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Abstract

We first review the recent research published in the Journal of International Accounting Research (JIAR) on the influence of international institutions on accounting practices and follow it with a discussion of the literature studying the influence of institutions on tax avoidance and tax evasion. We then explore a new methodological approach that draws on the theory of institutional hierarchy proposed by Williamson (2000) and examine the relative importance of three broad types of institutions (informal, formal and media) in curtailing perceived tax evasion activities. We contribute to the international accounting literature by summarizing the recent research that addresses tax avoidance and tax evasion and providing preliminary evidence on how employing an institutional hierarchy approach can address the interdependencies between commonly used institutional factors.

Keywords: Perceived tax evasion; Tax avoidance, Institutional economics; Institutional hierarchy; Accounting practices

JEL classification: H26; G28; O16

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I. INTRODUCTION

Following the revelations of tax evasion by individuals and corporations in the "Panama" and the "Paradise" papers, tax evasion has become not only a policy issue but also an important political and social issue around the world. The collection of taxes is a major fiscal policy challenge for governments, as evidenced by the sovereign debt crises in Greece and other countries that were blamed partly on the inability of these governments to constrain tax evasion. Policymakers have also increased their attention on tax evasion and enforcement after the financial crisis of 2008 due to the large fiscal deficits that followed (Slemrod 2019). Some studies estimate tax evasion in developing countries to be higher than 50% (e.g., Beck, Lin, and Ma 2014). However, even developed countries like the U.S. are not immune to this problem (Schneider and Ernste 2000). Citing the U.S. Inland Revenue Service (IRS) data, Mason, Utke, and Williams (2020) report that the estimated lost revenue from underreporting of income in the U.S. exceeds $350 billion annually, with a non-compliance rate of around 18%. Also, the recent media revelations point to a growing trend in tax dodging by both corporations and wealthy individuals. Our objective in this paper is to review the literature on how international institutions influence accounting decisions (focusing on recent papers published in Journal of International Accounting Research [JIAR]) with an emphasis on corporate tax avoidance and evasion, and to propose a methodological approach for exploring the roles of different types of institutions (informal, formal, and media institutions) and their relative importance in constraining corporate tax evasion activities.

To help policymakers better understand why taxpayers choose to evade taxes, the economics literature presents several models of various aspects of tax deterrence that are primarily based on cost-benefit tradeoffs (e.g., Allingham and Sandmo 1972). However, the tax evasion

decision is generally characterized as a complex, rather than a simple, decision based on economic cost-benefit tradeoffs (Andreoni, Erard, and Feinstein 1998; Fortin, Lacroix, and Villeval 2007; Mason et al. 2020). In particular, tax deterrence models face a persistent and growing amount of criticism, largely because they predict much higher levels of evasion than are observed (Mason et al. 2020). Although taxpayers and managers of firms still maximize their payoffs, they use more than just an economic cost-benefit analysis by also incorporating personal beliefs and preferences such as behavioral, social, or tax moral considerations (e.g., Fortin et al. 2007). Given that tax evasion is an illegal activity, tax morality has the potential to play an important role in tax evasion decisions. In his study of individual tax evasion, Torgler (2003) documents a positive relation between tax morals and informal characteristics and traits such as trust, pride, and religious conviction. Given the incremental importance of these behavioral and social factors in the tax evasion decision over economic cost-benefit tradeoffs, understanding how institutions influence corporate tax evasion behaviors becomes salient.[1]

According to Williamson (2000), informal institutions such as customs, traditions, norms, and religion have a spontaneous origin but have a lasting grip on how society conducts itself once adopted. By contrast, formal institutions are relatively more transitory and can be captured by interested parties. More specifically, the evolution of formal institutions can be influenced by the activities of firms and interested groups competing to protect and further their interests (e.g., lobbying for favorable tax regulations), thereby blunting their effectiveness (Dorobantu, Kaul, and Zelner 2017). Additionally, the media is susceptible to capture by influential firms, powerful politicians, and wealthy individuals. Following this reasoning, understanding the role of informal,

[1] In this study, we define tax evasion as tax planning activities that have no legal basis and thus have little ambiguity in the interpretation of tax codes. Our measure of firms' under-reporting of sales to the tax authorities is intended to capture these tax evasion activities (to be defined in detail later).

formal, and media institutions in constraining corporate tax evasion becomes important and forms the basis for our exploratory analysis.

We organize this paper into two parts. In the first part, we summarize the recent literature on institutions and accounting outcomes published in JIAR and then focus specifically on the literature studying the influence of institutions on tax avoidance and tax evasion. How institutions shape accounting practices has been a focus of international accounting researchers, with over 10 publications just in JIAR in the past five years. Additionally, there is a well-established literature on how international institutions influence corporate tax avoidance. This literature covers a wide variety of institutions such as culture, religion, legal systems, audit quality, media, and tax systems. However, most of this research studies each of these factors in isolation, but fails to consider their combined effects.[2] There also is limited work that directly addresses tax evasion.

In the second part, we draw on the theory of institutional hierarchy proposed by Williamson (2000) and explore the relative importance of three broad types of institutions (informal, formal, and media) in curtailing tax evasion activities. In particular, we employ a novel dataset from the World Bank Enterprise Surveys of firms from developing countries, which provides a measure of firm-level perceived tax evasion, to explore the relations between informal, formal, and media institutions and perceived tax evasion. Using a sample of 18,166 firm-year observations from 30 countries spanning the years 2002-2006, we find that stronger informal, formal, and media institutions are associated with lower perceived corporate tax evasion.[3] The relations between these institutions and tax evasion are also economically significant. A one standard deviation increase

[2] To our knowledge, Isidro, Nanda, and Wysocki (2020) is the only other paper studying the combined effects of international institutions. However, they focus on financial reporting differences using a purely statistical approach.
[3] We note that prior literature has attempted to address this question by using small-sample experiments and focusing on personal tax evasion. Unlike that research, we use a large sample and focus on corporate tax evasion.

in the summary measures of informal, formal, and media institutions is associated with a 19.5%, 17.0%, and 11.2% decrease in perceived tax evasion, respectively.

Next, we explore whether the importance of each type of institution in deterring tax evasion differs, and whether the effect of each type of institution that we document in the first-stage analysis is potentially subsumed by the others. The answers to these questions are particularly important to tax policymakers in deliberating which type of institution is more effective in reducing tax evasion and could consequently help them shape their regulatory and enforcement actions to reduce tax evasion. We find that each of these three types of institutions is incrementally important over the others in reducing perceived tax evasion. In terms of relative magnitude, we find that informal institutions are the most important, followed by formal institutions and media institutions. Our finding that informal institutions have the greatest influence in reducing perceived tax evasion relative to other institutions is consistent with Williamson's (2000) institutional hierarchy and lends support to the argument that informal institutions such as societal trust and religiosity are more deeply rooted in society and thus have a more lasting and stronger influence on individuals and firms than do other institutions.

Lastly, we explore whether and how informal institutions influence the perception of tax evasion through both a direct channel and an indirect (or mediating) channel via formal and media institutions. Our inquiry is motivated by Williamson's (2000) multi-level hierarchy of the different levels of institutions (starting at the highest level with informal institutions, followed by formal institutions, governance structures, media institutions, and incentive structures), where a higher level imposes constraints on the succeeding levels. Thus, our objective is to examine whether informal institutions have a lasting and pervasive influence on other institutions and eventual economic behavior. Using path analysis that accounts for both the direct effect of informal

institutions on perceived tax evasion as well as the indirect effect via formal and media institutions, we find that the direct effect is greater than the indirect effects mediated by formal institutions and media institutions. These results indicate that the overall impact of institutions on perceived tax evasion reduction manifests mostly through the direct effect of informal institutions, with the indirect influence through other institutions being much smaller.

We organize the rest of this study as follows. We review related research in section two, describe the exploratory analysis based on institutional hierarchy in section three, discuss the primary results and the results of additional analyses in section four, and provide our conclusions in section five.

II. PRIOR LITERATURE ON INSTITUTIONS

Institutions and Accounting Outcomes – Recent Studies published in JIAR

There is a growing body of literature on how institutions influence financial reporting behaviors. For example, Bjornsen, Do, and Omer (2019) examine how differences in religiosity across countries influence conditional conservatism. They find that managers in more religious countries report more conservatively. The positive relationship between religiosity and accounting conservatism is stronger when a country follows either International Financial Reporting Standards (IFRS) or U.S. Generally Accepted Accounting Principles (GAAP), but weaker in countries with a high level of uncertainty avoidance, strong legal enforcement, and greater numbers of religions. Similarly, Haw, Ho, Li, and Zhang (2015) find that product market competition and strong legal institutions jointly determine conditional conservatism. Using a global sample spanning 1995-2010, Swenson (2020) finds that firms domiciled in countries with larger religious presence report more conservatively.

