm" (Stulz and Williamson 2003) and population religiosity influences specific features of financial reporting and auditing (Ezzamel and Carmona 2006; McGuire et al. 2012;; Kanagaretham et al. 2013; Jagi and Xin 2014).

legal protection of minority shareholders affects the impact of generalized trust on the audit function.

Our hypotheses about the link between auditing and generalized trust or civic cooperation are non-directional because of competing predictions of various perspectives: agency theory, emerging research in economics, evolutionary psychology. Based on a straightforward reading of agency theory, *demand* for effective monitoring mechanisms such as high-quality audits is expected to be higher in societies where agents are more likely to shirk on their obligations to shareholders, i.e., where there is more risk. Therefore, there should be a *negative* association between the value of the audit, as proxied by audit fees and the likelihood of being audited by Big N, and generalized trust or civic cooperation societies since the potential value of third party monitoring would be highest in low trust societies. At the same time, the notion of trust could influence not just relationships between investors and investees but also between investors and auditors. As such, investors in high generalized trust societies might place the higher value on the audit function due to their higher trust in auditors and stronger beliefs that auditors will actually act on investors' behalf, suggesting a *positive* association between generalized trust and audit fees. On the other hand, due to their mistrust of auditors in low trust societies investors might prefer alternative monitoring devices such as their own in-house due diligence over third-party audit services. Such developments would also suggest the *positive* association between generalized trust and audit fees. So, even the exclusive application of the agency theory will lead to the conflicting predictions on the relationship between generalized trust and audit fees.

Insights from economics and evolutionary psychology provide further support for the possibility of a positive relationship between trust and societal value of auditing. This literature stresses the need for punishment of inappropriate behavior as the crucial condition for maintaining

social order and documents people's willingness to incur significant extra costs to detect and censor violators (Axelrod and Hamilton 1981; Gächter and Fehr 2000; Rilling et al. 2002; Bowles and Gintis 2004; Robinson and Robinson 2015). According to this perspective, the ability to cooperate is a unique outcome of human evolution.⁴ From an evolutionary standpoint, this inherent inclination toward cooperation leads to higher generalized trust, lower transaction costs, and efficient contracting. However, even small and rare deviations from social norms present a direct threat for such cooperation if they remain unpunished (Robinson and Robinson 2015). Therefore, society creates formal legal and monitoring mechanisms to detect and sanction behavior that undermines societal trust. Applying this perspective to the audit domain, high trust societies are likely to rely on audit services in order to maintain and support a high level of civic cooperation and generalized trust.⁵ In addition, these societies are likely to experience more significant negative consequences from even rare instances of inappropriate behavior than low trust and civic cooperation societies.⁶ Therefore, a *positive* association between the value of the audit and generalized trust and civic cooperation is expected since the potential value of third party monitoring would be highest in high trust societies.

Competing predictions of agency theory and evolutionary psychology may also pertain to the *supply/production* side of audits. An agency perspective suggests a *negative* association between generalized trust and the supply or production of audits because audits in a low trust environment will be riskier, i.e., management is more likely to misrepresent financial results and

⁴ In modern times, this trait exhibits itself especially strongly in extraordinary catastrophic situations, such as survival of air-crashes, where non-cooperation could have been actually more advantageous to the "fittest" agents (Robinson and Robinson 2015).

⁵ Because such societies invested heavily in the past to establish high generalized trust and civic cooperation, they are likely to perceive these features as essential societal attributes and the source of strategic economic advantage.

⁶ This view is consistent with the literature that documents the positive association of the trust with variety of positive economic indicators and the increasing gap between high trust and low trust countries in this aspect (Knack 2001; Knack and Keefer 1997; Zak and Knack 2001).

regular employees are more prone to commit fraud. This condition would then entail greater audit effort and higher fees. However, the counter argument suggests a *positive* association between generalized trust and the supply or production of audits because other factors beyond audit risk are likely to affect an engagement in an untrustworthy culture. For example, audit firms might be concerned with the risk of associating with certain clients, e.g., the likelihood that such clients may renege on contracts or harm an audit firm's reputation increases in less trustworthy countries. Higher fees may not always compensate for increased auditor business risk (Asare et al. 1994; Johnstone 2000),⁷ potentially deterring the entry of higher quality international audit firms into low civic cooperation markets. As a result, auditors who provide audit services in low civic cooperation societies are more likely to be local firms that share the same culture as their client. Such auditors might be prone to behavior consistent with societal norms, i.e., shirking in the conduct of the audit. Even though auditors might be capable of delivering the appropriate level of expertise and independence, the value of an audit depends on societal perception. Investors in low trust cultures are likely to see local auditors as susceptible to shirking and not place great value on their opinion. As a result, audit supply-side considerations suggest that the likelihood of being audited by Big N and audit fees will be lower in lower generalized trust or low civic cooperation societies even if low trust societies might benefit the most from high quality audits.

Overall, prior empirical evidence is sparse, and the limited literature that is available suggests ambiguous relation between generalized trust and the quality of audits in a society. Using a sample of 56,485 firm-year observations across 40 countries we find conflicting results for the main effect of our cultural variables: companies from countries with high civic cooperation are

⁷ Johnstone (2000) report that partners did not attempt to make the high-risk clients more acceptable by using the proactive risk-adaptation techniques such as increasing amount of audit evidence and assigning more experienced personnel (which usually would be associated with the higher audit fees). Instead, partners preferred to avoid risks all together and didn't accept the clients who didn't pass certain screening criteria.

more likely to be audited by Big N firms, although generalized trust has marginally significant negative association with Big N choice. However, when we control for the strength of the protection of minority shareholders and its interaction with trust/civic cooperation, we find a positive and significant association between all cultural measures of trust and the auditor being a Big N firm. This effect is weakened for countries with stronger investor protection regimes. Overall, the evidence from Big N tests is generally consistent with the argument that Big N companies are reluctant to enter the markets with low generalized trust and, especially, with low civic cooperation. In addition, the extent of Big N presence depends on the strength of protection of minority shareholders.

Because international wage index data, (which is needed to control for cross-country variation in the cost of living) is only available for a smaller sample of countries, our sample for audit fees analysis is limited to 44,748 firm-year observations from twenty three countries. For that sample, we find that higher levels of both societal trust and civic cooperation are associated with higher levels of audit fees. These results suggest that auditors exercise higher audit effort and provide more services in countries with higher levels of civic cooperation or generalized trust. Moreover, this is also suggestive of the fact that societies with higher trust and civic cooperation view auditors as being important to maintaining those levels of trust and civic cooperation. This is consistent with the research in economics that more developed institutions also facilitate trust formation (Nunn, 2012). Furthermore, we find that the positive effect of trust and civic cooperation on audit fees is weakened in countries with a higher level of investor protection. This, as well as similar negative significant coefficient on the interaction term in Big N model, suggests that the presence of other formal institutions such as legal protection of minority shareholders reduces the value of audit services as a perceived mechanism in ensuring higher levels of trust or civic

cooperation. That is, the market for audit services is relatively less influenced by informal institutions, such as societal trust, when formal institutions, such as legal investor protection mechanisms, are stronger.

We extend prior literature in several important ways. First, we highlight the importance of considering levels of generalized social trust and civic cooperation versus other more localized trust measures when exploring features of the audit function. Our insights complement the findings in Jha and Chen (2015) who document that audit fees in the United States are *negatively* associated with a *county*-level social capital index based on participation in clubs and civic groups. Given the granularity of their social data at the local level, and the small range of cultural norms exhibited within the USA, it is difficult to extrapolate their findings to a global market. Using our cross-country analysis, we examine a much broader range of attitudes relating to two established and distinct measures of cultural attitudes—generalized trust and civic cooperation. Moreover, while Jha and Chen (2015) are likely to capture the effects of “localized trust” (such as trust within your more immediate social network), we focus on much broader “trust in strangers”. Both kinds of trust are potentially important but they could lead to potentially different outcomes with respect to audit markets.⁸

Second, our study empirically demonstrates that generalized trust and civic cooperation can help explain the societal preference for the services of the international audit firms above and beyond legal factors stressed in earlier research, e.g., protection of minority shareholders. Third, we contribute to a small, yet growing, literature exploring the role of auditors in cross-country

⁸ Similarly, the working paper version of Garrett et al (2014) (available at: http://www.trustworthyleader.org/download/cms_page/63/file_1_file/Trust%20and%20Financial%20Reporting%20Quality.pdf) for a subsample of US firms with available survey data from the Great Place to Work Institute documents that employees’ trust in management is *negatively* associated with audit fees and is positively associated with financial reporting quality. This is another example of how more localized trust is important in reducing agency costs within the firm.

settings. Prior work examines how country level concentration/presence of Big N auditors affects country-level audit quality (Francis et al. 2013) as well as the level and cost of debt (Gul et al. 2013; El Ghouli et al. 2014). Carson (2009) shows the existence of an audit fee premium for global audit specialists. Kim et al. (2012) show that audit fees increased in countries adopting IFRS and that this increase was weaker among countries with stronger legal regimes. Michas (2011) shows that accounting quality is higher in countries with more developed auditing profession. However, with the notable exception of Hope et al. (2008), who examine how societal secrecy impacts the presence of Big N firms in a particular country, and Michas (2011), who shows that hiring a Big N auditor is positively associated with the country level of development of the auditing profession, we are not aware of other work that explicitly examines sources of country-level demand and supply for audit services.

We organize the remainder of our paper as follows. In Section 2, we develop our hypotheses. In Section 3, we describe our data sources, the process of sample selection, and the nature of our main empirical tests/models. In Section 4 we review our main results as well as findings from related sensitivity analyses. In Section 5, we conclude with the discussion of our study's limitations and related research opportunities.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Concepts of generalized trust and civic cooperation

Societal culture, including social values, religion, and beliefs, plays an important role in shaping economic institutions and financial markets (Beck et al. 2003; Stulz and Williamson 2003; Licht et al. 2005; Guiso et al. 2006; Guiso et al. 2009). While prior accounting studies have focused on issues related to the impact of legal rules on the financial reporting environment (Leuz et al. 2003; Bushman and Piotroski 2006; Choi and Wong 2007; DeFond et al. 2007), research in economics has explored the relation of country-specific legal regime with the underlying societal

culture. These studies have demonstrated that the legal environment of a country is the product of the context-specific evolution of cultural norms. Further, cultural norms often influence the effectiveness of legal reforms (Beck et al. 2003; Stulz and Williamson 2003; Licht et al. 2005).

Two of the most crucial manifestations of societal culture for economic development are (1) generalized trust and (2) the degree of “civic cooperation” in a society. The construct of generalized trust reflects the cultural tendency to perceive other people as trustworthy and has been extensively used in various streams of research.⁹ Generalized trust could be more accurately described as the trust between two randomly selected residents in a country with no prior connections. As such, it is often referred to as “trust in strangers”. Generalized trust has been measured in the World Value Survey (WVS) by using the responses to the following question: *Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?* (Bjørnskov 2007). Prior studies demonstrate that trust scores calculated on the basis of the World Value Surveys reflect a cultural attribute that could be expressed as “the degree to which people in certain cultures are expected to do the right thing” (Bjørnskov 2007). For example, these scores are positively associated with the likelihood that a dropped wallet will be returned to its owner with their contents intact (Bjørnskov 2007) and negatively associated with social corruption (Uslaner 2002).¹⁰ National generalized trust scores do not vary substantially across time (Bjornskov 2007). The persistent nature of “trust in strangers” is attributed to the fact that all individuals are socially conditioned in specific cultures early in life and usually retain the ingrained subconscious attitudes throughout their life. For example, Uslaner

⁹ See for example: Williamson (1993), LaPorta et al. (1996), Knack and Keefer (1997), Zak and Knack (2001), Aghion et al. (2010). Generalized societal trust differs from bi-lateral, inter-personal, and other particularized trust since it includes trust in people about whom the trusting individual does not have any direct contact or information (Uslaner 2002; Bjørnskov 2007).

¹⁰ While trust and trustworthiness are related to honesty, these concepts are not identical. While trust is expected to be higher in cultures with more honest people, trustworthiness captures more than just inclination for truth-telling. For example, “a person may be honest but incompetent and so not worthy of trust” (Rose-Ackerman 2001, p.526)

(2008) reports that the *descendants* of immigrants to the US exhibit similar levels of generalized trust as those currently living in the countries from which their ancestors emigrated, sometimes generations ago.¹¹

Overall, researchers agree that high generalized trust signals the existence of certain cultural norms that through social conditioning limit an individual's willingness to be opportunistic (Williamson 1993). Therefore, high generalized trust plays a strong positive role in the country's economic development and is a crucial factor in the development of effective financial markets (Knack and Keefer 1997; Guiso et al. 2008; Guiso et al. 2009; and Giannetti and Yafeh 2012). Specifically, trust and civic cooperation have been noted to be essential factors of economic growth and a variety of other positive economic attributes because they allow for more efficient transmission of information and trade exchange by reducing transaction costs (see Putnam 1993; Knack and Keefer 1997; Kenworthy 1997 Hidalgo 2015; for a review). Putnam (1993) notes that, "The social capital embodied in norms and networks of civic engagement seems to be a precondition for economic development, as well as for effective government." In their seminal empirical study, Knack and Keefer (1997) explore the particular mechanism of this impact and observe that, "To the extent that civic norms effectively constrain opportunism, the costs of monitoring and enforcing contracts are likely to be lower, raising the payoffs to many investments and other economic transactions" (page 1254).