In addition, using a sample of 33 countries, Luo and Tang (2016) show that the cultural dimensions of masculinity, power distance, and uncertainty avoidance are positively associated with carbon disclosure propensity. Burnett, Hart, Jorgensen, and Martin (2019) find that, consistent with legal origin theory, firms that are non-U.S. cross-listed and that are located in civil law jurisdictions have fewer accounting restatements. Haga, Huhtamäki, and Sundvik (2019) show that firms located in countries with long-term-oriented cultures engage in more accrual-based earnings management, whereas firms located in countries with short-term-oriented cultures engage in more real earnings management.

Institutions also play an important role in influencing other corporate (reporting) behaviors. Kanagaretnam, Lee, Lim, and Lobo (2017) examine how informal institutions influence the relationship between accounting-based risk measures and bank distress. Their findings reveal that selected informal institutions strengthen the predictive ability of accounting-based risk measures. Duong, Kang, and Salter (2016) find that firms located in countries with a higher Rule Preference Index are likely to have better corporate governance. Consistent with reasoned action theory, Goh, Lim, Ng, Pan, and Yong (2021) find that perceiving fair value accounting as beneficial is positively related to trust in it. Góis, de Lima, de Sousa, and Malacrida (2018) examine how six dimensions of national culture influence the relationship between IFRS adoption and the cost of equity capital. Their main findings suggest that the cost of equity capital is lower in countries with IFRS and long-term orientation. Curtis, Conover, and Chui (2012) document that country of origin, justice perception, power distance perception, and gender are related to ethical decision making in four countries, namely, China, Japan, Mexico, and the U.S. In addition, they document that power distance and justice partially mediate the relationship between country of origin and ethical decision making. Richardson (2007) examines whether cultural dimensions are related to the

development of tax systems internationally. Specifically, he finds that individualism is significantly related to all of the tax values, power distance is significantly related to equity, neutrality, and visibility, and uncertainty avoidance is significantly related to simplicity, neutrality, and visibility.

Literature on Tax Avoidance and Tax Evasion

Although the true impact of tax evasion on national economies is difficult to assess because tax evasion is an illegal economic activity, estimates from government sources and academic research indicate that individual and corporate tax evasion is an economically significant activity (Hashimzade, Myles, and Tran-Nam 2013; Mason et al. 2020), thus underscoring the importance of understanding the factors that influence a taxpayer's choice of whether to comply with the tax laws or to engage in evasion.

The pioneering work of Allingham and Sandmo (1972) started the economic analysis of a taxpayer's compliance decision. The main intuition of Allingham and Sandmo (1972)'s model is that tax evasion is negatively related to an increase in either the penalty rate or the probability of being caught. Additionally, tax evasion increases with income when absolute risk aversion decreases. Although these results are consistent with intuitive expectations, empirical studies report much lower levels of tax evasion than predicted by these models. More specifically, tax deterrence models face a persistent and growing amount of criticism, mainly because they predict much higher evasion than is observed (Mason et al. 2020).

The behavioral economics concept of social interactions affecting individual behavior (Andreoni et al. 1998) also applies to tax compliance decisions. For example, Fortin et al. (2007) and Hashimzade et al. (2013) assert that taxpayers use more than just an economic cost-benefit analysis; they also factor in personal beliefs and preferences such as behavioral, social, and tax

moral considerations. In particular, prior literature documents that factors such as social norms (Alm, McClelland, and Schulze 1992), guilt and shame (Erard and Feinstein 1994), and psychic payoffs from adhering to the standard pattern of reporting behavior (Myles and Naylor 1996) contribute to tax compliance behavior.

Additionally, individual tax behavior may not directly map to corporate tax decisions. This is because the separation of ownership and management will lead to tax penalties for corporations not having the same effects on individuals (Slemrod 2004). Because penalties are paid by the firms, managers' after-tax compensation incentives could offset any deterrence effects of increased enforcement and penalties (Crocker and Slemrod 2005). In this context, social or tax moral considerations could play an important role because managers (as well as major shareholders) are directly influenced by the norms of the society in which they live.

Institutions and Tax avoidance

There are only a few empirical studies that examine the relations between informal institutions and tax evasion. For example, Richardson (2007) and Tsakumis, Curatola, and Porcano (2007) study the influence of national culture on tax compliance levels using the size of the shadow economy as a proxy for a country's level of tax evasion. However, there is a well-established literature on how informal institutions shape corporate tax avoidance. For example, using Hofstede's (1980) cultural framework, this literature finds that a noncompliant country's profile is characterized by high uncertainty avoidance, low individualism, low masculinity, and high power distance. Using county-level data in the U.S., Boone, Khurana, and Raman (2013) find that individuals and firms from more religious U.S. counties engage in lower levels of tax avoidance. Additionally, employing a cross-country setting, Kanagaretnam, Lee, Lim, and Lobo (2018a) document that societal trust is negatively associated with corporate tax avoidance. They argue that "societal trust

is a particularly critical and salient factor, given the intricate design of tax codes and the difficulty of tax enforcement that present many opportunities for firms to avoid tax." Collectively, prior research suggests that informal institutions such as trust, culture, and religiosity could deter tax avoidance activities.

Another stream of research documents that formal institutions such as the rule of law, strength of enforcement, audit quality, and government effectiveness influence corporate tax avoidance (e.g., Atwood, Drake, J. Myers, and L. Myers 2012; Kanagaretnam, Lee, Lim, and Lobo 2016). Results from Atwood et al.'s (2012) analyses reveal that tax avoidance is lower, on average, for firms in home countries with stronger perceived tax enforcement and formal institutions. Kanagaretnam et al. (2016) document that auditor quality is negatively associated with corporate tax avoidance, even after controlling for other institutional determinants such as home-country tax system characteristics. More recently, Mason et al. (2020) document that tax evasion also increases as the perceived influence of foreign firms on domestic laws increases. They infer that "firms are less willing to comply with tax laws when they perceive the influence over their government to be unfavorable to them or the result of an unfair policymaking process." In their study of formal factors that influence tax evasion, Beck et al. (2014) show that higher banking sector outreach, which facilitates more information sharing and a larger branch network, has a significant deterrent effect on corporate tax evasion. Overall, prior evidence suggests that formal institutions such as tax enforcement can curtail tax evasion activities.

Recent literature documents that effective and independent media can influence firms' tax avoidance behavior (e.g., Dyreng, Hoopes, and Wilde 2016; Kanagaretnam, Lee, Lim, and Lobo 2018b). Media exposure can attract scrutiny from tax and regulatory authorities, which could result in large penalties and reputation costs. In particular, firms that engage in aggressive tax avoidance

practices can be called out as “poor corporate citizens” by the media (Bankman 2004), which may negatively affect their product market outcomes. Hanlon and Slemrod (2009) examine stock price changes to news about corporate tax aggressiveness. They document adverse stock market reactions to news about firms’ involvement in tax shelters. Kanagaretnam et al. (2018b) report lower tax aggressiveness when the media are more independent.

Some recent studies examine the effect of language on corporate tax avoidance (e.g., Cheng, Kim, Rhee, and Zhou 2022; Na and Yan 2022). Na and Yan (2022) hypothesize that managers in countries that have languages that distinguish the future from the present are more likely to engage in more tax avoidance. Similarly, Cheng et al. (2022) find that strong future time reference in languages induces managers to engage in more tax avoidance, based on a large sample from 31 countries.

Recent literature also highlights the important role of culture in influencing corporate tax avoidance. Kemme, Parikh, and Steigner (2020) use an index of tax morale obtained from the World Value Survey to document that low tax morale is positively associated with tax evasion. Lei, Wang, Yu, and Chan (2022) suggest that cultural diversity is negatively related to tax avoidance. That is, firms located in culturally diverse Chinese cities exhibit more tax management behaviors.

In addition, Kohlhase and Pierk (2020) document that multinational firms engage in more tax avoidance in their foreign subsidiaries when they are under a territorial tax system. Joshi (2020) shows that private country-by-country reporting is negatively related to tax avoidance, and Joshi, Outslay, Persson, Shevlin, and Venkat (2020) find that the effect of public country-by-country reporting on banks’ overall tax avoidance is rather limited. Overesch and Wolff (2021)

demonstrate that country-by-country reporting deters tax avoidance. In particular, the deterrent effect only exists when the focal firm's sheltering activities are under public scrutiny.

III. A PROPOSED METHODOLOGICAL APPROACH: RELATIVE IMPORTANCE OF INSTITUTIONS

Prior research has studied the evolution of institutions and their implications for economic outcomes. An influential work in this line of research is Williamson's (2000) New Institutional Economics framework for studying the economics of institutions. This framework proposes a hierarchical structure for institutions, where a higher level in the hierarchy imposes constraints on the levels below. The framework places informal institutions at the top of the hierarchy and formal institutional environments, governance structures, media institutions, and incentive structures in succeeding levels. Drawing on Williamson's work, we reason that informal institutions such as trust and religiosity are at the top of the institutional hierarchy. Trust and religiosity have been shown to have an influence on individuals' implicit social norms that constrain opportunistic behaviors such as tax evasion. In addition, individuals try to minimize deviations from socially accepted norms in order to avoid being ostracized by society for breaking social norms (Hechter and Opp 2001; Horne 2009; Liu, Lu, and Veenstra 2014).