While the construct of generalized trust has been extensively examined by researchers, our use of "civic cooperation" construct is relatively novel. The notion of "civic cooperation" originally emerged in political science where scholars used it as the mediating variable to explore

¹¹ People's beliefs about others' trustworthiness are so deeply rooted that when people leave their native culture they carry-over the acquired level of trust to their new environments without significant adjustments (Guiso et al. 2004, 2006).

the impact of culturally informed individual attitudes on the structure of a society's political system (e.g., Almond and Verba 1963). Knack and Keefer (1997) first suggested that individual attitudes about questionable activities identified in the World Values Survey could be used as a proxy for civic cooperation in an economic context. In this sense, "civic cooperation" captures people's inclination to fulfill their communal economic obligations by paying taxes, not accepting bribes, and paying fares on public transportation (Knack and Keefer 1997).

The construct of "civic cooperation" reflects some of the same phenomenon as generalized trust, i.e., trustworthiness of the environment. For example, Knack and Keefer (1997) have used this construct to explain the attitudes of strangers when confronted with a "prisoners' dilemma".¹² The construct of civic cooperation, however, has at least two important differences from generalized trust. First, the focus group that a respondent may adopt when responding to the generalized trust question (i.e., *most people can be trusted*) is not specified. Some individuals may think of strangers when formulating a response, while others may consider friends, family and associates. This may introduce misspecification in the measurement of trust because respondents may be addressing localized trust (e.g., in family or local community) as opposed to generalized trust, which is much more important from the perspective of financial development (Delhey et al. 2011). Second, and more importantly, the measure of generalized trust reflects expectations of the

¹² In other words, people's beliefs about the crucial role of civic cooperation will affect their own actions when faced with uncertainty about whether another participant of the deal will reciprocate or take an advantage of the first mover concession. The issues of such cooperation were widely explored in game theory research through various designs, commonly labeled as prisoner's dilemma settings. Knack and Keefer (1997) put it this way: "Cooperative norms act like constraints on narrow self-interest, leading individuals to contribute to the provision of public goods of various kinds. Internal (e.g., guilt) and external (e.g., shame and ostracism) sanctions associated with norms alter the costs and benefits of cooperating and defecting in prisoner's dilemmas." (p. 1254). Another quote illustrates this point further: "For example, norms can take the form of conventions, resolving coordination problems, such as prescribing that one should drive on the right hand side of the road. As used in this chapter, however, "norms" will be used more restrictively to apply to collective action problems with risks of opportunism, specifically the two prisoner's dilemma variants with the most frequent real-world applications, voluntary provision of public goods and principal-agent games (sometimes called one-sided prisoner's dilemma or trust games). Trust and trustworthiness are therefore central themes in the literature discussed" (see Keefer and Knack 2008, Handbook of New Institutional Economics, page 702).

behavior of *others*, while civic cooperation assesses a *respondents' own willingness* to cooperate. Such willingness is shaped by the expectations of the behavior of others but is not always identical to it. Therefore, while generalized trust measures trust in others, civic cooperation captures the self-reported trustworthiness of the respondents. On the negative side, however, the construct of civic cooperation is likely to contain some measurement error due to self-serving bias in individual responses (Knack and Keefer 1997).¹³ As a result, Knack and Keefer (1997) conclude that both proxies are valid and potentially useful for a study of societal trust and trustworthiness.¹⁴ In addition, trust and civic cooperation are highly correlated (Knack and Keefer 1998), which suggests that generalized trust and civic cooperation are mutually reinforcing, e.g., increased civic cooperation (also referred to as “trustworthiness”) begets increased generalized trust because higher civic cooperation reduces the probability of deviant behavior by an economic counter-party, and vice versa.

While we are not aware of any accounting literature that directly links civic cooperation to the financial reporting environment, several studies explore the connection between generalized trust and financial reporting. Nanda and Wysocki (2013) demonstrate that companies from countries with high generalized trust are less likely to become involved in earnings management and are faster to recognize bad news in financial statements. Pevzner et al. (2015) report stronger investor reaction to earnings announcements in countries with higher generalized trust, and find this effect to be more pronounced in countries with weak investor protection regime and low

¹³ This bias could manifest as a reduced variance in the responses obtained in the survey.

¹⁴ Knack and Keefer (1997) report the presence of higher levels of trust and civic cooperation in societies that are less polarized by ethnic and economic forces and which have more effective formal institutions that protect property rights. Knack and Keefer also documented the positive association between both independent variables - generalized trust and civic cooperation - and various benchmarks of economic performance such as growth in per capita income and societal investment. In addition, Knack and Keefer stress that the positive impact of trust on economic growth is more pronounced in poor countries, consistent with the notion that the role of trust as informal protection mechanism is especially crucial in environments with weaker formal protection channels.

disclosure requirements. Moreover, a more trusting attitude of stakeholders in societies with higher generalized trust increases the value of management disclosures and ultimately pushes companies toward greater financial reporting transparency (Nanda and Wysocki 2013). Related to this research is recent work by Lee et al. (2013) who document that corporate tax avoidance is lower in countries with higher levels of societal trust.

2.2 Hypotheses: Generalized trust, civic cooperation, and the market for audit services

The evidence of the positive impact of a trustworthy environment on financial reporting quality raises the question about the value of the audit in such societies. Is the organization of the auditing function affected by societal trust and if so in which aspects? In this paper, we model the relationship between social trustworthiness and the value of the audit by considering the effect of trustworthiness on both the demand and supply of auditing. The traditional view of the value of the audit function is rooted in agency theory that focuses on the demand for audits. It is a well-established result in the auditing literature that the demand for audit services arises in situations where agency problems between principals and agents are magnified, creating the demand for an external monitor, i.e., an auditor. Implied in this relation is a fundamental non-cooperative, potentially adversarial, relationship between investors and managers, i.e., the presumption that absent audited periodic reporting managers will “shirk” on their obligations to investors either through consumption of perks or the outright theft of shareholder property.¹⁵ Hence, prior research focuses on making the connection between the value of audit services, usually measured by audit

¹⁵ An alternative view of the audit can be found in the literature on service science where the driver of value is the co-creation of value by a service provider and a client (Knechel, Thomas and Driskill 2015). One primary difference between traditional professional services (e.g., consulting) and the audit is the potential tension between the client (e.g., the company) and the ultimate consumer of the audit (e.g., shareholders) as reflected in professional standards on independence.

fees, and corporate factors that are linked to significant agency problems arising from the organizational structure, capital structure and accounting complexity of the firm.¹⁶

Extension of such reasoning to a cross-country context suggests that the value of an audit may be conditional on cultural attitudes that can aggravate or diminish the impact of agency problems. For example, an audit may be more valuable in a culture where shirking is wide spread and considered a behavioral “norm”. More specifically, the nature of culture will influence *ex ante* the degree to which managers behave in a self-centered, non-cooperative or opaque manner. According to this view, societies with low generalized trust or low civic cooperation are likely to experience a high degree of agency problems and will have a greater need for formal third party monitoring (Knack and Keefer 1997; Keefer and Knack 2008). From this perspective, stakeholders in societies where residents have a higher propensity to justify inappropriate behavior could see the audit as a crucial mechanism to curb agents’ opportunism, placing higher value on high quality audits. In contrast, since overall trustworthiness is associated with higher financial reporting quality, societies with substantial generalized trust or civic cooperation might experience fewer agency problems and perceive less need for external monitoring. In these societies individuals “can spend less to protect themselves from being exploited in economic and political transactions” (Keefer and Knack 2008, page 708). As a result, the audit function may be in low demand, or simply become a legally-mandated commodity, in societies with high generalized trust or civic cooperation. This implies that, *ceteris paribus*, a lack of civic cooperation or low generalized trust would increase the need and societal value of a high quality audit, while strong civic compliance will curb the demand for audit services to a regulatory minimum. It is well documented in the

¹⁶ See for example, Simunic 1980; Hackenbrack and Knechel 1997; Bell et al. 2001; Bedard and Johnstone 2004; Hay et al. 2006; Knechel and Willikens 2006; Hay et al. 2008; Hogan and Wilkins 2008; Hogan et al. 2008; Knechel et al. 2009; Knechel et al. 2012; Krishnan et al. 2012; Chen et al. 2012;; Hackenbrack et al. 2014.

auditing literature that Big N firms generally provide higher quality audits than non-Big N firms (Knechel et al. 2013). Therefore, applying the perspective of the agency theory, one would expect a higher (lower) likelihood that a company will be audited by a Big N firm in a low (high) trust environment.

The prior argument focuses on the significance of agency problems as the main determinant of audit value. However, the quality of the existing societal audit function, as well as societal perceptions of its quality, are also important considerations. Audit scholars agree that stakeholders attribute the value of the audit to the ability of auditors to detect and correct (or disclose) material misstatements in the financial statements (DeAngelo 1981). Thus, the extent of the agency problem or the perceived probability that material misstatements exist in the unaudited financial statements is only one of the factors of societal audit value. Other factors include: (1) the anticipated reliance on financial statements in making decisions, (2) the perceived competence of the auditors, and (3) the perceived independence of the auditors. In other words, the demand for audits is highest not only when agency problems are significant but also when investors expect auditors to be effective in their ability to monitor managers (DeAngelo 1981). While low trust and civic engagement societies might have greater need for high quality audits, stakeholders in such societies might have little faith in the auditors' independence and their ability to report truthfully, e.g., the auditing profession is not exempt from the overall attitudes of trust in a society. In addition, insights from sociology and political economy suggest that stakeholders in such societies may prefer family and quasi-family connections to formal institutions in governing their life and decision choices (Almond and Verba 1963; Della Porta 2000). Therefore, stakeholders in low trust and low civic cooperation societies may not see the value of an audit because they either do not plan to rely on financial statements in their decisions or do not trust the competence and independence of the

auditors.¹⁷ As a result, there would be a lower (higher) likelihood of the company being audited by a Big N firm in low (high) trust environment.

Recent literature from economics and evolutionary biology further reinforces the potentially conflicting predictions about audit demand and audit value in low trust vs. high trust societies. According to this view, reciprocal altruism and cooperation are the unique attributes of the human species, grounded in neurobiology and resulting from long-term evolution (Rilling et al. 2002). The particular features of the evolution that prompted such development are the needs for close and repeated social interaction as well as the societal ability to recognize and punish inappropriate behavior (Axelrod and Hamilton 1981; Rilling et al. 2002;). This research stresses the societal need to punish deviants in order to maintain cooperation within the society, even if the execution of such punishment imposes significant costs on the punishers themselves and decreases their own benefits or pay-offs (Gächter and Fehr 2000; Bowles and Gintis 2004;).

Extension of these insights into the context of our study would suggest that a society needs strong formal protection mechanisms to monitor and punish deviant behavior in order to maintain a sufficient level of social trust, and such mechanisms are likely to play much bigger role in high trust societies relative to low trust societies. The societal cost of unpunished deviant behavior is very high in high trust societies due to the relatively low frequency of misbehavior coupled with the potentially high externalities of allowing deviant behavior to go unpunished in a trustworthy society. A small number of significant acts that run counter to the norms of society (e.g., Enron) can compromise trust in such environments and undermine prior long term investments that provide the foundation for societal trust and civic cooperation. Therefore, this line of reasoning would suggest that the value of

¹⁷ This reasoning is consistent with Knack and Keefer (1997) findings that lower “civic cooperation” societies are associated with “lower executive constraints” in the political sphere. Low executive constraints society lacks strong system of checks and balances, and power executives in such societies may act of their own volition without need to consult and agree with others.

audit is higher in a high generalized trust society than in a low generalized trust society, and the quality of the performed audit services will be higher in high trust societies than in low trust societies.

Finally, the discussion of the value and quality of the delivered audit services in high trust societies is also consistent with an audit supply/production perspective. According to this perspective, very low generalized trust and civic cooperation is likely to influence the risk surrounding an audit. Engagement risk in such societies could be so high that reputable international audit firms might choose not to enter the market while talented and conscientious citizens choose to avoid the audit profession. As a result, there will be the lower probability of that a company will be audited by a Big N firm in low trust society since Big N firms may believe that they cannot adequately price the risk (Asare et al. 1994; Johnstone 2000). Overall, our theoretical discussion and prior empirical literature is inconclusive about the impact of trust on the degree of presence of Big N audit firms in a country-specific audit market. Therefore, our first hypothesis is non-directional:

H1: There is an association between generalized trust and societal civic cooperation and the presence of Big N firms in a country.

The same forces that would influence the presence of Big N audit firms in a country would also likely influence the level of audit fees. If the audit serves as a main mechanism to detect and address inappropriate behavior in low trust societies, then we would expect higher audit effort with a commensurate increase in audit fees in a low trust, low civic cooperation country. On the other hand, if the value of the audit is low in such countries, and may only exist due to regulatory requirements, we expect relatively low fees and commodity-type pricing. On the supply side, if auditors take on high risk engagements, they are likely to charge very high fees in such an environment. On the other hand, if auditors who would normally expect a fee premium for their services (i.e., Big N firms, industry specialists) simply avoid the entire market or high risk engagements, then the upper end of the possible fee distribution is likely to be truncated, resulting

in lower average fees.¹⁸ If local auditors are perceived as providing low quality audits, fees will also be reduced. These observations lead to our second (non-directional) hypothesis:

H2: There is an association between generalized trust and societal civic cooperation and audit fees within a country.