Following the prior literature, we reason that formal and media institutions could also matter for financial decisions such as tax evasion. However, prior research suggests that interested parties can capture these institutions (e.g., North 1990; Williamson 2000; Dorobantu et al. 2017). For example, interested parties with bargaining power can influence the creation of formal rules to serve their own interests (North 1990). Relative to formal institutions, the media are more susceptible to capture by private firms and wealthy individuals. According to Houston, Lin, and Ma (2011), because the media are themselves businesses, they will consider the expected costs

and benefits before deciding to publicize firms' misdeeds. This allows firms to influence media decisions through their advertising choices because the media derive much of their revenue from advertising. Therefore, we reason that institutional capture by interested parties can render formal and media institutions less effective and of secondary importance to informal structures in curtailing corporate tax evasion. This effect could be even more pronounced in our sample of developing countries where the evolution of formal and media institutions may be in its infancy and, therefore, these institutions are more susceptible to capture.

Another key reason that informal institutions are relatively more important in constraining tax evasion behavior is tax moral considerations. Torgler and Schaltegger (2006) define tax morals as a set of attitudes regarding tax compliance and intrinsic motivation to pay taxes. Given the difficulty of monitoring tax compliance, tax morals are a key consideration for individuals to pay taxes honestly. Torgler (2003) documents that tax morals are positively influenced by informal factors such trust, pride, and religious conviction. Additionally, Torgler (2004) shows that tax morals are an important determinant of tax compliance.

In sum, we argue that the direct influence of informal institutions on social norms and tax morals discourages cheating on taxes, and their influence on not just the corporations but also the managers running these corporations makes them important factors in constraining tax evasion activities. On the other hand, formal and media institutions could be captured by interested parties as well as have a smaller impact on individual managers (as they are more directed towards corporations), making them relatively less effective institutions.

Exploratory Analyses

Measure of Perceived Tax Evasion

Following prior research (Beck et al. 2014; Williams 2015; Mason et al. 2020), we obtain our firm-level measure of perceived tax evasion from responses to the following question in the World Bank Enterprise Surveys: "Recognizing the difficulties many enterprises face in fully complying with taxes and regulations, what percentage of total sales would you estimate the typical establishment in your area of activity reports for tax purposes?" We compute the firm-level perceived tax evasion ratio (*EVADE_RATIO*) as 100 minus the number in the response. In other words, *EVADE_RATIO* indicates the percentage of revenue that is not declared to the taxation authorities. Hence, the level of perceived tax evasion is increasing in *EVADE_RATIO*.

The question of tax evasion in the survey is worded in an indirect way to induce more truthful responses because respondents might not answer truthfully and admit wrongdoing if the question is worded in a direct manner, particularly in a non-anonymous interview with a World Bank researcher. Hence, one might be concerned that the answers do not represent the true extent of tax evasion perceived to be perpetuated by the respondent's own firm or other firms in a similar area of activity. Beck et al. (2014) discuss several reasons why this measurement error is unlikely to invalidate the use of this survey question to proxy for firm-level perceived tax evasion. First, the authors highlight that respondents "presumably most often respond based on their experiences," and therefore researchers can use these indirect survey responses as representing respondents' own behavior. Second, Beck et al. (2014) argue that if respondents answered this question based on their observations of other firms' tax evasion and not their own behavior, then there would not be significant within-country-industry variation in the measure of tax evasion because respondents are just simply providing their response based on the tax evasion level that they observed from other firms in their industry in the country. However, the authors observe significant within-country-industry variation in the survey responses, which suggests that

respondents are actually responding based on their own behavior. Third, Beck et al. (2014) report a high correlation between this firm-level measure of tax evasion and the ratio of informal activity to GDP (a proxy for a country's level of tax evasion), which validates the use of this measure as a proxy for the firm-level perceived tax evasion in the country. Finally, the World Bank recognizes the sensitivity of these types of questions, and hence, in order to elicit truthful responses to these sensitive questions, they assure respondents that survey responses are kept confidential and government officials are not directly involved with data collection. Based on the above reasons, we follow prior research (Beck et al. 2014; Williams 2015; Mason et al. 2020) and use the survey responses to the above question as a proxy for firm-level perceived tax evasion. However, because the survey responses are based on respondents' perception of their own firm's tax evasion behavior or perception of other firms' tax evasion behavior, they may not reflect their own firm's actual tax evasion behavior. Therefore, readers should interpret our exploratory analyses with these limitations in mind.

Measures of Institutional Factors

Measures of informal institutions

We use two measures to proxy for the strength of informal institutions: societal trust and religiosity. We follow prior literature (e.g., Guiso, Sapienza, and Zingales 2008; Ahern, Daminelli, and Fracassi 2015; Pevzner, Xie, and Xin 2015; Kanagaretnam et al. 2018a) and construct our measure of societal trust based on responses to the following question from the World Values Survey: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" The two possible answers are "Most people can be trusted" and "Can't be too careful." We code the response to this question as one if a survey participant reports that most people can be trusted, and zero otherwise. We then use the mean

response for each country-year as our measure of societal trust (*TRUST*). Higher values of *TRUST* correspond to higher societal trust.

We follow prior literature (e.g., Kanagaretnam, Lobo, and Wang 2015) and construct our measure of religiosity based on responses to the following two questions from the World Values Survey. The first question assesses the respondent's self-perceived religiosity: "Independently of whether you attend religious services or not, would you say you are:" The three possible answers are "A religious person," "Not a religious person" and "An atheist." We code the response to this question as one if a survey participant reports that he/she is a religious person, and zero otherwise. The second question assesses the respondent's affiliation with a religious organization: "Could you tell me whether you are a member of a religious organization," and the three possible answers are "Active member," "Inactive member" and "Not a member." We code the response to this question as one if a survey participant reports that he/she is an active or inactive member, and zero otherwise. We use the mean response to these two questions for each country-year as our measure of religiosity (*RELIG*). Higher values of *RELIG* correspond to higher levels of religiosity.

We then compute an overall summary measure of the strength of informal institutions (*INFORMAL*) as the mean value of *TRUST* and *RELIG*.[4]

Measures of formal institutions

Although the concept of country-level governance is widely discussed among academics and practitioners, there is no strong consensus on what constitutes institutional quality or the strength of formal institutions (Kaufmann, Kraay, and Mastruzzi 2010). We measure the strength of formal institutions as the level of governance in a country, which, per Kaufmann et al. (2010), is reflected

[4] We use the mean value of these two measures instead of using a principal component because the two measures capture different dimensions of informal institutions. In a sensitivity analysis, we examine *TRUST* and *RELIG* separately when we assess the relative importance of informal, formal, and media institutions.

in: 1) the process by which governments are selected, monitored and replaced, for which we use Kaufmann et al.'s political stability measure (*POLSTAB*);[5] 2) the capacity of the government to effectively formulate and implement sound policies, for which we use Kaufmann et al.'s government effectiveness measure (*GOVTEFF*);[6] and 3) the respect of citizens and the state for the institutions that govern economic and social interactions among them, for which we use Kaufmann et al.'s rule of law measure (*RULELAW*).[7]

We then derive an overall summary measure of the strength of formal institutions (*FORMAL*) by using the first principal component extracted from a factor analysis of *POLSTAB*, *GOVTEFF* and *RULELAW*.

Measures of media institutions

The World Bank Institute (2002) indicates that the media are more likely to promote better economic performance when they are independent, provide good-quality information, and have a broad reach. Prior research also suggests that having press freedom and independent media are more likely to promote complete and unbiased news and hence lead to lower corruption (e.g., Brunetti and Weder 2003; Houston et al. 2011). Following prior work, we utilize two measures to proxy for the effectiveness of the media as an institution. The first measure is the freedom of the press (*FPRESS*), which we obtain from the Freedom House Press Freedom Index. This index measures the ability of the media to operate freely without repercussions and is based on responses

[5] *POLSTAB* measures the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.

[6] *GOVTEFF* measures the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

[7] *RULELAW* measures the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

to 23 methodological questions about the legal environment, the political environment, and the economic environment. The second measure is based on media independence. Djankov, McLiesh, Nenova, and Shleifer (2003) propose and document that media independence is increasing in private media ownership. We measure media independence as the percentage of privately held ownership of the five largest television stations (by viewership). We obtain data on private ownership of television (*TV_INDEP*) from Djankov et al. (2003).

We then derive an overall summary measure of the effectiveness of media institutions (*MEDIA*) by using the first principal component extracted from a factor analysis of *FPRESS* and *TV_INDEP*.[8]

Research Design

For our empirical tests, we estimate the following pooled cross-sectional regression:

$$EVADE\_RATIO_{it} = \alpha + \beta INST_{it} + \psi CONTROLS_{it} + YEAR\_FE + IND\_FE + \varepsilon_{it} \quad (1)$$

where *EVADE_RATIO* is the measure of perceived tax evasion, *INST* is either the measure of informal institutions, formal institutions, or media institutions. We first examine each institutional factor separately before including them all in the same regression specification to assess the incremental importance of each factor over the others in mitigating tax evasion. *CONTROLS* is a vector of firm-level and country-level controls, and *YEAR_FE* and *IND_FE* are indicator variables for year and industry, respectively.[9] The Appendix includes detailed definitions of all the variables.

[8] We acknowledge that the age of the media data employed in the study may not reflect some current developments, such as the use of social media. However, it is consistent with prior literature (e.g., Cao, Myers, Tsang, and Yang 2017; Cao, Keskek, Myers, and Tsang 2022) and maps closely to the tax evasion sample from 2002-2006.

[9] Industries are defined as in the classification in Frankel, Johnson, and Nelson (2002), which is based on the following SIC codes: agriculture (0100–0999), mining and construction (1000–1999, excluding 1300–1399), food (2000–2111), textiles and printing/publishing (2200–2799), chemicals (2800–2824, 2840–2899), pharmaceuticals (2830–2836), extractive (2900–2999, 1300–1399), durable manufacturers (3000–3999, excluding 3570–3579 and 3670–3679), transportation (4000–4899), utilities (4900–4999), retail (5000–5999), services (7000–8999, excluding 7370–7379) and computers (3570–3579, 3670–3679, 7370–7379).

We expect stronger institutions to be associated with lower tax evasion; hence, we expect β to be negative.

The World Bank Enterprise Surveys are anonymous, and hence they do not provide firm identifiers to collect firm-level variables from other sources. Therefore, we rely only on the firm-level data included in the Surveys, and include controls for tax rate (*TAX_RATE*), tax administration difficulty (*TAX_ADMIN*), whether the firm's financial statements are audited (*AUDIT*), percentage of foreign ownership (*FOREIGN*), percentage of sales that are exported directly (*EXPORT*), firm age (*AGE*), total number of employees (*EMPLOY*), informal payment as a percentage of sales (*INF_PMT*), extent of local corruption (*CORRUPT*), whether the firm is located in a small city (*SMALL_CITY*), whether the firm is located in the capital city (*CAPITAL_CITY*), and total amount of taxes paid by businesses (*TAXPMT*). These controls have been used in prior literature (e.g., Williams 2015, Kanagaretnam et al. 2018a, 2018b). We also control for country-level growth in GDP (*GDPGR*) and whether the country adopts International Financial Reporting Standards (*IFRS*).

Results

Sample and Descriptive Statistics

We obtain our initial sample of firms for the period 2002-2006 from the standardized World Bank Enterprise Surveys, which cover both private and public firms[10] of all sizes and ownership types from 26 different industries across 98 countries over this period.[11] After merging this sample with

[10] In particular, the World Bank Enterprise Surveys categorize firms into: 1) public listed company; 2) private held, limited company; 3) cooperative; 4) sole proprietorship; 5) partnership; and 6) others.

[11] The World Bank provides both country data (sample from individual countries) and standardized data (pooled sample from different countries) for the Enterprise Surveys. According to the World Bank, "Country data includes all questions that were asked in a survey but may lack comparability across countries and years. Standardized data is country data that has been matched to a standard set of questions. This format allows cross-country comparisons and analysis but sacrifices those country-specific survey questions which cannot be matched. The standardization process

the requisite institutional factors and obtaining the necessary control variables, we obtain a sample of 18,166 firm-year observations from 30 countries (see Table 1). The sample size for each country ranges from 113 for Mali to 1,631 for Turkey. Given that the World Bank Enterprise Surveys focus on the conditions in the local investment climate and business perceptions of the most important obstacles to enterprise operation and growth,[12] most of the firms represented in the surveys are smaller, private firms from developing countries.[13]

Table 2 Panel A provides the descriptive statistics for the whole sample. The mean tax evasion measure (*EVADE_RATIO*) is 14.71, which suggests that an average firm in our sample under-reports 14.71% of its revenue to the tax authorities. Table 2 Panel B reports Pearson correlations between the variables in our analyses. Consistent with prior literature, we observe that measures of informal institutions (*TRUST*, *RELIG* and *INFORMAL*), formal institutions (*POLSTAB*, *GOVEFF*, *RULELAW* and *FORMAL*), and media institutions (*FPRESS*, *IND_TV* and *MEDIA*) are significantly negatively correlated with perceived tax evasion (*EVADE_RATIO*). The correlations between the proxies for informal institutions (*TRUST* and *RELIG*), formal institutions (*POLSTAB*, *GOVEFF* and *RULELAW*), and media institutions (*FPRESS* and *IND_TV*) are positive, with Pearson correlations ranging between 0.17 and 0.95, which indicates that these proxies capture similar dimensions of the underlying construct of interest. Because these are pairwise univariate correlations, we defer the main inferences to the multivariate tests, reported in the following section.

requires that certain compromises are made in order to match some of the variables." Given that our study examines a cross-country setting, we utilize the standardized data to ensure comparability across countries. To the best of our knowledge, the 2002-2006 standardized data is the most recent dataset provided by the World Bank.

[12] According to the World Bank Enterprise Survey, the goal of the survey is to advise government on ways to change policies that hinder private establishments and to develop new policies and programs that support productivity growth.

[13] Only 4.6% of the firms in our sample are public listed firms.

Baseline Analyses

In this section, we report the results of the association between each institutional factor and perceived tax evasion. First, we examine the relation between informal institutions and perceived tax evasion. We expect stronger informal institutions to be associated with lower perceived tax evasion. We present the results of our tests in Table 3. We use societal trust (INFORMAL = *TRUST*) in Column 1, religiosity (INFORMAL = *RELIG*) in Column 2, and a composite measure (INFORMAL = *INFORMAL*) in Column 3 as proxies for the strength of informal institutions. Consistent with our prediction, we find, in all three columns, that the strength of informal institutions is negatively associated with perceived tax evasion. The relation between informal institutions and perceived tax evasion is also economically significant. A one standard deviation increase in *TRUST*, *RELIG*, and *INFORMAL* is associated with a decrease in perceived tax evasion of 19.8%, 4.3%, and 19.5%, respectively.[14]

Second, we examine the relation between formal institutions and perceived tax evasion in Table 4. We expect stronger formal institutions to be associated with lower perceived tax evasion. We use political stability (FORMAL = *POLSTAB*) in Column 1, government effectiveness (FORMAL = *GOVTEFF*) in Column 2, rule of law (FORMAL = *RULELAW*) in Column 3, and a composite measure (FORMAL = *FORMAL*) in Column 4 as proxies for the strength of formal institutions. Consistent with our prediction, we find, in all four columns, that the strength of formal institutions is negatively associated with perceived tax evasion. The relation between formal institutions and perceived tax evasion is also economically significant. A one standard deviation

[14] The impact of a one standard deviation increase in societal trust (*TRUST*) on tax evasion (*EVADE_RATIO*) in Column 1 is computed as -32.379 (coefficient on *TRUST*) × 0.090 (the sample standard deviation of *TRUST*, Table 2 Panel A) ÷ 14.707 (the sample mean of *EVADE_RATIO*, Table 2 Panel A) = 19.8%. The other comparative statics are computed analogously.

increase in *POLSTAB*, *GOVTEFF*, *RULELAW*, and *FORMAL* is associated with a decrease in perceived tax evasion of 18.6%, 10.1%, 10.5%, and 17.0%, respectively.

Third, we examine the relation between media institutions and perceived tax evasion. We expect more effective media institutions to be associated with lower perceived tax evasion. We present the results of our tests in Table 5. We use press freedom (MEDIA = *FPRESS*) in Column 1, TV media independence (MEDIA = *TV_INDEP*) in Column 2, and a composite measure (MEDIA = *MEDIA*) in Column 3 as proxies for the effectiveness of media institutions. Consistent with our prediction, we find, in all three columns, that the effectiveness of media institutions is negatively associated with perceived tax evasion. The relation between media institutions and perceived tax evasion is also economically significant. A one standard deviation increase in *FPRESS*, *TV_INDEP*, and *MEDIA* is associated with a decrease in perceived tax evasion of 6.7%, 11.9%, and 11.2%, respectively.