2.3 Generalized trust, civic cooperation, and the strength of legal protection of minority shareholders

We next explore how demand for audit services across countries is affected by interaction of civic cooperation or societal trust and the strength of the legal protection of minority shareholders. Prior studies document that stronger investor protection is associated with higher earnings quality and greater credibility of accounting information (Bushman and Piotroski 2006; Ali and Hwang 2000; Defond et al 2007). Countries with stronger investor protection regimes tend to attract more Big N auditors (e.g., Francis et al. 2003). These findings are presumably due to the higher level of investment made by firms in response to higher level of legal enforcement. Francis et al. (2003) document that Big N firms audit proportionately more clients in countries with a strong investor protection regime and that countries with strong investor protection spend more on audit enforcement. Francis and Wang (2008) report that audit quality, proxied by Big N presence, mediates the impact of the investor protection regime on earnings quality. In particular, they hypothesize that Big N auditors are more sensitive to client's misreporting risks than non-Big N auditors, and that this difference becomes especially pronounced in countries with strong investor protections. Choi et al. (2008) complement these findings by documenting higher audit fees in countries with stricter legal liability. The higher audit fees are presumably related to greater efforts taken by auditors to avoid the more severe consequences of a mistake in a highly litigious

¹⁸ This effect would be similar to a "lemons market" since high quality producers could not be paid enough to justify their investment in audit quality (Akerlof 1970; Causholli and Knechel 2012).

environment. Overall, prior research suggests that, on average, stronger investor protection is expected to be associated with greater presence of Big N auditors and higher audit fees.

We focus our attention on a single aspect of the investor protection regime: the strength of the legal protection of minority shareholders. We use the anti-self-dealing index developed by Djankov et al. (2008) to proxy for legal protection. This theoretically-grounded index reflects the strength of the enforcement mechanisms related to self-dealing by executives in corporations such as disclosures and approvals. The index captures the strength of legal institutions in a very specific area by measuring “the legal protection for minority shareholders against expropriation by corporate insiders” based on prevailing rules in 2003 for both private and public enforcement (Djankov et al. 2008, p. 430).¹⁹

While prior studies suggest a greater presence of Big N firms and higher audit fees in societies with strong protection of minority shareholders, the picture becomes less clear when we consider the potential *interactions* of trust and civic cooperation with investor protections. Pevzner et al. (2015) show that greater investor protection increases investors’ reaction to earnings announcements when trust is *low*, i.e., trust and investor protection are substitute mechanisms when it comes to interpreting earnings information. This relationship would suggest that when trust or civic cooperation is low, but investor protection/disclosure regimes are strong, the demand for audit services would be stronger. However, when civic cooperation or trust is high, and investor protection/disclosure regimes are strong (weak), the demand for monitoring and for audit services will be lower (higher). This leads to the final two hypotheses:

¹⁹ Anti-self-dealing index includes both private and public enforcement mechanisms. However, Djankov et al. (2008) reported the lack of variation in the public enforcement mechanisms across the countries. So, the cross-country differentiation in anti-self-dealing index is mainly due to cross-country variance in the private enforcement mechanisms.

H3: In societies with strong legal protection of minority shareholders, the presence of Big N firms is higher when generalized trust or civic cooperation is low.

H4: In societies with strong legal protection of minority shareholders, audit fees are higher when generalized trust or civic cooperation is low.

3. RESEARCH DESIGN AND SAMPLE

3.1 Research Design

To test our first hypothesis about the presence of the Big N in an audit market, we use the following baseline regression models:

$$Big_N = \alpha_0 + \alpha_1 TEST + FinanceVarControl_i \quad (1)$$

where *Big_N* is dummy variable that takes value of “1” if firm is audited by a Big N auditor and “0” otherwise.²⁰ *TEST* can take on one of three values: *TRUST*, *CIVIC* or *TFACTOR*. *TRUST* (*CIVIC*) reflects the societal levels of generalized trust (civic cooperation) and are computed from responses in the latest Wave of World Values Survey as discussed in detail in Section 3.2. *TFACTOR* is the variable that is based on the common factor extracted from a factor analysis of *TRUST* and *CIVIC* and is computed as discussed in detail below. *FinanceVarControl_i* is a vector of firm-specific financial control variables. We estimate this, and all subsequent, models controlling for year and industry fixed effects. All continuous variables are winsorized at their respective 1st and 99th percentiles. We cluster our standard errors on firm and year.

To test our second hypothesis regarding audit fees, we use the following baseline regression models:

$$AFEE = \beta_0 + \beta_1 TEST + \beta_2 WAGE_INDEX + FinanceVarControl_i \quad (2)$$

²⁰ We code a firm as Big N if any part of its name contains KPMG, EY, Arthur Andersen, PwC, PW, Coopers and Lybrand, Deloitte or its variant or predecessor. This approach is consistent with the list of current PCAOB international registrants available at <http://pcaobus.org/Registration/Firms/Pages/GlobalNetworkFirms.aspx>

where *AFEE* is the log of the audit fees from Thomson Reuters EICON database originally collected by Thomson Reuters²¹ (expressed in thousands of US Dollars); *TEST* is one of our test conditions: *TRUST*, *CIVIC* or *TFACTOR*; and *WAGE_INDEX* is a variable that controls for cross-country differences in the wages of accountants (and indirectly for differences in cost of living) from the Occupational Wages around the World database (<http://www.nber.org/oww/>) and all other variables are defined as before.

To test our third and fourth hypotheses, we run the following models using the interaction of the proxy for self-dealing and our test variables:

$$Big_N = \lambda_0 + \lambda_1 TEST + \lambda_2 HANTI_SELF + \lambda_3 TEST*HANTI_SELF + FinanceVarControl_i \quad (3)$$

$$AFEE = \nu_0 + \nu_1 TEST + \nu_2 HANTI_SELF + \nu_3 TEST*HANTI_SELF + \nu_4 WAGE_INDEX + FinanceVarControl_i \quad (4)$$

HANTI_SELF is an indicator variable set equal to one if the anti-self-dealing index from Djankov et al. (2008) is above the sample median, else set equal to zero.²² *TEST* is again our three test variables: *TRUST*, *CIVIC* or *TFACTOR*.

3.2 Definition of Variables

3.2.1 Measurement of Trust (*TRUST*)

²¹ Thomson Financials EICON database combines data from Thomson Reuters and Worldscope. Worldscope database contains total fee variable (combining audit and non-audit fees), and this variable was used in prior research (e.g., Kim et al. 2012). However, Thomson Reuters audit fee variable includes audit fees only, and this is the variable we use in order not to garble our regression models with non-audit fees.

²² The anti-self dealing index is available at Andrei Shleifer's website at: <http://scholar.harvard.edu/shleifer/publications?page=2>). This index was developed by the same scholars as the anti-directors rights index (La Porta et al. 2006) that was used as the proxy for investor protection in earlier studies on the value of the audit. Djankov et al. (2008) report a high correlation of anti-self-dealing index with anti-directors rights index as well as other similar indices. After extensive sensitivity test, Djankov et al. (2008) concluded that "the anti-self-dealing index is a more robust predictor of the development of stock markets than the anti-director rights index". Therefore, we use this particular index in our study.

As described earlier, the original measurement of the *generalized societal trust (TRUST)* is the country-specific proportion of the respondents to the World Value Survey (WVS) who agreed that most people can be trusted when answering the following question: *Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?*²³

3.2.2 Measurement of Civic Cooperation (CIVIC)

The measurement of *the civic cooperation (CIVIC)* is based on the following questions from the WVS:²⁴

Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between, using this card. (*Read out and code one answer for each statement*):

	Never justifiable					Always justifiable				
(1) Claiming government benefits to which you are not entitled	1	2	3	4	5	6	7	8	9	10
(2) Avoiding a fare on public transport	1	2	3	4	5	6	7	8	9	10
(3) Cheating on taxes if you have a chance	1	2	3	4	5	6	7	8	9	10
(4) Someone accepting a bribe in the course of their duties	1	2	3	4	5	6	7	8	9	10

For each respondent we calculate their average score in answering these four questions and then calculate the country-specific “CIVIC” score as the average response of all respondents from a particular country multiplied by “-1” to ensure that higher number signals higher civic cooperation. For example, if for a country X, the average responses for questions listed above are 4, 3, 2, and 1, CIVIC is equal to $-(4+3+2+1)/4 = -2.5$.²⁵ While questions (1), (2) and (3) were used in Knack and Keefer (1997), we do not use the responses to questions about “keeping money you have

²³ In the latest Wave 6 (2010-2014) of the World Values Survey, General Trust Variable is coded as V24.

²⁴ In the latest Wave 6 (2010-2014) of the World Values Survey, the foregoing components of CIVIC are coded as V198, V199, V201 and V202, respectively.

²⁵ We average the responses in order to equally weight each component of civic cooperation from the World Values Survey. Our robustness test indicate that simply adding up the components and multiplying the sum by -1 results in very similar results. We present additional analyses of the average relations between audit fees/Big N choice and civic cooperation results using individual components of CIVIC as well as the results of factor analysis-based measure of CIVIC in the end of the paper (Section 4.3.1). Our results remain broadly consistent with those reported using this summary measure.

found” and “failing to report damage you have accidentally done to a parked vehicle” (Knack and Kiefer, page 1256). These questions are not available in the Wave 6 of the World Values Survey so we replace them with the question (4) concerning the acceptance of bribes.

3.2.3 Measurement of commonality between TRUST and CIVIC (TFACTOR).

To capture common effects of *TRUST* and *CIVIC* on the formation of audit markets, we perform factor analysis of these variables on the country level across all countries with available *TRUST* and *CIVIC* data in the World Values Survey. Factor analysis produces a single factor, which we extract and name *TFACTOR* in our analysis.

3.2.4 Financial Control Variables

Following prior studies (e.g., Simunic 1980; Hay et al. 2006; Krishnan et al. 2012; Chen et al. 2012b; Hackenbrack et al. 2014), we control for the following firm-specific variables that are likely to impact the auditor choice and audit fees: firm size (*LASSET*), firm profitability (*ROA* and *LOSS*), firm leverage (*LEV*), business complexity denoted by the level of inventory and receivables (*INVREC*) and special items (*SPEC*), the number of business segments (*SEGM*), and overall accruals (*ACCR*). We also control for corporate activities that intensify audit risk such as issuance of new securities (*ISSUE*), acquisitions (*MERGE*), cross-listing of the companies outside US on a US stock exchange (*ADR*), or on another stock exchange outside the domicile country (*INT_CROSS*), as well as for the type of audit opinion (*QUAL*). Prior research has documented a fee premium for Big N firms. In addition, auditors have been found to lowball during initial years of tenure (Simon and Francis 1988). As such, in all the models examining the determinants of audit fees, we control for auditor type (*BIG_N*) and auditor changes (*AUD_CHANGE*).

3.3 Sample Selection

Consistent with prior research (e.g., Knack and Keefer 1997; Pevzner et al. 2015), we use the WVS data as the data source for measures of generalized societal trust and civic cooperation. This survey was administered to people from a large number of countries and at several points in time (six waves). We use data from the last available wave for any particular country. Given the observed stability of trust measures across WVS waves, we believe that using data obtained from the latest WVS wave does not bias our results.

Table 1 describes our sample selection procedure. We begin by merging WVS aggregated country level culture data with company-specific data from Thomson Financial database. The original merged World Values Survey and Thomson Financial data file includes 223,388 firm-year observations. We exclude the observations that had missing data for the purposes of our analyses such as missing audit fee data, a missing auditor identifier (19,817 observations), missing firm-specific control variables (140,996 observations), missing trust and civic data (2,877 observations), and missing anti-self-dealing index (3,198 observations). From this smaller sample, we dropped countries with less than 10 remaining observations (Lithuania, Pakistan, Slovakia, and Ukraine). This process resulted in the final sample for Big N analyses of 56,485 firm-year observations across 40 countries (Big N Sample). The sample for audit fee is smaller due to missing wage index data for some countries, and includes 44,748 firm-year observations across 23 countries. Table 1 illustrates sample selection process in detail.

[INSERT TABLE 1 HERE]

3.4 Sample Descriptive Statistics

Table 2 Panel A presents information about the sample distribution across the years from 1997 to 2013. We document a general increase in the firm-year observations from 246 in Big N

sample and 179 in the audit fee sample in 1997 to 11,478 in the Big N sample and 7,795 in the audit fee sample in 2013. The time variation in the annual composition of our sample reflects the Thomson Reuters' trends in collecting our variables of interest.²⁶ Table 2 Panel B presents the distribution of firm-years across different countries and provides country-specific descriptive statistics on key variables. Our sample firms for the Big N analyses represent 40 different countries and range from 14,273 firm-year observation (United States) to 15 firm-year observations (Hungary). Our audit fee sample is smaller due to additional restriction of availability of the country-specific wage index and includes 23 different countries. In this sample, United States still has the highest number of firm-year observations (14,273 observations) and Hungary is represented by the smallest number of observations (15 firm-year observations).