The signs of the coefficients of the control variables are largely consistent with our expectations. Firms exhibit higher perceived tax evasion when the tax burden (tax rates (*TAX_RATE*) and the tax administration costs (*TAX_ADMIN*)) are higher, and when government officials are perceived as corrupt (*INF_PMT* and *CORRUPT*). Firms with audited financial statements (*AUDIT*) exhibit lower perceived tax evasion, presumably because of monitoring by external auditors (Kanagaretnam et al. 2016). Firms with a higher percentage of foreign ownership (*FOREIGN*), a higher percentage of exports (*EXPORT*), and more employees (*EMP*) are associated with lower perceived tax evasion, presumably because these firms are likely to be larger and hence face more scrutiny from regulators (Kanagaretnam et al. 2016). Additionally, younger firms (*AGE*), firms located in small cities (*SMALL_CITY*), and firms that paid more taxes

(*TAXPMT*) have lower perceived tax evasion. Lastly, firms in countries with higher GDP growth (*GDPGR*) and in countries that adopt IFRS (*IFRS*) exhibit lower perceived tax evasion.

Overall, the results are consistent with our prediction that informal, formal, and media institutions have a deterrent effect on perceived tax evasion.

Incremental Importance of Institutions in Deterring Perceived Tax Evasion

Next, we examine our second set of research questions on whether the importance of each type of institution differs in deterring tax evasion and whether the effect of each type of institution on perceived tax evasion that we documented in the preliminary analyses is potentially subsumed by the others or whether it is incremental in deterring perceived tax evasion. These questions are particularly important to tax policymakers for assessing which type of institution is more effective in reducing tax evasion and could consequently help them shape their regulatory and enforcement actions to reduce tax evasion.

To assess whether the effect of each of type of institution is subsumed by the others, we include all three composite measures of institutions (*INFORMAL*, *FORMAL*, and *MEDIA*) in the same regression specification. Additionally, to assess the incremental importance of each type of institution, we report standardized coefficients so that the magnitude of each coefficient is directly comparable to the magnitudes of the others.[15] We report these estimation results in Table 6 Column 1.

As observed from Table 6 Column 1, all three types of institutions (*INFORMAL*, *FORMAL*, and *MEDIA*) continue to be significantly negatively associated with perceived tax evasion. This suggests that each type of institution is incrementally important over the others in reducing

[15] The standardized coefficient is obtained by dividing each coefficient by the ratio of the standard deviation of the dependent variable to the standard deviation of the regressor.

perceived tax evasion. In terms of relative magnitude of the incremental effects, we find that informal institutions (*INFORMAL*) are the most important (standardized estimate = -0.108), followed by formal institutions (*FORMAL*, standardized estimate = -0.063) and media institutions (*MEDIA*, standardized estimate = -0.029).[16] The finding that informal institutions have the greatest influence in reducing perceived tax evasion relative to other institutions is consistent with Williamson's (2000) and our argument that informal institutions such as societal trust and religiosity are more deep-rooted in society and, therefore, have a more lasting and stronger influence on individuals and firms relative to other institutions.

In the earlier test, we employed a composite measure of the strength of informal institutions (*INFORMAL*) by using the mean values of *TRUST* and *RELIG* instead of using the principal component of these two variables because *TRUST* and *RELIG* capture different dimensions of informal institutions. In an additional robustness test, we examine the effect of *TRUST* and *RELIG* separately and include these two variables together with *FORMAL* and *MEDIA* in the same regression specification. In an untabulated analysis, we continue to find that both *TRUST* and *RELIG* have greater influence in reducing perceived tax evasion relative to other institutions. In addition, *TRUST* is more important than *RELIG* in deterring perceived tax evasion.[17]

In another robustness test, we use a weighted least squares (WLS) regression to address the concern that countries with more observations (e.g., Turkey) may unduly influence the empirical results relative to countries with fewer observations (e.g., Mali). This approach ensures that each of the 30 countries receives equal weight in the regression estimations (Dittmar, Mahrt-

[16] For comparison with the magnitude of the coefficients reported in earlier tables, the unstandardized coefficients of *INFORMAL*, *FORMAL* and *MEDIA* are -32.78, -1.54 and -0.58, respectively (untabulated). Consistent with our earlier conjecture that the effects of different institutions can potentially be subsumed by the others, the magnitudes of the unstandardized coefficients are attenuated when all three institutions are included in the same regression.

[17] In particular, the standardized coefficients of *TRUST* and *RELIG* are -0.132 and -0.052, respectively (untabulated).

Smith, and Servaes 2003). We report the results of this estimation in Table 6 Column 2. As shown in this column, we continue to find that informal institutions (*INFORMAL*) and formal institutions (*FORMAL*) are significantly negatively associated with perceived tax evasion, whereas the media institutions variable (*MEDIA*) is no longer significantly associated with perceived tax evasion. In terms of relative magnitude, *INFORMAL* remains the most important (standardized estimate = -0.062), followed by *FORMAL* (standardized estimate = -0.057) and *MEDIA* (standardized estimate = 0.003).

Path Analysis: Direct and Indirect Channels from Informal Institutions to Perceived Tax Evasion

Next, we explore whether informal institutions affect tax evasion through a direct channel and also through an indirect (or mediating) channel via formal and media institutions. Our inquiry is motivated by Williamson's (2000) multi-level framework of the different levels of institutions (starting at the highest level with informal institutions, followed by formal institutions, governance structures, media institutions, and incentive structures), where a higher level imposes constraints on the succeeding levels. Accordingly, we test whether informal institutions have a lasting and pervasive influence on the eventual economic implications (perceived tax evasion in our setting) of formal and media institutions. We do so by conducting a path analysis, where we model the direct and indirect paths through which informal institutions affect perceived tax evasion. As depicted in the path diagram presented in Table 7 Panel A, we model: 1) a direct path from informal institutions to perceived tax evasion; 2) a mediated path from informal institutions to formal institutions to perceived tax evasion; and 3) a mediated path from informal institutions to media institutions to perceived tax evasion. We model only the direct effect of the control variables in

the main regression specification (Equation 1) on perceived tax evasion and omit them from the path diagram for brevity.

We present the direct and the indirect standardized path coefficients in Table 7 Panel B. The coefficient for the direct path is Ω1 (-0.1090), and the coefficients for the mediated paths through formal institutions and media institutions are -0.0176 and -0.0057, respectively, obtained by multiplying the path coefficients along the respective pathways.[18]

There are three important observations from the path analysis. First, informal institutions have a significant and positive impact on both formal institutions (α1 = 0.2781) and media institutions (α2 = 0.1954), and the impact of informal institutions is relatively larger on formal institutions than on media institutions. These results are consistent with our prediction that informal institutions such as societal trust and religiosity are more embedded in society and can have an influence on the development of other institutions. Second, the direct impact of informal institutions on perceived tax evasion (Ω1 = -0.1090) is greater than the indirect impact mediated by formal institutions (-0.0176) and media institutions (-0.0057), which suggests that the overall impact of informal institutions in reducing perceived tax evasion is mostly direct rather than indirect through other institutions. Lastly, in terms of the magnitude of the indirect paths, the mediated path through formal institutions (-0.0176) is much larger than the mediated path through media institutions (-0.0057).

IV. CONCLUSION

Our review of recent papers published in JIAR shows that the study of international institutions and their influence on accounting outcomes continues to be of considerable interest to accounting researchers. Furthermore, we document that the relationship between institutions and tax

[18] The mediated path of formal institutions is obtained by multiplying α1 (0.2781) by β1 (-0.0632), and the mediated path of media institutions is obtained by multiplying α2 (0.1974) by β2 (-0.0289).

avoidance has gained interest in the recent past. This literature covers various institutions such as culture, religion, legal systems, audit quality, media, and tax systems. A deficiency of most of this research is that it studies each of these factors in isolation and does not consider their combined effects. There also is relatively little research that directly addresses tax evasion.

Given the above, as an exploratory analysis, we draw on the theory of institutional hierarchy proposed by Williamson (2000) and examine the relative importance of three broad types of institutions (informal, formal, and media) in curtailing tax evasion activities. We use a measure of firm-level perception of tax evasion from the World Bank Enterprise Surveys to examine the influence of informal, formal, and media institutions on corporate tax evasion. Based on a sample of firm-year observations from 30 different countries, we first document that the strengths of informal, formal, and media institutions are negatively associated with perceived corporate tax evasion. We also show that each of these three types of institutions is incrementally important in reducing perceived tax evasion. In terms of relative magnitude, we find that informal institutions are the most important, followed by formal institutions and media institutions. Lastly, we use path analysis to document that informal institutions affect perceived tax evasion both directly and indirectly via formal and media institutions, and that the direct impact is greater than the indirect impacts mediated by formal institutions and media institutions. These results suggest that the overall impact of informal institutions in reducing perceived tax evasion is mostly direct rather than indirect through other institutions.