[INSERT TABLE 2 HERE]

Table 3 presents summary statistics for our main variables for both the Big N sample (Panel A) and audit fee sample (Panel B). Approximately 57 % of the firms in our Big N sample and 52 % in our audit fee sample are audited by Big N firms, which is significantly lower than in the US, probably due to the fact that Big N penetration is uneven across countries.²⁷ The mean (median) log of audit fees for our sample is 4.97 (4.75); translated to US dollars, mean audit fee is approximately 1,330,000 while median audit fee is approximately 115,600. The mean (median) log of assets of the sample firms is 12.05 (12.17) in our Big N sample and 11.90 (12.08) in our audit fee sample; this translates into the mean asset size in USD of approximately \$1.9 billion for both Big N and audit fee samples, and median asset size of \$191 million (\$176 million) for Big N (Audit fee) sample. The significant right skewness of our asset variable is consistent with the

²⁶ To control for time level clustering, our models include year fixed effects.

²⁷ Francis et al. (2013) examine consequences of cross-country penetration of Big N firms for audit quality.

presence of dis-proportionally large firms in our sample; hence, it makes sense to use it in the logarithmic form in our regression models. The mean (median) for generalized trust is at 0.37 (0.38) in both Big N sample in the audit fee sample, which suggests that on average 37% (38%) of respondents agree with the statement that “generally speaking, most people can be trusted”. The mean (median) for civic cooperation is at -2.17 (-2.12) in Big N sample and -2.18 (-2.28) in the audit fee sample, which suggests that on average people are reluctant to justify deviant behavior.

[INSERT TABLE 3 HERE]

3.5 Correlation Analysis

Table 4 presents Pearson correlation coefficients for both country-specific and company-specific variables. We highlight correlations with magnitude over 10% in bold which are also statistically significant. Panel A indicates expected significant and positive correlation between *TRUST*, *CIVIC* and *TFACTOR* variables. At the same time, we do not find any correlation of these variables with investor protection measure, using one country – one observation approach. Panel C indicates significant and positive correlation between audit fees and *TRUST*, audit fees and *CIVIC*, and audit fees and *TFACTOR* variables. These results are consistent with our conjecture that high trust or high civic cooperation societies place higher value on societal audit function. Panel C also indicates a negative and significant correlation between audit fees and *HANTI_SELF* (i.e., the strength of protection of minority shareholders) which suggests that societies with better protection of minority shareholders tend to have lower audit fees. Other significant correlations between *BIG_N* (Panel B) and audit fees (Panel D) and variables representing firm-specific characteristics (e.g., firm size, business complexity) are consistent with prior research.

[INSERT TABLE 4 HERE]

4. EMPIRICAL RESULTS

4.1 Auditor Choice: Main Effect of Generalized Trust and Civic Cooperation

Table 5 Panel A presents the results for hypothesis H1. Results on the effect of Trust or Civic cooperation on the likelihood that a company is audited by a Big N firm are inconclusive. While *TFACTOR* is not significant, the coefficient of *TRUST* is negative and marginally significant ($p < 0.1$) but *CIVIC* is positive and significant ($p < 0.01$). For control variables, larger firms (*LASSET*) and firms that experience losses (*LOSS*) are more likely to hire high quality auditors. The results on business complexity are mixed. Firms that issued new securities (*ISSUE*) and are cross-listed on exchanges outside their domicile country (*INT_CROSS*) are more likely to hire Big N auditors, while most of others financial control variables are not significant. The number of segments (*SEGM*) is significant and negative ($p < .05$), while the leverage (*LEV*) is marginally significant and negative ($p < .10$).

4.2 Audit Fees: Main Effect of Generalized Trust and Civic Cooperation

Table 5 Panel B presents the results for H2: the effect of generalized trust and civic cooperation on audit fees. All three test variables (*TRUST*, *CIVIC* and *TFACTOR*) are highly significant ($p < .01$ in all three cases) and positively associated with audit fees. This evidence suggests that societies with higher generalized trust or higher civic cooperation place higher value on the audit function and are willing to incur higher audit fees. For control variables, evidence is generally consistent with prior research. Audit fees are higher in societies with higher cost of living (*WAGE_IND*) and when companies report special items (*SPEC*). Audit fees are also higher for larger firms (*LASSET*), firms audited by Big N companies (*BIG_N*) and firms cross-listed on other exchanges (*INT_CROSS*). We also document a positive and significant association between audit fees and most indicators of business complexity such as acquisitions (*MERGE*), issuance of new

securities (*ISSUE*), presence of multiple segments (*SEGM*), and higher leverage (*LEV*). Consistent with low-balling (Simon and Francis 1988), audit fees are lower for firms that recently changed auditors. Finally, audit fees are lower for firms that have a higher return on assets (*ROA*) and higher accruals (*ACCR*).²⁸

[INSERT TABLE 5 HERE]

4.3 Auditor Choice: Interaction Effects with Anti-self-dealing Index

Table 6 Panel A reports results for H3: the effect of the interaction of trust and civic cooperation with the strength of the investor protection regime on the likelihood of being audited by Big N firms. Interestingly, when we control for this interaction, we observe a significant positive main effect for all three test variables ($p < .01$ for *TRUST* and *TFACTOR*, $p < 0.05$ for *CIVIC*). In other words, when we control for interaction of trust/civic cooperation with formal protection of minority shareholders, the presence of Big N firms increases as a function of generalized trust and civic cooperation. We also observe that the interaction term is significant and negative for models with *TRUST* and *TFACTOR* ($p < .01$). These results provide support for H3 that in societies with strong legal protection of minority shareholders, the presence of Big N firms on a specific audit is lower when generalized trust or civic cooperation is higher.²⁹

²⁸ In the US, audit fees are often positively associated with measures of accruals, suggesting more risk. However, the incentive to use accruals to increase earnings is much less obvious in other countries where minimizing a company's tax burden may be more important. In this case, the association between audit fees and accruals could be negative since earnings manipulation would have the impact of reducing taxable profits (Bauwhede and Willekens 2003; Bauwhede et al. 2003; Bauwhede and Willekens 2004).

²⁹ Consistent with Ai and Norton (2003), we run the INTEFF procedure to examine the distribution of z-statistics on the interaction terms in these models. Our untabulated plots of these z-statistics for interactions of *TRUST*HANTI_SELF* and *CIVIC*HANTI_SELF* show that the distribution of z-statistics is reliably negative (our untabulated results show that the average z-statistic for *TRUST*HANTI_SELF* is -33.64 while average z-statistic for *CIVIC*HANTI_SELF* is -24.49), which confirms that higher levels of investor protection weaken the positive impact of trust or civic cooperation on Big N presence. The INTEFF procedure for *TFACTOR*HANTI_SELF* did not converge.

4.4 Audit Fees: Interaction Effects for Anti-self-dealing Index

Panel B of Table 6 presents the results for H4: the effect of the interaction of trust and civic cooperation with the strength of the investor protection regime on audit fees. The results in Panel B are consistent with those in Panel A and suggest that the impact of generalized trust and civic cooperation on the value of the audit depends on the strength of legal protection of minority shareholders. In particular, the positive main effects of trust and civic cooperation on audit fees, reported in Table 5, remain in the presence of interaction ($p < .01$ in all cases). In addition, the interaction terms are negative and significant in all three models ($p < .01$ for CIVIC and TFACTOR models, $p < 0.05$ for TRUST). These results are consistent with H4 and suggest that audit fees are lower in high trust societies with strong legal protection of minority shareholders. Overall, the results reported in Table 6 suggest that the audit function and legal protection of minority shareholders are likely to play substitute roles in maintaining generalized societal trust.

[INSERT TABLE 6 HERE]

4.5 Sensitivity Analyses:

4.5.1. Extending the sample for Big N analyses

Our initial sample for Big N analyses consists of 56,485 observations. One of the conditions for our initial analyses was the availability of audit fee data for all observations included in our initial sample. We repeat the analyses for impact of generalized trust or civic cooperation on the likelihood of being audited by Big N using the bigger sample of 87,350 observations where the requirement for audit fee data is omitted. Table 7 Panel A reports the results of the original model using this bigger sample (previously reported in Table 5 Panel A). Table 7 Panel B reports the results of the model that controls for the impact of investors' protection (previously reported in Table 6 Panel A).

Results from this extended sample are generally consistent with previously reported results. As it follows from Table 7 Panel A, in the basic model without controlling for investor protection, only coefficient on *CIVIC* is positive and significant while coefficients on *TRUST* and *TFACTOR* are insignificant. However, when control for investor protection is introduced in the model (Table 7, Panel B), we report a significant positive main effect for all three test variables *TRUST*, *CIVIC* and *TFACTOR* ($p < .01$). We also report a significant and negative interaction of *TRUST* and *TFACTOR* with investor protection variable ($p < .01$).

4.5.2. Controlling for potential changes in TRUST or CIVIC across the time.

In our initial analyses we used the country-specific *TRUST* and *CIVIC* variables from the latest Wave 6 data from World Value Survey. While prior research stresses the stability of these measurements across time, we conduct sensitivity tests using the closest available data from World Value Survey rather than the latest Wave 6 data. For example, for 1997 year observations we are using *TRUST* and *CIVIC* measures from Wave 3 (1995-1998) if this particular country was included in Wave 3 data collection. If this country was not covered by Wave 3, but was covered by Wave 4 (1999-2004), then we use Wave 4 measures for 1997 year observations for this country.

We repeat all the previously reported analyses in Tables 5 and 6 using the adjusted *TRUST*, *CIVIC*, or *TFACTOR* numbers. These results are reported in Table 8 (Panels A, B, C, and D). All coefficients are exactly in the same direction and of the similar significance as in Tables 5 and 6. In particular, when we control for investor protection in the Big N model, we observe the significant positive main effect of all our country-specific *TRUST*, *CIVIC*, and *TFACTOR* variables. We also observe the significant negative interaction of *TRUST* and *TFACTOR* with investor protection variable. We also report the significant positive effect of *TRUST*, *CIVIC*, and

TFACTOR on audit fees in both models: (1) in the model with just the main effect of those variables and (2) in the model that controls for investor protection. In addition, in the model that controls for investor protection, we also report the significant negative interaction term between investor protection and all our country-specific variables of TRUST, CIVIC and TFACTOR.

4.5.3 Controlling for Endogeneity

While the main assumption of our paper is that trust and civic cooperation are fundamental determinants of informal country-level institutions, they could still be affected by other country level variables, such as prevalent religion or country's institution (such as investor protection and disclosure regime). To address this issue, we re-estimate Table 5 using two-stage models, whereby we estimate abnormal (residual) TRUST, CIVIC and TFACTOR variables in the first stage and use these residual variables in the 2nd stage to estimate our equations (1) and (2). This is similar to the approach employed in some other accounting studies (e.g. Nikolaev 2010). In results tabulated in Table 9 we find that abnormal CIVIC and TFACTOR are positively associated with Big N choice, while abnormal trust, civic cooperation and joint trust/civic cooperation are all positively correlated with audit fees. Thus, these results generally support our earlier findings with respect to audit fees and are suggestive of the positive impact of societal trust on Big N choice.

4.5.4. Excluding the US observations from the sample

Because US firm-years represent disproportionately high number of observations of our sample, we re-ran the analyses in Table 5 while excluding observations from US. Table 10 reports the results when US firm-years are excluded from the sample. The results are consistent with original results reported in Table 5.

5. CONCLUSION

In his recent speeches, PCAOB Chairman Jim Doty has emphasized the importance of auditing as a trust-enhancing mechanism in capital markets and has called for more research on the role of the audit in facilitating capital formation and investor protection.³⁰ The results of our study suggest that the audit function does not emerge in a societal vacuum but is the result of the complex interplay between the informal and formal societal institutions. Thus, societal trust and civic cooperation by themselves can potentially impact certain characteristics of audit markets such as the extent of Big N presence and audit fees. Higher trust/higher civic cooperation societies appear to be willing to pay more for high quality audits, as proxied by Big N presence and size of audit fees, while lower trust/lower civic cooperation societies are associated with lower audit fees and lower Big N presence.³¹ These results suggest that market forces alone might not be sufficient for establishing high quality audit institutions in lower trust/lower civic cooperation societies. As such, intervention of the government or international institutions could be crucial for promoting effective audit mechanisms to break the negative cycle of distrust and inappropriate economic behavior in some environments.

Our results are in contrast to the findings in recent studies (e.g., Jha and Chen 2015) that document *negative* relation between local trust and audit fees. Our results, thus, suggest the importance of the differentiating between local (trust of kin) and “global” generalized trust constructs, as is suggested by Francis Fukuyama (see, for example, Fukuyama, 2000, 2002). One

³⁰ See for example: http://pcaobus.org/News/Speech/Pages/12092013_Doty_AICPA.aspx

³¹ This dynamic is consistent with other vicious circles established in economic studies when, for example, low economic growth leads to high poverty while high poverty leads, in turn, to low economic growth (e.g., Reference: Report of the World Bank “Poverty reduction and growth: virtuous and vicious circles”. Available at http://siteresources.worldbank.org/EXTLACOFFICEOFCE/Resources/870892-1139877599088/virtuous_circles1_complete.pdf)

intriguing possibility whose exploration we leave for future research is to examine whether local trust (e.g. trust in management or trust in local judiciary) is more important for resolving localized firm-level agency problems within the existing uniform culture, while generalized trust is more important for development of audit markets in disparate country-specific cultures in the macro-economic sense.

Our study further highlights that informal institutions (trust and trustworthiness) work in tandem with formal institutions such as legal protection of minority shareholders. Thus, the positive impact of societal trust and civic cooperation on audit fees and Big N presence is weakened in countries with stronger levels of investor protection. Overall, our results suggest that that informal and formal institutions act as substitutes in forming demand and supply for audit services. Therefore, simultaneous societal investment in both audit function and legal protection of the minority shareholders might be necessary for success in low trust/low civic cooperation societies.

As with every empirical study, our results are subject to a number of limitations. First, our measures of generalized trust and civic cooperation represent the self-reported answers on specific questions by subjects. As such, the responses are prone to a variety of related biases such as self-selection bias, social desirability bias, etc. Second, due to data availability our sample is limited to 27 countries for Big N tests and seventeen countries for audit fees test. Future studies might explore whether our results still hold for the bigger sample of the countries. Third, the strength of the investor protection regime is challenging to capture in empirical studies. While anti-self-dealing index represents the last refinement of the proxy for protection of minority shareholders, new and more precise measurements might emerge in the future that will require further validation of our study results.

Finally, due to inherent limitations of archival research we cannot fully rule out the reverse causality. Strengthening societal audit function increases the probability of detecting and punishing non-compliant behavior. Therefore, both societal trust and civic cooperation might grow as a result. However, we conducted several sensitivity tests to address this concern, and reported evidence generally support earlier conclusions. In spite of these limitations, the results in this paper clearly demonstrate that an effective auditing profession does not exist in vacuum, and a strong societal audit function can only develop when overall societal attitudes and institutions allow it to do so.

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Appendix: Definitions of Variables

Variable	Definition
<i>Dependent Variables</i>	
BIG_N	An indicator variable equal one if a firm is a Big N firm, using the description from Thomson Financial database (Reuters' Financial Historical Auditor Data). We code a firm as Big N if any part of its name contains KPMY, EY, Arthur Andersen, PwC, PW, Coopers and Lybrand, Deloitte or its variant or predecessor. This approach is consistent with the list of current PCAOB international registrants available here: http://pcaobus.org/Registration/Firms/Pages/GlobalNetworkFirms.aspx
AFEE	Natural Log of (AUDITFEE_USD/1,000) where AUDITFEE_USD is an audit fee in US dollars obtained from Thomson Financial (Reuters Financial) database.
<i>Trust/Civic Cooperation Variables</i>	
TRUST	A continuous variable measuring the level of country-level generalized trust. Generalized trust represents country-level average of generalized trust (V28) variable from the latest available Wave of the World Values Survey. It is computed as the proportion of respondents who chose "most people can be trusted" answer from WVS questionnaire. WVS data is available at: http://www.worldvaluessurvey.org/wvs.jsp
TRUST_S	Denotes measurement of generalized trust based on the closest (specific) Wave of the World Values Survey.
TRUST*	Denotes abnormal TRUST from the first stage regression model
CIVIC	A continuous variable capturing the level of societal civic cooperation or "trustworthiness" which is computed as the country-level average of residents' propensity to justify four different examples of deviant behavior as reflected in four WVS questions, multiplied by "-1" for ease of interpretation (Knack and Keefer, 1997). WVS data is available at: http://www.worldvaluessurvey.org/wvs.jsp
CIVIC_S	Denotes measurement of societal civic cooperation based on the closest (specific) Wave of the World Values Survey.
CIVIC*	Denotes abnormal CIVIC from the first stage regression model
TFACTOR	Trust factor derived from factor analysis of TRUST and CIVIC
TFACTOR_S	Denotes measurement of Trust factor derived from the closest (specific Wave) of the World Values Survey.
TFACTOR*	Denotes abnormal TFACTOR from the first stage regression model
HANTI_SELF	A dummy variable equal to one if anti-self-dealing index (ANTI_SELF) from Djankov et al. (2008) is above sample median. The data is available from Andrei Shleifer's website at: http://scholar.harvard.edu/shleifer/publications?page=2
<i>Firm-Specific Variables</i>	
LASSET	Natural log of a firm's assets in \$000 of US dollars obtained from Thomson Financial database
INVREC	Ratio of sum of inventory and receivables to beginning of the year total assets.
QUAL	An <i>indicator</i> variable equal one if a firm reports anything but an unqualified audit opinion
SPEC	An indicator variable equal one if a firm reports non-missing special items ; else zero
ROA	Ratio of income before extraordinary items to beginning of the year total assets

LOSS	An indicator variable equal to one if a firm reports negative net income
ACCR	Firms' accruals defined as the difference between income and operating cash flow, deflated by total assets
MERGE	An indicator variable equal one if acquisitions (ACQ) is not missing; else zero
ISSUE	An indicator variable equal one if a firm issues equity or debt
SEGM	An indicator variable equal one if a firm reports sales for more than two reportable segments in Thomson Financial Worldscope database
INT_CROSS	An indicator variable equal to one if a firm is listed on exchanges outside of its home country (Thomson Reuters); else zero
ADR	An indicator variable equal to one if a firm is cross-listed on the US exchange per Bank of New York ADR listing (available at: http://www.adrbnymellon.com/dr_directory.jsp)
LEV	Ratio of total liabilities to total assets
WAGE_INDEX	Wage index for finance/accounting professionals obtained from Country Survey of Manufacturers NBER database. Available at: http://www.nber.org/nberces/
AUD_CHANGE	An indicator variable equal one if a prior year auditor is different than current year auditor
<i>Additional Control Variables to Estimate 2 stage model of TRUST, CIVIC, and TFACTOR to obtain TRUST*, CIVIC* and TFACTOR*</i>	
GDP	Natural Log of a country's GDP obtained from World Bank
GDP_GR	Percentage Growth in a country's GDP
BUDD/PROT/ CATH/SHINTHO/CATH/ MUSLIM	An indicator variable equal to one if a country's majority religion is Buddhist/Protestant/Shinto/Catholic/Muslim
DISCLOSURE	This index is from La Porta et al. (2006) and captures a country's requirement (or the lack thereof) of the delivery of a prospectus to potential investors in advance of securities issuance, and the extent of affirmative disclosure requirements in the following five areas: insiders' compensation, ownership by large shareholders, inside ownership, contracts outside the normal course of business, and transactions with related parties.

TABLE 1
SAMPLE SELECTION

	<i>Number of Observations</i>
Available data from Thomson Financials	223,388
Less:	
Missing Auditor Identifier (Big N)	19,817
Missing firm-specific control variables (INVREC, LASSET, LEV, QUAL, ACCR) and Audit Fee data in USD	140,996
Missing TRUST, CIVIC	2,877
Missing anti-self dealing index	3,198
Drop countries with less than 10 remaining observations in Big N sample (Lithuania, Pakistan, Slovakia and Ukraine)	15
Big N Sample	56,485
Less:	
Missing Wage Index Data	11,737
Audit Fee Sample	44,748

The sample period spans 1997-2013. All available data from Thomson Financial (Worldscope and Reuters Financial) with available control variables are used. All variables are defined in the Appendix.

TABLE 2
ANNUAL AND COUNTRY DISTRIBUTION FOR SAMPLE

PANEL A: Annual Distribution

Year	BIG_N Sample		Audit Fees Sample	
	All Observations	% of Total	All Observations	% of Total
1997	246	0.44	179	0.4
1998	452	0.8	337	0.75
1999	504	0.89	384	0.86
2000	488	0.86	402	0.9
2001	374	0.66	345	0.77
2002	394	0.7	376	0.84
2003	474	0.84	461	1.03
2004	587	1.04	578	1.29
2005	692	1.23	654	1.46
2006	1,394	2.47	1,246	2.78
2007	3,522	6.24	2,948	6.59
2008	4,412	7.81	3,555	7.94
2009	3,388	6	3,378	7.55
2010	9,516	16.85	7,433	16.61
2011	9,898	17.52	7,666	17.13
2012	8,666	15.34	7,011	15.67
2013	11,478	20.32	7,795	17.42
Total	56,485	100.00	44,748	100.00

TABLE 2 (Continued)
ANNUAL AND COUNTRY DISTRIBUTION FOR SAMPLE

PANEL B: Summary Statistics by Country

Country (ISO Code)	BIG_N Sample			Audit Fee Sample		
	All Observations	Mean BIG_N	Mean TRUST	Mean CIVIC	All Observations	Mean Audit Fee (In USD)
ARG	45	0.60	0.23	-2.44		
AUS	1147	0.61	0.54	-1.76	1147	\$447,326
BGR	58	0.28	0.22	-2.19	58	\$113,946
BRA	101	0.79	0.12	-2.40	101	\$354,185
CAN	4049	0.62	0.42	-1.86	4049	\$4,097,271
CHE	320	0.92	0.51	-1.75		
CHL	125	0.66	0.13	-2.32	125	\$389,367
CHN	4970	0.15	0.64	-2.61	4970	\$657,196
COL	37	0.57	0.12	-2.37		
CZE	26	0.65	0.29	-2.82	26	\$1,031,076
EGY	101	0.49	0.21	-2.20	101	\$1,755,657
ESP	158	0.93	0.20	-1.86		
FIN	311	0.83	0.59	-2.02	311	\$691,805
FRA	1180	0.66	0.19	-2.75		
GBR	8671	0.64	0.30	-2.12	8671	\$586,728
HKG	935	0.80	0.48	-3.23		
HRV	82	0.79	0.25	-3.23	82	\$304,034
HUN	15	0.87	0.28	-2.19	15	\$1,055,856
IDN	93	0.63	0.43	-1.68		
IND	3,994	0.17	0.22	-2.53	3,994	\$50,991
ITA	326	0.81	0.29	-1.80	326	\$1,147,188
JPN	4,540	0.67	0.39	-1.54		
KOR	4,677	0.59	0.30	-2.28	4,677	\$116,131
MAR	39	0.69	0.13	-1.66		
MYS	267	0.81	0.12	-2.62		
NGA	62	0.74	0.15	-2.27	62	\$810,563
NLD	107	0.90	0.65	-1.64		
NOR	196	0.81	0.65	-2.04		
NZL	20	0.90	0.57	-1.87		

PER	35	0.49	0.12	-2.71	35	\$350,463
PHL	23	0.57	0.12	-3.23	23	\$129,023
POL	597	0.46	0.23	-2.18	597	\$86,308
RUS	386	0.47	0.29	-3.02		
SGP	301	0.79	0.39	-2.79	301	\$880,638
SWE	511	0.89	0.65	-2.25		
THA	684	0.58	0.33	-2.10	684	\$180,191
TUR	120	0.31	0.12	-1.54	120	\$495,402
TWN	2493	0.89	0.30	-2.33		
USA	14,273	0.59	0.38	-2.04	14273	\$2,230,931
ZAF	410	0.75	0.24	-3.23		
Total	56,485				44,748	

TABLE 3
DESCRIPTIVE STATISTICS

PANEL A: Selected Descriptive Statistics for Big N Sample (N=56,485)

Variable	Mean	STD	Q1	Median	Q3
BIG_N	0.57	0.50	0.00	1.00	1.00
TRUST	0.37	0.12	0.30	0.38	0.39
CIVIC	-2.17	0.35	-2.33	-2.12	-2.04
TFACTOR	0.24	0.21	0.10	0.31	0.42
HANTI_SELF	0.31	0.46	0.00	0.00	1.00
\$ASSETS(000)	\$1,917,187	\$6,190,284	\$44,000	\$191,961	\$830,890
LASSET	12.05	2.53	10.69	12.17	13.63
INVREC	2.74	19.54	0.09	0.26	0.43
QUAL	0.18	0.39	0.00	0.00	0.00
SPEC	0.60	0.49	0.00	1.00	1.00
ROA	-0.23	1.47	-0.03	0.04	0.09
LOSS	0.30	0.46	0.00	0.00	1.00
ACCR	-0.12	0.74	-0.11	-0.04	0.02
MERGE	0.83	0.38	1.00	1.00	1.00
ISSUE	0.32	0.46	0.00	0.00	1.00
SEGM	0.47	0.50	0.00	0.00	1.00
INT_CROSS	0.08	0.28	0.00	0.00	0.00
ADR	0.04	0.21	0.00	0.00	0.00
LEV	0.36	0.95	0.02	0.18	0.38

TABLE 3 (Continued)
DESCRIPTIVE STATISTICS

PANEL B: Selected Descriptive Statistics for the Audit Fee Sample (N=44,748)

Variable	Mean	STD	Q1	Median	Q3
BIG_N	0.52	0.50	0.00	1.00	1.00
AUDITFEE_USD (\$000)	\$1,330	\$36,600	\$43.73	\$115.6	\$529.7
AFEE	4.97	1.84	3.78	4.75	6.27
TRUST	0.37	0.12	0.30	0.38	0.38
CIVIC	-2.18	0.25	-2.28	-2.12	-2.04
TFACTOR	0.25	0.18	0.16	0.31	0.31
HANTI_SELF	0.35	0.48	0.00	0.00	1.00
\$ASSETS(000)	\$1,855,845	\$6,079,456	\$35,202	\$176,317	\$798,155
LASSET	11.90	2.65	10.47	12.08	13.59
INVREC	3.36	21.85	0.08	0.24	0.43
QUAL	0.17	0.38	0.00	0.00	0.00
SPEC	0.56	0.50	0.00	1.00	1.00
ROA	-0.30	1.64	-0.05	0.03	0.09
LOSS	0.33	0.47	0.00	0.00	1.00
ACCR	-0.14	0.82	-0.11	-0.04	0.02
MERGE	0.86	0.35	1.00	1.00	1.00
ISSUE	0.34	0.47	0.00	0.00	1.00
SEGM	0.43	0.49	0.00	0.00	1.00
INT_CROSS	0.04	0.19	0.00	0.00	0.00
ADR	0.03	0.17	0.00	0.00	0.00
LEV	0.39	1.04	0.02	0.18	0.38
WAGE_INDEX	20.35	10.79	15.40	25.32	26.56

This table summarizes descriptive statistics for our Sample. Sample selection procedure is described in Table 1. The sample period is 1997 to 2013. All variables are defined in the Appendix.