At a broad level, our study contributes to academic research by providing empirical evidence that is consistent with Williamson's (2000) institutional hierarchy that informal institutions are more deeply rooted in society and thus have a more lasting and stronger influence on individuals and firms than do other institutions. In this regard, it provides a useful framework

for future international accounting research that studies the implications of different types of institutions on accounting outcomes. Our study also provides evidence of the incremental importance of institutions in the tax evasion decision over economic cost-benefit tradeoffs.

Our study is subject to several caveats. As discussed previously, our main measure of corporate tax evasion is based on responses to a survey question on the perception of tax evasion by other firms in the same area of activity and not their own actual tax evasion. The results should therefore be interpreted with caution. In addition, our data are also somewhat old – the World Bank Enterprise Surveys data cover the years 2000-2006. Given these reasons, we characterize our research as primarily exploratory in nature. Future research could study the relation between firms' own tax evasion and institutions if suitable data covering the most recent period become available.

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APPENDIX: VARIABLES DEFINITION

Country-level variables		
TRUST	=	Societal trust index, based on responses to the following question from the World Values Survey question: Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people? Respondents can either answer: "Most people can be trusted" or "Can't be too careful". We code the response to this question as one if a survey participant reports that "Most people can be trusted," and zero otherwise. We then use the mean response to this question for each country-year as our measure of societal trust. Higher values correspond to higher levels of societal trust.
RELIG	=	A measure of religiosity based on responses to the following two questions from the World Values Survey. The first question assesses the respondent's self-perceived religiosity: "Independently of whether you attend religious services or not, would you say you are:" The three possible answers are "A religious person," "Not a religious person" and "An atheist." We code the response to this question as one if a survey participant reports that he/she is a religious person, and zero otherwise. The second question assesses the respondent's affiliation with a religious organization: "Could you tell me whether you are a member of a religious organization," and the three possible answers are "Active member," "Inactive member" and "Not a member." We code the response to this question as one if a survey participant reports that he/she is an active or inactive member, and zero otherwise. We then use the mean response to these two questions for each country-year as our measure of religiosity. Higher values correspond to higher levels of religiosity.
INFORMAL	=	Average of *TRUST* and *RELIG*.
POLSTAB	=	A measure of political stability from Kaufmann et al. (2010), which captures perception of "the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism." Higher values correspond to higher political stability.
GOVTEFF	=	A measure of government effectiveness from Kaufmann et al. (2010), which captures perception of "the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies." Higher values correspond to greater government effectiveness.
RULELAW	=	A measure of rule of law from Kaufmann et al. (2010), which captures perception of "the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence. Higher values correspond to stronger law and order.
FORMAL	=	First principal component extracted from a factor analysis of *POLSTAB, GOVTEFF* and *RULELAW*.
FPRESS	=	Freedom of Press index obtained from Freedom House. Higher values correspond to higher press freedom.
TV_INDEP	=	Percentage of private ownership of television stations out of the five largest television stations (by viewership). Higher values correspond to more media independence. Data from Djankov et al. (2003).
MEDIA	=	First principal component extracted from the factor analysis of *FPRESS and TV_INDEP*.
GDPGR	=	The annual GDP growth rate. Source:

		www.ers.usda.gov/datafiles/International_Macroeconomic_Data/...Data
IFRS	=	An indicator variable that equals one if the country adopts IFRS, and zero otherwise.
Firm-level variables		
EVADE_RATIO	=	Perceived tax evasion ratio, based on responses to the following question from the World Bank Enterprise Surveys: "Recognizing the difficulties many enterprises face in fully complying with taxes and regulations, what percentage of total sales would you estimate the typical establishment in your area of activity reports for tax purposes?" The tax evasion ratio is calculated as 100 minus the respondent's answer. Higher values correspond to higher levels of perceived tax evasion.
TAX_RATE	=	A firm's difficulty with managing its operations because of its tax rate, based on the response to the following question in the World Bank Enterprise Surveys: "Please tell us if Tax Rates are a problem for the operation and growth of your business. If an issue poses a problem, please judge its severity as an obstacle on a four-point scale where: 0 = no obstacle, 1 = minor obstacle, 2 = moderate obstacle, 3 = major obstacle, 4 = very severe obstacle."
TAX_ADMIN	=	A firm's difficulty with managing tax administration, based on the response to the following question in the World Bank Enterprise Surveys: "Please tell us if the Tax Administration is a problem for the operation and growth of your business. If an issue poses a problem, please judge its severity as an obstacle on a four-point scale where: 0 = no obstacle, 1 = minor obstacle, 2 = moderate obstacle, 3 = major obstacle, 4 = very severe obstacle."
AUDIT	=	An indicator variable that equals one if an external auditor reviewed the firm's financial statements, and zero otherwise. Data from the World Bank Enterprise Surveys.
FOREIGN	=	The percentage of foreign investors' ownership. Data from the World Bank Enterprise Surveys.
EXPORT	=	Direct exports as a percentage of sales. Data from the World Bank Enterprise Surveys.
AGE	=	The log of firm age, where firm age is measured based on the response to the following question in the World Bank Enterprise Surveys: "In what year did your firm begin operations in this country?" Firm age is then computed as the year of the survey minus the respondent's answer.
EMP	=	The total number of employees in the firm. Data from the World Bank Enterprise Surveys.
INF_PMT	=	Informal payments as a percentage of sales, based on the response to the following question in the World Bank Enterprise Surveys: "We've heard that establishments are sometimes required to make gifts or informal payments to public officials to 'get things done' with regard to customs, taxes, licenses, regulations, services etc. On average, what percent of annual sales value would such expenses cost a typical firm like yours?"
CORRUPT	=	The extent of local corruption, based on the response to the following question in the World Bank Enterprise Surveys: "Please tell us if any of the following issues are a problem for the operation and growth of your business. If an issue poses a problem, please judge its severity as an obstacle on a four-point scale where: 0 = no obstacle; 1 = minor obstacle; 3 = Major obstacle; 4 = Very severe obstacle".
SMALL_CITY	=	An indicator variable that equals one if the firm is located in a small city, and zero otherwise. The firm location is considered as a small city if the firm location is coded as 4 (city of 50,000 to 250,000) or 5 (town or location with less than 50,000 population) in the World Bank Enterprise Surveys.

CAPITAL_CITY	=	An indicator variable that equals one if the firm is located in the capital city, and zero otherwise. The firm location is in the capital city if the firm location is coded as 1 (capital city) in the World Bank Enterprise Surveys.
TAXPMT	=	The log of the total amount of taxes paid by businesses, including electronic filing. Data from the World Bank Enterprise Surveys.

TABLE 1
Sample Composition and Mean Characteristics by Country

Country	*N*	*EVADE_RATIO*	*TRUST*	*RELIG*	*INFORMAL*	*POSTAB*	*GOVTEFF*	*RULELAW*	*FORMAL*	*FPRESS*	*TV_INDEP*	*MEDIA*	*TAX_RATE*
Armenia	476	6.30	0.25	0.85	0.55	-0.06	-0.13	-0.37	-0.38	36	0.80	-0.60	1.81
Azerbaijan	426	13.13	0.21	0.46	0.33	-1.11	-0.68	-0.74	-1.27	28	0.80	-0.85	1.53
Bulgaria	442	15.68	0.22	0.34	0.28	0.13	0.19	-0.16	-0.04	66	0.50	0.14	1.55
Belarus	438	7.67	0.24	0.39	0.31	0.35	-1.1	-1.19	-1.08	12	0.00	-1.84	1.67
Chile	1,574	7.55	0.12	0.53	0.33	0.85	1.22	1.27	1.48	74	6.00	3.78	0.69
Colombia	670	17.34	0.14	0.64	0.39	-2.03	-0.16	-0.66	-1.37	39	0.50	-0.69	0.11
Czech Republic	488	12.15	0.29	0.30	0.29	0.9	0.97	0.82	1.15	80	0.50	0.58	2.09
Germany	1,181	5.72	0.34	0.40	0.37	0.86	1.54	1.66	1.83	84	0.40	0.64	1.66
Egypt	877	17.12	0.18	0.47	0.33	-0.65	-0.39	0.03	-0.55	39	0.00	-1.00	3.26
Spain	569	3.75	0.20	0.33	0.27	0.18	1.49	1.1	1.24	79	0.60	0.61	1.21
Estonia	238	4.71	0.22	0.24	0.23	0.58	0.99	0.92	1.08	84	0.75	0.85	0.82
Georgia	284	24.89	0.18	0.52	0.35	-0.68	-0.42	-0.72	-0.95	44	0.60	-0.48	1.82
Croatia	315	9.26	0.25	0.63	0.44	0.43	0.48	0.09	0.35	61	0.25	-0.17	1.44
Hungary	596	10.42	0.23	0.38	0.30	0.98	0.8	0.83	1.11	79	0.60	0.61	2.06
Indonesia	709	26.86	0.43	0.76	0.59	-1.48	-0.44	-0.82	-1.35	42	0.80	-0.42	1.61
Jordan	330	14.40	0.31	0.47	0.39	-0.13	0.08	0.41	0.08	39	0.00	-1.00	0.10
Korea (South)	546	9.83	0.30	0.39	0.35	0.45	1.02	0.97	1.06	70	0.20	0.08	1.04
Lithuania	288	13.36	0.22	0.49	0.35	0.75	0.79	0.58	0.88	82	0.80	0.82	2.05
Moldova	489	16.31	0.18	0.58	0.38	-0.44	-0.73	-0.4	-0.84	35	0.80	-0.63	2.19
Mexico	834	23.12	0.16	0.72	0.44	-0.44	0.08	-0.41	-0.46	52	1.00	0.02	0.13
Mali	113	25.59	0.17	0.82	0.50	0.19	-0.69	-0.14	-0.43	76	0.00	0.14	2.15
Peru	470	9.05	0.06	0.60	0.33	-0.98	-0.6	-0.74	-1.18	61	1.00	0.30	0.04
Poland	1,355	9.92	0.19	0.58	0.39	0.34	0.48	0.42	0.48	79	0.60	0.61	2.31
Russian Federation	843	17.31	0.27	0.42	0.34	-1.25	-0.46	-0.9	-1.30	28	0.20	-1.22	1.53
Slovakia	226	9.32	0.27	0.53	0.40	0.85	0.94	0.52	0.97	80	0.60	0.64	1.30
Slovenia	338	12.24	0.18	0.51	0.34	1.05	0.92	0.86	1.21	80	0.40	0.51	1.17
Turkey	1,631	36.47	0.05	0.42	0.24	-0.6	0.16	0.16	-0.20	52	1.00	0.02	2.60
Ukraine	781	12.81	0.28	0.49	0.39	-0.27	-0.58	-0.79	-0.89	47	0.60	-0.38	1.97
South Africa	518	8.72	0.17	0.83	0.50	-0.15	0.64	0.08	0.18	73	0.00	0.05	1.34
Zambia	121	16.07	0.12	0.93	0.52	0.07	-0.93	-0.58	-0.81	36	0.00	-1.10	2.25