TABLE 4
CORRELATION COEFFICIENTS

PANEL A: Country-specific sample (N=40, Big N country composition)

		1	2	3	4
		TRUST	CIVIC	TFACTOR	
TRUST	1	-			
CIVIC	2	0.30	-		
TFACTOR	3	0.85	0.76	-	
HANTI_SELF	4	0.14	-0.05	0.07	-

PANEL B: Big N Sample (N=56,485)

		1	2	3	4	5	6	7	8	9	10	11	12
		BIG_N	LASSET	INVREC	QUAL	SPEC	ROA	LOSS	ACCR	MERGE	ISSUE	SEGM	LEV
BIG_N	1	-											
LASSET	2	0.44	-										
INVREC	3	-0.09	-0.16	-									
QUAL	4	-0.08	-0.24	0.05	-								
SPEC	5	0.14	0.28	-0.03	0.00	-							
ROA	6	0.18	0.48	-0.15	-0.27	0.06	-						
LOSS	7	-0.15	-0.42	0.10	0.21	-0.03	-0.33	-					
ACCR	8	0.09	0.24	-0.09	-0.16	0.00	0.63	-0.21	-				
MERGE	9	0.07	0.22	0.02	-0.16	0.05	0.03	-0.09	0.03	-			
ISSUE	10	0.09	-0.01	-0.03	0.00	-0.01	-0.01	0.08	0.00	0.03	-		
SEGM	11	0.10	0.34	-0.07	-0.10	0.18	0.16	-0.23	0.87	0.08	-0.08	-	
LEV	12	-0.12	-0.30	0.08	0.21	-0.02	-0.62	0.18	-0.34	0.00	-0.01	-0.09	-

TABLE 4 (Continued)

CORRELATION COEFFICIENTS

PANEL C: Audit Fee Sample: country-specific variables (N=56,485)

		1	2
		AFEE	BIG_N
AFEE	1	-	
BIG_N	2	0.52	-
TRUST	3	0.21	-0.12
CIVIC	4	0.31	0.28
TFACTOR	5	0.34	0.02
HANTI_SELF	6	-0.05	-0.04

PANEL D: Audit Fee Sample: company-specific variables (N=44,748).

		1	2	3	4	5	6	7	8	9	10	11	12
		AFEE	BIG_N	LASSET	INVREC	QUAL	SPEC	ROA	LOSS	ACCR	MERGE	ISSUE	SEGM
AFEE	1	-											
BIG_N	2	0.51	-										
LASSET	3	0.69	0.48	-									
INVREC	4	-0.05	-0.08	-0.16	-								
QUAL	5	-0.13	-0.11	-0.29	0.06	-							
SPEC	6	0.30	0.14	0.28	-0.02	0.00	-						
ROA	7	0.18	0.18	0.50	-0.14	-0.32	0.05	-					
LOSS	8	-0.17	-0.15	-0.45	0.10	0.25	0.00	-0.34	-				
ACCR	9	0.06	0.09	0.26	-0.09	-0.19	-0.01	0.62	-0.22	-			
MERGE	10	0.22	0.11	0.23	0.02	-0.17	0.06	0.05	-0.12	0.04	-		
ISSUE	11	0.09	0.12	0.00	-0.03	0.00	0.00	0.00	0.08	0.00	0.01	-	
SEGM	12	0.25	0.07	0.36	-0.06	-0.13	0.15	0.16	-0.25	0.88	0.13	-0.07	-
WAGE_INDEX	13	0.34	0.34	-0.06	0.08	0.08	0.00	-0.11	0.23	-0.08	0.05	0.25	-0.20

The table summarizes Pearson correlation coefficients for key variables over the sample period 1997 to 2013. All correlation coefficients in bold indicate significance at .05 levels or less. All variables are defined in the Appendix.

TABLE 5
DETERMINANTS OF BIG_N and AUDIT FEES

PANEL A: Determinants of BIG_N (N = 56,485)

	(1) X=TRUST		(2) X=CIVIC		(3) X=TFACTOR	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=BIG_N						
X	-3.10*	(-1.77)	1.41***	(6.69)	-0.04	(-0.05)
LASSET	0.56***	(17.06)	0.55***	(12.66)	0.53***	(12.04)
INVREC	-0.00*	(-1.90)	-0.00***	(-3.08)	-0.00	(-1.06)
QUAL	-0.02	(-0.23)	0.18	(1.25)	0.15	(1.13)
SPECIAL	0.08	(0.97)	0.02	(0.25)	0.11	(0.84)
ROA	-0.01	(-0.31)	0.04	(0.61)	0.05	(0.82)
LOSS	0.20**	(2.51)	0.08	(1.43)	0.18**	(2.43)
ACCR	-0.10	(-1.23)	-0.08	(-1.19)	-0.11	(-1.48)
MERGE	-0.19***	(-3.61)	-0.17***	(-3.44)	-0.21***	(-3.98)
ISSUE	0.45***	(6.99)	0.38***	(4.81)	0.49***	(5.21)
SEGM	-0.18*	(-1.92)	-0.26**	(-2.03)	-0.29**	(-2.33)
INT_CROSS	0.58***	(4.69)	0.77***	(4.67)	0.52***	(4.24)
ADR	0.06	(0.24)	0.24	(0.97)	0.17	(0.66)
LEV	-0.22*	(-1.66)	-0.16*	(-1.75)	-0.20*	(-1.80)
Intercept	-5.36***	(-6.04)	-3.49***	(-5.37)	-6.23***	(-10.26)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.80		0.81		0.79	

TABLE 5 (Continued)
DETERMINANTS OF BIG_N and AUDIT FEES

PANEL B : Determinants of AUDIT FEES (N = 46,566)

	(1) X=TRUST		(2) X=CIVIC		(3) X=TFACTOR	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=AFEE						
X	2.13***	(9.54)	1.50***	(13.06)	1.69***	(18.25)
LASSET	0.45***	(27.69)	0.47***	(35.80)	0.45***	(27.35)
INVREC	0.00***	(2.67)	0.00	(1.19)	0.00***	(3.24)
QUAL	-0.04	(-0.35)	-0.12	(-0.95)	-0.03	(-0.28)
BIG_N	0.38***	(11.87)	0.25***	(6.99)	0.37***	(11.87)
SPEC	0.17***	(8.21)	0.17***	(8.96)	0.18***	(8.11)
ROA	-0.10***	(-7.04)	-0.12***	(-8.05)	-0.10***	(-7.13)
LOSS	0.09*	(1.74)	0.08	(1.58)	0.07	(1.36)
ACCR	-0.03***	(-3.09)	-0.03**	(-2.20)	-0.03***	(-3.04)
MERGE	0.25***	(6.74)	0.33***	(8.52)	0.27***	(7.51)
ISSUE	0.15***	(5.31)	0.10***	(3.59)	0.13***	(5.01)
SEGM	0.20***	(3.13)	0.31***	(6.42)	0.21***	(3.17)
AUDITOR_CHANGE	-0.52***	(-5.60)	-0.51***	(-5.77)	-0.48***	(-6.03)
INT_CROSS	0.30***	(4.73)	0.36***	(5.66)	0.30***	(4.50)
ADR	0.23*	(1.84)	0.18	(1.55)	0.27**	(2.29)
LEV	0.04***	(4.09)	0.04***	(4.17)	0.04***	(4.06)
WAGE_INDEX	0.06***	(34.31)	0.03***	(5.39)	0.05***	(31.66)
Intercept	-3.98***	(-15.43)	0.39	(0.80)	-3.37***	(-13.85)
Year fixed effects		Yes		Yes		Yes
Industry fixed effects		Yes		Yes		Yes
R-sq	0.76		0.76		0.78	

Table 5 presents estimations of equation (1) and (2), i.e. Big N (LOGIT) and Audit Fees (OLS) as a function of TRUST, CIVIC, TFACTOR and associated control variables. Reported t-statistics are estimated using standard errors clustered on year and firm. All continuous variables are winsorized at the 1st and 99th percentiles. *, **, *** denote two-tail significance levels at 0.10, 0.05, and 0.01, respectively. All variables are defined in the Appendix.

TABLE 6
DETERMINANTS OF BIG_N and AUDIT FEES
ROLE OF ANTI-SELF DEALING INDEX

PANEL A: BIG_N (N=56,485)

DEPVAR=BIG_N	(1) X=TRUST		(2) X=CIVIC		(3) X=TFACOR	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
X	5.30***	(3.26)	1.10**	(2.23)	2.08***	(2.76)
X*HANTI_SELF	-13.67***	(-12.85)	0.49	(0.58)	-6.63***	(-6.79)
HANTI_SELF	4.86***	(11.81)	0.79	(0.49)	1.11***	(6.79)
LASSET	0.59***	(19.65)	0.56***	(14.12)	0.57***	(18.24)
INVREC	-0.01***	(-7.20)	-0.00***	(-2.82)	-0.00***	(-3.59)
QUAL	0.04	(0.39)	0.11	(0.78)	0.12	(0.86)
SPECIAL	0.04	(0.82)	0.02	(0.23)	-0.01	(-0.21)
ROA	-0.02	(-0.64)	0.02	(0.40)	0.02	(0.41)
LOSS	-0.00	(-0.04)	0.09	(1.47)	0.05	(0.77)
ACCR	-0.04	(-0.65)	-0.07	(-1.03)	-0.06	(-0.95)
MERGE	-0.33***	(-5.05)	-0.14**	(-2.11)	-0.21***	(-3.25)
ISSUE	0.24***	(5.42)	0.38***	(5.22)	0.36***	(5.99)
SEGM	-0.07	(-0.95)	-0.21**	(-2.18)	-0.20**	(-2.28)
INT_CROSS	0.61***	(3.86)	0.75***	(4.73)	0.43***	(3.08)
ADR	-0.01	(-0.03)	0.27	(0.98)	0.10	(0.47)
LEV	-0.13	(-1.53)	-0.19*	(-1.78)	-0.17*	(-1.82)
Intercept	-8.52***	(-10.58)	-4.04***	(-5.15)	-6.85***	(-13.21)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.84		0.81		0.83	

TABLE 6 (Continued)
DETERMINANTS OF BIG_N and AUDIT FEES
ROLE OF ANTI-SELF DEALING INDEX

PANEL B: Audit Fees (N=44,748)

	(1) X=TRUST		(2) X=CIVIC		(3) X=TFACOR	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=AFEE						
X	4.88***	(6.37)	2.47***	(12.26)	2.91***	(11.82)
X*HANTI_SELF	-3.29**	(-2.49)	-2.31***	(-11.29)	-2.11***	(-4.33)
HANTI_SELF	0.81*	(1.94)	-5.12***	(-10.23)	0.18**	(2.32)
LASSET	0.45***	(27.23)	0.46***	(28.85)	0.45***	(27.44)
INVREC	0.00***	(3.35)	0.00***	(3.16)	0.00***	(3.70)
QUAL	-0.07	(-0.65)	-0.05	(-0.55)	-0.05	(-0.57)
BIG N	0.35***	(10.58)	0.30***	(9.97)	0.33***	(11.10)
SPEC	0.16***	(6.97)	0.18***	(7.37)	0.17***	(6.80)
ROA	-0.09***	(-6.93)	-0.10***	(-7.47)	-0.09***	(-7.22)
LOSS	0.07	(1.35)	0.05	(0.94)	0.05	(0.99)
ACCR	-0.03***	(-3.00)	-0.03**	(-2.46)	-0.03***	(-2.85)
MERGE	0.28***	(7.51)	0.36***	(9.61)	0.31***	(8.02)
ISSUE	0.14***	(4.74)	0.11***	(4.44)	0.13***	(4.49)
SEGM	0.24***	(4.16)	0.26***	(4.90)	0.24***	(4.35)
AUDITOR_CHANGE	-0.48***	(-5.54)	-0.46***	(-4.98)	-0.44***	(-5.41)
INT_CROSS	0.26***	(2.94)	0.31***	(5.45)	0.27***	(3.09)
ADR	0.39***	(3.20)	0.34***	(3.26)	0.42***	(3.57)
WAGE_INDEX	0.04***	(6.01)	0.03***	(12.21)	0.03***	(8.33)
LEV	0.03***	(3.94)	0.04***	(3.99)	0.03***	(3.97)
Intercept	-4.37***	(-21.83)	2.71***	(4.38)	-3.09***	(-10.33)
Year fixed effects		Yes		Yes		Yes
Industry fixed effects		Yes		Yes		Yes
R-sq	0.77		0.77		0.77	