TABLE 1 (continued)

Country	*TAX_ADMIN*	*AUDIT*	*FOREIGN*	*EXPORT*	*AGE*	*EMP*	*INF_PMT*	*CORRUPT*	*SMALL_CITY*	*CAPITAL_CITY*	*TAXPMT*	*GDPGR*	*IFRS*
Armenia	1.99	0.40	7.83	89.62	2.38	2.94	1.18	1.15	0.44	0.56	3.91	13.87	0
Azerbaijan	1.53	0.50	11.70	94.20	2.12	3.46	2.74	1.28	0.15	0.69	3.61	26.40	0
Bulgaria	1.05	0.45	10.60	87.50	2.53	2.91	1.85	1.25	0.62	0.19	3.37	5.96	0
Belarus	1.41	0.54	11.56	87.86	2.26	3.26	1.30	0.82	0.40	0.34	4.83	9.40	0
Chile	0.47	0.53	9.02	88.06	2.94	3.70	0.55	0.38	0.14	0.29	2.08	5.56	0
Colombia	0.04	0.54	1.97	93.01	2.48	3.03	1.72	0.06	0.00	0.00	4.25	4.71	0
Czech Republic	1.94	0.40	10.06	90.13	2.29	2.82	0.75	1.28	0.69	0.19	3.30	6.44	1
Germany	1.46	0.54	6.40	94.75	2.76	2.68	0.40	0.41	0.73	0.07	2.48	0.71	1
Egypt	2.59	0.83	2.47	91.18	2.75	3.50	2.65	2.24	0.05	0.29	3.74	4.47	0
Spain	0.94	0.59	5.56	94.03	2.65	2.63	0.06	0.40	0.59	0.15	1.95	3.72	1
Estonia	0.61	0.87	14.29	86.68	2.27	3.07	0.36	0.68	0.39	0.61	1.95	9.47	1
Georgia	1.60	0.72	11.12	90.39	2.31	2.90	1.71	1.54	0.49	0.51	3.83	9.60	0
Croatia	0.67	0.46	12.82	86.04	2.68	3.13	0.83	1.32	0.68	0.32	3.69	4.16	1
Hungary	1.28	0.69	12.87	85.50	2.41	2.98	0.89	0.76	0.63	0.36	2.56	4.26	1
Indonesia	1.42	0.46	14.06	70.72	2.70	5.03	1.73	1.86	0.00	0.00	3.93	5.69	0
Jordan	0.12	0.77	10.15	78.60	2.30	3.64	0.64	0.08	0.00	0.00	3.26	8.16	0
Korea (South)	0.82	0.36	8.57	91.60	2.32	2.70	0.06	0.61	0.26	0.31	2.64	3.92	0
Lithuania	1.38	0.52	11.48	85.85	2.33	3.16	0.94	1.20	0.51	0.31	2.40	7.80	1
Moldova	1.95	0.25	10.06	82.28	2.16	3.41	1.52	1.59	0.53	0.47	3.97	7.49	0
Mexico	0.03	0.30	6.82	93.41	2.64	3.31	1.00	0.12	0.00	0.00	3.30	3.03	0
Mali	1.81	0.48	12.82	92.53	2.26	2.67	3.30	2.26	0.07	0.93	4.08	6.08	0
Peru	0.14	0.32	8.12	85.71	2.65	3.31	0.39	0.06	0.00	0.00	2.20	6.29	0
Poland	1.93	0.42	7.60	91.04	2.54	2.71	0.87	1.33	0.44	0.12	3.69	3.55	1
Russian Federation	1.67	0.39	8.28	94.64	2.19	3.40	1.24	1.07	0.29	0.25	2.48	6.38	0
Slovakia	1.03	0.49	11.48	87.81	2.35	2.96	1.25	1.15	0.58	0.42	3.47	6.54	1
Slovenia	1.03	0.38	10.49	78.53	2.68	2.88	0.53	0.63	0.78	0.22	3.09	4.00	1
Turkey	2.18	0.51	5.26	77.19	2.53	3.71	0.77	1.92	0.17	0.32	2.40	8.40	0
Ukraine	1.48	0.45	10.90	91.64	2.25	3.18	1.88	1.38	0.35	0.16	4.99	2.70	0
South Africa	0.88	0.96	15.96	85.99	2.79	4.69	0.32	1.13	0.03	0.00	2.48	5.28	1
Zambia	1.46	0.82	22.75	82.52	2.52	4.24	1.68	1.95	0.18	0.55	3.64	7.24	0

This table provides the sample composition and the mean characteristics by country. The detailed definitions of the variables are provided in the Appendix. All continuous variables are trimmed at the 1 and 99 percentiles.

TABLE 2
Tax Evasion Analysis: Descriptive Statistics and Correlations

Panel A: Descriptive Statistics

	Mean	Median	Q1	Q3	Std Dev
EVADE_RATIO	14.707	0.000	0.000	20.000	25.499
TRUST	0.206	0.195	0.156	0.267	0.090
RELIG	0.518	0.494	0.418	0.584	0.145
INFORMAL	0.362	0.348	0.326	0.389	0.084
POLSTAB	-0.089	-0.060	-0.600	0.750	0.814
GOVTEFF	0.290	0.160	-0.420	0.970	0.740
RULELAW	0.177	0.160	-0.660	0.830	0.801
FORMAL	0.086	-0.200	-0.893	1.109	1.034
FPRESS	58.569	61.000	39.000	79.000	19.804
IND_TV	0.552	0.600	0.400	0.800	0.308
MEDIA	0.232	0.017	-0.602	0.606	1.267
TAX_RATE	1.577	2.000	0.000	3.000	1.360
TAX_ADMIN	1.297	1.000	0.000	2.000	1.301
AUDIT	0.515	1.000	0.000	1.000	0.500
FOREIGN	8.739	0.000	0.000	0.000	25.981
EXPORT	87.846	100.000	95.000	100.000	26.170
AGE	2.529	2.485	1.946	3.091	0.824
EMP	3.301	3.091	2.079	4.382	1.692
INF_PMT	1.065	0.000	0.000	0.100	4.011
CORRUPT	1.035	0.000	0.000	2.000	1.278
SMALL_CITY	0.315	0.000	0.000	1.000	0.465
CAPITAL_CITY	0.232	0.000	0.000	0.000	0.422
TAXPMT	3.134	3.258	2.398	3.738	0.842
GDPGR	5.986	5.560	3.720	7.490	4.079
IFRS	0.336	0.000	0.000	1.000	0.473

TABLE 2 (continued)