Sum of coefficients' test	Coef.	F-stat of test $X=X+X*HANTI_SELF$	Coef.	F-stat of test $X=X+X*HANTI_SELF$	Coef.	F-stat of test $X=X+X*HANTI_SELF$
$X+X*HANTI_SELF$	1.59	6.18**	0.15	127.48***	0.80	18.75***

Table 6 contains estimations of equation (3) and (4), i.e. total audit fees as a function of TRUST, CIVIC, TFACTOR, interacted with HANTI_SELF, and associated control variables. Reported t-statistics are estimated using standard errors clustered on year and firm. All continuous variables are winsorized at the 1st and 99th percentiles. *, **, *** denote two-tail significance levels at 0.1, 0.05, and 0.01, respectively. All variables are defined in the Appendix

TABLE 7**DETERMINANTS OF BIG_N –Expanded Sample Not Requiring Availability of Audit Fees***PANEL A: General Model with results from the original sample in Table 5 Panel A (N=87,350)*

	(1) X=TRUST		(2) X=CIVIC		(3) X=TFACTOR	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=BIG_N						
X	-2.14	(-1.52)	0.90***	(6.13)	0.07	(0.13)
LASSET	0.51***	(17.58)	0.51***	(14.24)	0.50***	(13.33)
INVREC	-0.00**	(-2.54)	-0.00***	(-4.48)	-0.00**	(-2.32)
QUAL	0.05	(0.84)	0.16*	(1.70)	0.15*	(1.75)
SPECIAL	0.03	(0.42)	0.01	(0.08)	0.03	(0.28)
ROA	-0.04	(-1.48)	-0.01	(-0.25)	-0.01	(-0.15)
LOSS	0.16***	(2.85)	0.09*	(1.95)	0.15***	(3.01)
ACCR	-0.07	(-1.36)	-0.07	(-1.44)	-0.08*	(-1.67)
MERGE	-0.06	(-0.82)	-0.11	(-1.47)	-0.09	(-1.09)
ISSUE	0.33***	(9.90)	0.27***	(6.57)	0.34***	(5.91)
SEGM	-0.13*	(-1.82)	-0.16*	(-1.73)	-0.19**	(-2.24)
INT_CROSS	0.48***	(4.84)	0.64***	(5.15)	0.47***	(4.46)
ADR	-0.08	(-0.35)	0.08	(0.32)	0.02	(0.07)
LEV	-0.20**	(-2.21)	-0.17**	(-2.24)	-0.18**	(-2.31)
Intercept	-5.03***	(-7.03)	-3.82***	(-7.10)	-5.64***	(-12.12)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.78		0.78		0.77	

TABLE 7

DETERMINANTS OF BIG_N –Expanded Sample Not Requiring Availability of Audit Fees

PANEL B: Role of Anti-Self Dealing Index with the results from initial sample reported in Table 6 Panel A (N=87,350).

	(1) X=TRUST		(2) X=CIVIC		(3) X=TFCTOR	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=BIG_N						
<i>X</i>	3.74***	(2.83)	1.04***	(2.62)	1.82***	(2.91)
<i>X*HANTI_SELF</i>	-10.71***	(-12.57)	-0.44	(-0.74)	-4.81***	(-7.42)
<i>HANTI_SELF</i>	3.67***	(11.67)	-1.35	(-1.25)	0.62***	(3.79)
<i>LASSET</i>	0.54***	(20.72)	0.50***	(14.51)	0.51***	(17.65)
<i>INVREC</i>	-0.01***	(-6.78)	-0.00***	(-4.32)	-0.00***	(-4.76)
<i>QUAL</i>	-0.01	(-0.14)	0.14	(1.61)	0.10	(1.28)
<i>SPECIAL</i>	0.01	(0.11)	-0.02	(-0.26)	-0.04	(-0.61)
<i>ROA</i>	-0.05*	(-1.83)	-0.01	(-0.23)	-0.01	(-0.33)
<i>LOSS</i>	0.03	(0.61)	0.09*	(1.86)	0.05	(1.03)
<i>ACCR</i>	-0.04	(-0.73)	-0.06	(-1.32)	-0.06	(-1.16)
<i>MERGE</i>	-0.18**	(-2.06)	-0.05	(-0.53)	-0.10	(-1.07)
<i>ISSUE</i>	0.16***	(5.24)	0.28***	(6.03)	0.25***	(6.73)
<i>SEGM</i>	-0.02	(-0.29)	-0.15**	(-2.08)	-0.14**	(-2.17)
<i>INT_CROSS</i>	0.50***	(3.83)	0.55***	(4.55)	0.37***	(3.04)
<i>ADR</i>	-0.07	(-0.37)	0.11	(0.44)	0.03	(0.17)
<i>LEV</i>	-0.15**	(-2.04)	-0.19**	(-2.35)	-0.17**	(-2.37)
Intercept	-7.17***	(-11.04)	-3.37***	(-5.20)	-5.98***	(-13.66)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.81		0.79		0.80	

TABLE 8
DETERMINANTS OF BIG_N and Audit Fees—Using Specific World Values Survey Waves for Culture Measures

PANEL A: Determinants of Big N--General Model).

	(1) X=TRUST_S (N=46,080)		(2) X=CIVIC_S (N=45,869)		(3) X=TFACOR_S (N=45,762)	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=BIG_N						
X	-4.74**	(-2.39)	1.56***	(6.63)	-0.03	(-0.04)
LASSET	0.61***	(16.22)	0.56***	(10.93)	0.55***	(10.90)
INVREC	-0.00***	(-2.62)	-0.00***	(-4.13)	-0.00	(-1.10)
QUAL	-0.01	(-0.13)	0.27*	(1.78)	0.27*	(1.82)
SPECIAL	0.09	(1.05)	0.00	(0.01)	0.14	(0.87)
ROA	0.08	(1.22)	0.22*	(1.82)	0.21**	(2.03)
LOSS	0.18*	(1.78)	0.04	(0.92)	0.18**	(2.51)
ACCR	-0.17	(-1.42)	-0.14	(-1.62)	-0.20*	(-1.86)
MERGE	-0.14	(-1.59)	-0.24***	(-4.00)	-0.24***	(-3.25)
ISSUE	0.39***	(5.43)	0.34***	(3.12)	0.48***	(4.23)
SEGM	-0.11	(-1.21)	-0.31***	(-2.78)	-0.30***	(-2.99)
INT_CROSS	0.74***	(5.17)	0.69***	(6.76)	0.65***	(5.41)
ADR	-0.17	(-0.52)	0.08	(0.30)	-0.04	(-0.13)
LEV	-0.26	(-1.40)	-0.13	(-1.52)	-0.23	(-1.61)
Intercept	-5.47***	(-5.99)	-3.40***	(-4.52)	-6.63***	(-9.90)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.81		0.82		0.78	

TABLE 8
DETERMINANTS OF BIG_N and Audit Fees—Using Specific World Values Survey Waves
for Culture Measures

PANEL B: Big_N--Role of Anti-Self Dealing Index.

	(1) X=TRUST_S (N=46,080)		(2) X=CIVIC_S (N=45,869)		(3) X=TFACTOR_S (N=45,762)	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=BIG_N						
X	3.82**	(2.03)	1.21**	(2.32)	1.51**	(2.35)
X*HANTI_SELF	-14.31***	(-10.34)	0.78	(1.11)	-5.24***	(-10.87)
HANTI_SELF	5.31***	(10.88)	1.09	(0.78)	0.73***	(4.31)
LASSET	0.62***	(15.96)	0.58***	(14.95)	0.59***	(16.78)
INVREC	-0.01***	(-11.71)	-0.00***	(-4.38)	-0.01***	(-6.01)
QUAL	-0.01	(-0.08)	0.14	(1.33)	0.15	(1.30)
SPECIAL	0.03	(0.48)	-0.02	(-0.19)	-0.03	(-0.41)
ROA	0.06	(1.08)	0.15**	(2.06)	0.13**	(2.00)
LOSS	0.02	(0.32)	0.04	(0.81)	0.04	(0.87)
ACCR	-0.09	(-0.93)	-0.12	(-1.38)	-0.11	(-1.23)
MERGE	-0.32***	(-3.79)	-0.18***	(-2.82)	-0.26***	(-3.45)
ISSUE	0.21***	(4.73)	0.30***	(3.91)	0.30***	(5.40)
SEGM	-0.05	(-0.92)	-0.19***	(-3.11)	-0.18***	(-2.94)
INT_CROSS	0.72***	(4.52)	0.73***	(7.72)	0.59***	(4.65)
ADR	-0.20	(-0.73)	0.10	(0.40)	-0.13	(-0.53)
LEV	-0.16	(-1.29)	-0.18	(-1.58)	-0.19	(-1.63)
Intercept	-8.44***	(-10.33)	-4.00***	(-3.84)	-7.13***	(-13.41)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.84		0.82		0.83	

TABLE 8
DETERMINANTS OF BIG_N and Audit Fees–Using Specific World Values Survey Waves for Culture Measures

PANEL C: Determinants of Audit Fees--General Model.

	(1) X=TRUST_S (N=35,977)		(2) X=CIVIC_S (N=35,660)		(3) X=TFACOR_S (N=35,660)	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=AFEE						
X	2.03***	(11.64)	1.38***	(11.03)	1.06***	(11.55)
LASSET	0.45***	(35.70)	0.46***	(40.55)	0.45***	(34.41)
INVREC	0.00***	(3.75)	0.00**	(2.48)	0.00***	(3.44)
QUAL	-0.14	(-0.97)	-0.21	(-1.41)	-0.13	(-0.99)
BIG_N	0.40***	(11.61)	0.27***	(5.87)	0.39***	(11.61)
SPEC	0.13***	(4.79)	0.14***	(6.20)	0.13***	(5.17)
ROA	-0.09***	(-8.11)	-0.10***	(-9.52)	-0.09***	(-8.00)
LOSS	0.12**	(2.29)	0.09*	(1.73)	0.10*	(1.91)
ACCR	-0.03***	(-3.85)	-0.03***	(-2.86)	-0.03***	(-3.72)
MERGE	0.32***	(7.48)	0.40***	(9.86)	0.32***	(7.98)
ISSUE	0.14***	(3.95)	0.08***	(2.70)	0.12***	(3.54)
SEGM	0.21***	(3.07)	0.29***	(4.90)	0.21***	(2.99)
AUDITOR_CHANGE	-0.62***	(-4.74)	-0.62***	(-4.73)	-0.59***	(-5.23)
INT_CROSS	0.51***	(4.04)	0.32***	(2.88)	0.43***	(2.93)
ADR	0.52***	(2.84)	0.42***	(2.68)	0.52***	(2.89)
LEV	0.06***	(20.93)	0.03***	(4.54)	0.05***	(11.79)
WAGE_INDEX	0.03***	(4.73)	0.04***	(4.46)	0.03***	(4.58)
Intercept	-4.17***	(-19.88)	-0.43	(-1.15)	-3.52***	(-19.25)
Year fixed effects		Yes		Yes		Yes
Industry fixed effects		Yes		Yes		Yes
R-sq	0.78		0.79		0.79	

TABLE 8
DETERMINANTS OF BIG_N and Audit Fees—Using Specific World Values Survey Waves for Culture Measures

PANEL D: Determinants of Audit Fees—Role of Self-Dealing Index.

	(1) X=TRUST_S (N=35,977)		(2) X=CIVIC_S (N=35,660)		(3) X=TFACTOR_S (N=35,660)	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=AFEE						
X	6.87***	(4.21)	1.82***	(7.38)	2.29***	(4.15)
X*HANTI_SELF	-6.88***	(-2.99)	-1.52***	(-2.83)	-2.11**	(-2.44)
HANTI_SELF	2.29***	(2.95)	-3.58***	(-2.84)	0.16	(1.23)
LASSET	0.44***	(34.60)	0.45***	(37.28)	0.44***	(34.14)
INVREC	0.00**	(2.04)	0.00***	(2.58)	0.00*	(1.75)
QUAL	-0.16	(-1.33)	-0.16	(-1.26)	-0.14	(-1.26)
BIG N	0.38***	(9.98)	0.30***	(8.99)	0.36***	(10.72)
SPEC	0.14***	(7.53)	0.13***	(5.89)	0.14***	(6.68)
ROA	-0.09***	(-7.43)	-0.09***	(-8.21)	-0.08***	(-7.60)
LOSS	0.11**	(2.31)	0.08*	(1.68)	0.09*	(1.82)
ACCR	-0.03***	(-3.61)	-0.03***	(-3.02)	-0.03***	(-3.42)
MERGE	0.23***	(6.37)	0.38***	(10.49)	0.28***	(7.60)
ISSUE	0.14***	(3.75)	0.10***	(3.19)	0.12***	(3.38)
SEGM	0.21***	(3.32)	0.26***	(3.76)	0.22***	(3.22)
AUDITOR_CHANGE	-0.48***	(-5.47)	-0.57***	(-5.10)	-0.46***	(-6.15)
INT_CROSS	0.55**	(2.48)	0.29**	(2.11)	0.38*	(1.85)
ADR	0.60***	(3.25)	0.52***	(3.34)	0.62***	(3.53)
WAGE_INDEX	0.04***	(5.41)	0.03***	(5.36)	0.03***	(3.74)
LEV	0.02***	(4.15)	0.03***	(3.71)	0.02***	(3.73)
Intercept	-5.97***	(-11.66)	1.10*	(1.76)	-3.12***	(-16.18)
Year fixed effects		Yes		Yes		Yes
Industry fixed effects		Yes		Yes		Yes
R-sq	0.79		0.80		0.80	
Sum of coefficients' test	Coef.	F-stat of test X=X+ X*HANTI_SEL F	Coef.	F-stat of test X=X+ X*HANTI_SEL F	Coef.	F-stat of test X=X+ X*HANTI_SEL F
X+X*HANTI_SELF	-0.01	8.95***	0.30	7.99***	0.18	5.98**

Table 8 contains estimations of equation (3) and (4), i.e. total audit fees as a function of TRUST, CIVIC, TFACTOR, estimated using year-specific waves of World Values Survey. Reported t-statistics are estimated using standard errors clustered on year and firm. All continuous variables are winsorized at the 1st and 99th percentiles. *, **, *** denote two-tail significance levels at 0.1, 0.05, and 0.01, respectively. All variables are defined in the Appendix.

TABLE 9
Two-stage Model of the Impact of
TRUST/CIVIC/TRUST FACTOR on Big N Choice
(N=53,834).

PANEL A: 1st stage model

	(1)		(2)		(3)	
DEPVAR	TRUST		CIVIC		TFACTOR	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
Log(GDP)	0.01	(1.29)	0.03***	(2.70)	0.03*	(1.75)
GDP_GR	0.00	(0.54)	-0.02	(-1.47)	-0.00	(-0.40)
BUD	0.25***	(6.10)	0.10	(1.55)	0.40***	(7.38)
PROT	0.06	(1.36)	0.38***	(4.11)	0.22**	(2.48)
CATH	0.05*	(1.73)	0.40***	(7.21)	0.22***	(4.27)
ORTHO	-0.10***	(-4.94)	-0.27***	(-6.92)	-0.22***	(-6.00)
SHINTO	0.07*	(1.75)	0.98***	(11.45)	0.45***	(5.76)
MUSLIM	-0.11***	(-12.44)	0.51***	(5.13)	0.00	(0.00)
ANTI_SELF	0.05***	(2.95)	-0.19***	(-4.39)	0.01	(0.26)
DISCLOSURE	-0.11***	(-4.58)	0.15**	(2.12)	-0.10*	(-1.78)
LASSET	0.00***	(5.22)	-0.00*	(-1.92)	0.00***	(4.04)
INVREC	-0.00***	(-3.52)	0.00	(0.73)	-0.00***	(-5.22)
QUAL	-0.03***	(-3.71)	-0.06**	(-2.50)	-0.06***	(-3.39)
SPECIAL	0.00	(0.75)	-0.02***	(-4.96)	-0.00	(-1.08)
ROA	-0.01***	(-3.18)	0.00*	(1.64)	-0.01***	(-2.69)
LOSS	0.02***	(6.20)	0.03***	(5.20)	0.04***	(6.45)
ACCR	0.00	(1.48)	-0.00**	(-2.54)	0.00	(0.12)
MERGE	-0.01	(-1.62)	-0.01	(-0.48)	-0.01	(-1.32)
ISSUE	0.00*	(1.88)	0.03***	(7.00)	0.01***	(4.51)
SEGM	0.00***	(2.80)	-0.03***	(-6.10)	-0.00	(-1.45)
INT_CROSS	0.03***	(3.66)	-0.13***	(-3.70)	0.00	(0.24)
ADR	-0.01	(-1.35)	-0.01	(-0.59)	-0.02	(-1.61)
LEV	0.00	(0.92)	-0.00*	(-1.83)	0.00	(0.57)
INTERCEPT	-0.04	(-0.16)	-3.29***	(-11.51)	-0.77*	(-1.76)
Year fixed effects		Yes		Yes		Yes
Industry fixed effects		Yes		Yes		Yes
R-sq		0.54		0.68		0.49

TABLE 9 (Continued)
Two-stage Model of the Impact of
TRUST/CIVIC/TRUST FACTOR on Big N Choice
(N =53,834).

PANEL B: 2nd stage model for Big_N

	(1) X=TRUST*		(2) X=CIVIC*		(3) X=TFACTOR*	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=BIG_N						
X	1.39	(1.16)	0.66***	(2.85)	0.91**	(2.39)
LASSET	-0.02	(-0.10)	-0.02	(-0.14)	-0.02	(-0.10)
INVREC	0.20*	(1.73)	0.20*	(1.86)	0.20*	(1.75)
QUAL	0.09	(1.37)	0.09	(1.22)	0.09	(1.32)
SPECIAL	0.18**	(2.22)	0.18**	(2.25)	0.18**	(2.22)
ROA	-0.13*	(-1.79)	-0.13*	(-1.76)	-0.13*	(-1.79)
LOSS	0.03	(0.83)	0.03	(0.69)	0.03	(0.75)
ACCR	0.52***	(5.98)	0.52***	(6.27)	0.52***	(6.01)
MERGE	-0.27*	(-1.95)	-0.27**	(-2.03)	-0.27**	(-1.98)
ISSUE	0.78***	(8.45)	0.78***	(7.12)	0.78***	(7.90)
SEGM	0.09	(0.48)	0.09	(0.43)	0.09	(0.45)
INT_CROSS	-0.17*	(-1.78)	-0.18*	(-1.70)	-0.17*	(-1.75)
ADR	1.39	(1.16)	0.66***	(2.85)	0.91**	(2.39)
LEV	0.45***	(8.08)	0.46***	(8.08)	0.45***	(7.95)
INTERCEPT	-0.00*	(-1.71)	-0.00**	(-1.98)	-0.00*	(-1.81)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.78		0.78		0.78	

This table presents two-stage estimation of the effects of TRUST, CIVIC and TFACTOR on Big N choice and audit fees levels. Reported t-statistics for 2nd stage regression are estimated using standard errors clustered on firm and year. All continuous variables are winsorized at the 1st and 99th percentiles. *, **, *** denote two-tail significance levels at 0.1, 0.05, and 0.01, respectively. All variables are defined in the Appendix.

TABLE 9 (Continued)
Two-stage Model of the Impact of
TRUST/CIVIC/TRUST FACTOR on Audit Fees
(N=44,748).

PANEL C: 2nd stage model for Audit Fees

	(1) X=TRUST*		(2) X=CIVIC*		(3) X=TFACTOR*	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=AFEE						
X	2.65***	(12.71)	0.70***	(4.45)	1.41***	(13.68)
LASSET	-0.14	(-1.13)	-0.14	(-1.12)	-0.15	(-1.29)
INVREC	0.45***	(21.45)	0.40***	(16.40)	0.43***	(21.04)
QUAL	0.17***	(6.45)	0.16***	(4.18)	0.17***	(5.64)
BIG_N	-0.12***	(-8.93)	-0.12***	(-7.73)	-0.12***	(-8.81)
SPEC	0.17***	(7.93)	0.16***	(7.33)	0.17***	(7.91)
ROA	-0.02***	(-2.58)	-0.03**	(-2.46)	-0.03***	(-2.65)
LOSS	0.29***	(6.19)	0.29***	(7.06)	0.30***	(6.51)
ACCR	0.16***	(6.15)	0.16***	(5.79)	0.17***	(6.34)
MERGE	0.27***	(3.62)	0.26***	(3.84)	0.26***	(3.64)
ISSUE	-0.57***	(-5.67)	-0.56***	(-5.52)	-0.56***	(-5.78)
SEGM	0.49***	(7.40)	0.41***	(6.07)	0.42***	(6.53)
AUDITOR_CHANGE	0.14	(1.62)	0.05	(0.46)	0.10	(1.19)
INST_CROSS	0.04***	(11.88)	0.05***	(10.20)	0.04***	(10.67)
ADR	0.04***	(3.97)	0.04***	(4.33)	0.04***	(4.10)
WAGE_INDEX	0.04	(0.25)	-0.16	(-0.88)	-0.05	(-0.32)
LEV	2.65***	(12.71)	0.70***	(4.45)	1.41***	(13.68)
Intercept	0.45***	(31.30)	0.45***	(28.96)	0.45***	(30.91)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
R-sq	0.75		0.74		0.75	

This table presents two-stage estimation of the effects of TRUST, CIVIC and TFACTOR on Big N choice and audit fees levels. Reported t-statistics for 2nd stage regression are estimated using standard errors clustered on firm and year. All continuous variables are winsorized at the 1st and 99th percentiles. *, **, *** denote two-tail significance levels at 0.1, 0.05, and 0.01, respectively. All variables are defined in the Appendix.

TABLE 10
DETERMINANTS OF BIG_N and AUDIT FEES EXCLUDING USA

PANEL A: Determinants of Big_N (N=42,212)

	(1)		(2)		(3)	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
DEPVAR=BIG_N						
TRUST	-2.52	(-1.62)	1.27***	(7.25)	0.10	(0.15)
LASSET	0.43***	(8.58)	0.42***	(6.87)	0.39***	(6.43)
INVREC	-0.00	(-1.08)	-0.00	(-0.91)	0.00	(0.10)
QUAL	0.06	(0.42)	0.25	(1.39)	0.25	(1.43)
SPECIAL	0.09	(0.85)	0.01	(0.12)	0.11	(0.74)
ROA	-0.05	(-1.00)	0.01	(0.14)	0.02	(0.33)
LOSS	0.21**	(2.33)	0.09	(1.33)	0.17**	(2.35)
ACCR	-0.17*	(-1.67)	-0.15*	(-1.95)	-0.19**	(-2.06)
MERGE	-0.13	(-1.56)	-0.05	(-0.54)	-0.13	(-1.37)
ISSUE	0.45***	(5.76)	0.37***	(4.44)	0.48***	(4.86)
SEGM	-0.19**	(-2.06)	-0.27**	(-2.05)	-0.30**	(-2.54)
INT_CROSS	0.60***	(4.63)	0.77***	(4.48)	0.58***	(4.46)
ADR	0.32	(1.61)	0.46*	(1.94)	0.45*	(1.93)
LEV	-0.34	(-1.51)	-0.23	(-1.45)	-0.29	(-1.63)
Intercept	-4.06***	(-4.10)	-2.35***	(-3.74)	-4.72***	(-6.28)
Year fixed effects	Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes	
Area Under ROC Curve	0.75		0.77		0.73	

TABLE 10
DETERMINANTS OF BIG_N and AUDIT FEES EXCLUDING USA

PANEL B: Determinants of Audit Fees (N=30,475)

	(1)		(2)		(3)	
	X=TRUST		X=CIVIC		X=TFACTOR	
DEPVAR=AFEE	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat
X	2.43***	(7.70)	0.99***	(8.01)	1.67***	(12.57)
QUAL	-0.06	(-0.62)	-0.23*	(-1.87)	-0.06	(-0.79)
BIG_N	0.34***	(8.87)	0.22***	(3.71)	0.32***	(9.38)
SPEC	0.17***	(4.65)	0.16***	(7.00)	0.17***	(5.00)
ROA	-0.12***	(-3.11)	-0.18***	(-5.66)	-0.12***	(-3.16)
LOSS	0.02	(0.37)	0.03	(0.58)	0.00	(0.06)
ACCR	-0.03	(-1.34)	-0.01	(-0.29)	-0.03	(-1.19)
MERGE	0.06	(0.90)	0.12*	(1.78)	0.10	(1.44)
ISSUE	0.22***	(7.60)	0.18***	(5.22)	0.20***	(6.85)
SEGM	0.24***	(3.82)	0.37***	(7.88)	0.25***	(4.18)
AUD_CHANGE	-0.18***	(-3.28)	-0.24***	(-3.86)	-0.17***	(-3.54)
INT_CROSS	0.49***	(6.99)	0.53***	(8.32)	0.49***	(7.15)
ADR	0.66***	(4.18)	0.50***	(3.74)	0.66***	(4.25)
WAGE_INDEX	0.05***	(10.77)	0.03***	(4.83)	0.04***	(10.24)
LEV	0.05**	(2.19)	0.02	(0.93)	0.05**	(2.19)
TRUST	-2.49***	(-4.89)	0.36	(0.78)	-1.87***	(-3.78)
LASSET	2.43***	(7.70)	0.99***	(8.01)	1.67***	(12.57)
Intercept	0.39***	(10.45)	0.43***	(13.22)	0.39***	(10.75)
Year fixed effects		Yes		Yes		Yes
Industry fixed effects		Yes		Yes		Yes
R-sq		0.68		0.66		0.69

Table 10 presents estimations of equation (1) and (2), excluding USA observations from the sample. t-statistics are estimated using standard errors clustered on firm and year. All continuous variables are winsorized at the 1st and 99th percentiles. *, **, *** denote two-tail significance levels at 0.1, 0.05, and 0.01, respectively. All variables are defined in the Appendix.