Panel B: Pearson Correlations

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)	*EVADE_RATIO*	1.00												
(2)	*TRUST*	**-0.12**	1.00											
(3)	*RELIG*	**-0.08**	**0.17**	1.00										
(4)	*INFORMAL*	**-0.04**	**0.50**	**0.78**	1.00									
(5)	*POLSTAB*	**-0.20**	**0.11**	0.00	**0.22**	1.00								
(6)	*GOVTEFF*	**-0.15**	**0.06**	**0.11**	**0.24**	**0.73**	1.00							
(7)	*RULELAW*	**-0.14**	**0.02**	0.01	**0.32**	**0.78**	**0.95**	1.00						
(8)	*FORMAL*	**-0.17**	**0.06**	**0.03**	**0.28**	**0.89**	**0.95**	**0.97**	1.00					
(9)	*FPRESS*	**-0.14**	0.01	**0.10**	**0.17**	**0.74**	**0.87**	**0.83**	**0.87**	1.00				
(10)	*IND_TV*	**-0.05**	**0.35**	**0.16**	**0.15**	**0.31**	**0.37**	**0.39**	**0.39**	**0.25**	1.00			
(11)	*MEDIA*	**-0.11**	**0.26**	**0.17**	**0.20**	**0.60**	**0.71**	**0.70**	**0.72**	**0.67**	**0.88**	1.00		
(12)	*TAX_RATE*	**0.12**	0.00	**-0.28**	**-0.12**	**0.02**	**-0.11**	-0.01	**-0.03**	**-0.05**	**-0.21**	**-0.18**	1.00	
(13)	*TAX_ADMIN*	**0.12**	**0.03**	**-0.25**	**-0.09**	**-0.03**	**-0.13**	**-0.05**	**-0.07**	**-0.10**	**-0.20**	**-0.20**	**0.75**	1.00
(14)	*AUDIT*	**-0.07**	-0.01	**-0.04**	**-0.03**	**0.02**	**0.04**	**0.06**	**0.04**	**0.02**	**-0.02**	0.00	**0.02**	0.01
(15)	*FOREIGN*	**-0.05**	**0.05**	**0.04**	**0.05**	**0.03**	-0.01	**-0.02**	0.00	0.01	0.00	0.00	**-0.03**	-0.01
(16)	*EXPORT*	**-0.04**	**0.03**	0.00	-0.01	**0.04**	**0.04**	**0.03**	**0.04**	**0.03**	-0.01	0.00	**-0.04**	**-0.05**
(17)	*AGE*	**-0.06**	**-0.06**	**0.09**	**0.02**	**0.07**	**0.14**	**0.14**	**0.13**	**0.13**	**0.15**	**0.18**	**-0.04**	**-0.06**
(18)	*EMP*	**-0.03**	**-0.02**	**0.09**	**0.12**	**-0.14**	**-0.11**	**-0.11**	**-0.13**	**-0.12**	**0.08**	0.00	**-0.02**	-0.01
(19)	*INF_PMT*	**0.12**	**0.02**	**-0.03**	**0.04**	**-0.09**	**-0.13**	**-0.11**	**-0.12**	**-0.11**	**-0.04**	**-0.09**	**0.06**	**0.08**
(20)	*CORRUPT*	**0.17**	**-0.02**	**-0.16**	0.00	**-0.13**	**-0.22**	**-0.16**	**-0.18**	**-0.15**	**-0.15**	**-0.19**	**0.49**	**0.50**
(21)	*SMALL_CITY*	**-0.10**	**0.19**	**-0.11**	**-0.11**	**0.34**	**0.23**	**0.23**	**0.28**	**0.25**	**-0.12**	**0.03**	**0.10**	**0.07**
(22)	*CAPITAL_CITY*	**0.02**	**-0.09**	**-0.09**	**-0.11**	**0.06**	**-0.07**	**-0.02**	-0.01	**-0.08**	**0.05**	-0.01	**0.11**	**0.11**
(23)	*TAXPMT*	**0.02**	**0.31**	**0.04**	**0.45**	**-0.32**	**-0.65**	**-0.63**	**-0.58**	**-0.52**	**-0.40**	**-0.56**	**0.12**	**0.11**
(24)	*GDPGR*	**0.06**	**-0.19**	**-0.15**	**-0.08**	**-0.29**	**-0.40**	**-0.37**	**-0.38**	**-0.47**	0.01	**-0.22**	**0.04**	**0.09**
(25)	*IFRS*	**-0.17**	**0.26**	0.01	**-0.02**	**0.59**	**0.62**	**0.56**	**0.63**	**0.74**	**-0.24**	**0.17**	**0.09**	**0.04**

TABLE 2 (continued)

		(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
(14)	*AUDIT*	1.00											
(15)	*FOREIGN*	**0.16**	1.00										
(16)	*EXPORT*	**-0.14**	**-0.22**	1.00									
(17)	*AGE*	**0.15**	**-0.04**	**-0.06**	1.00								
(18)	*EMP*	**0.36**	**0.21**	**-0.35**	0.33	1.00							
(19)	*INF_PMT*	**-0.02**	**-0.02**	**0.02**	-0.06	**-0.05**	1.00						
(20)	*CORRUPT*	**0.03**	0.00	**-0.07**	-0.05	**0.06**	**0.14**	1.00					
(21)	*SMALL_CITY*	**-0.06**	**-0.05**	**0.03**	-0.05	**-0.18**	**-0.03**	**-0.04**	1.00				
(22)	*CAPITAL_CITY*	**0.07**	**0.11**	**-0.02**	-0.04	**0.02**	**0.04**	**0.12**	**-0.37**	1.00			
(23)	*TAXPMT*	**-0.05**	0.01	0.01	-0.12	**-0.02**	**0.12**	**0.16**	**-0.02**	0.00	1.00		
(24)	*GDPGR*	0.01	**0.03**	**-0.04**	**-0.12**	**0.07**	**0.06**	**0.12**	**-0.11**	**0.28**	**0.08**	1.00	
(25)	*IFRS*	**0.06**	**0.02**	**0.05**	**0.03**	**-0.14**	**-0.08**	**-0.07**	**0.36**	**-0.08**	**-0.21**	**-0.34**	1.00

This table provides the descriptive statistics (Panel A) and Pearson correlations (Panel B) of the main variables used in the analyses. The detailed definitions of the variables are provided in the Appendix. All continuous variables are trimmed at the 1 and 99 percentiles. All correlations with absolute values greater than 0.02 are statistically significant at the 0.01 level or better (two-tailed).

TABLE 3
Relation between Informal Institutions and Perceived Tax Evasion

	(1) INFORMAL = *TRUST*	(2) INFORMAL = *RELIG*	(3) INFORMAL = *INFORMAL*
INFORMAL	**-32.379**	**-4.331**	**-34.200**
	(-10.70)* **	**(-2.80)*** **	**(-11.27)*** **
TAX_RATE	1.027	1.343	1.148
	(4.86)***	(6.32)***	(5.43)***
TAX_ADMIN	0.898	0.782	0.862
	(4.26)***	(3.69)***	(4.08)***
AUDIT	-1.139	-1.236	-1.443
	(-2.89)***	(-3.11)***	(-3.66)***
FOREIGN	-0.033	-0.036	-0.034
	(-4.86)***	(-5.28)***	(-4.94)***
EXPORT	-0.029	-0.030	-0.028
	(-3.26)***	(-3.40)***	(-3.14)***
AGE	-1.101	-1.012	-0.949
	(-4.42)***	(-4.04)***	(-3.80)***
EMP	-0.806	-0.844	-0.823
	(-6.07)***	(-6.33)***	(-6.19)***
INF_PMT	0.591	0.573	0.575
	(8.40)***	(8.15)***	(8.19)***
CORRUPT	1.750	1.974	1.870
	(9.29)***	(10.40)***	(9.91)***
SMALL_CITY	-1.119	-1.492	-1.323
	(-2.50)**	(-3.31)***	(-2.94)***
CAPITAL_CITY	0.881	1.116	1.238
	(1.64)	(2.05)**	(2.28)**
TAXPMT	-1.413	-2.274	-1.008
	(-6.19)***	(-8.92)***	(-3.93)***
GDPGR	-0.333	-0.182	-0.223
	(-7.23)***	(-4.08)***	(-5.10)***
IFRS	-9.878	-10.052	-9.530
	(-20.81)***	(-21.08)***	(-20.02)***
Constant	39.754	37.001	42.425
	(21.03)***	(20.06)***	(22.23)***
Observations	18,166	18,166	18,166
R-squared	0.120	0.113	0.117

This table reports the regression results of the relation between informal institutions and perceived tax evasion. Column 1 shows the results when informal institutions is proxied by *TRUST*; Column 2 shows the results when informal institutions is proxied by *RELIG*, and Column 3 shows the results when informal institutions is proxied by the composite measure, *INFORMAL*. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year and industry indicator variables are not tabulated for brevity. The t-statistics reported in parentheses are based on robust standard errors controlling for heteroscedasticity. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 4
Relation between Formal Institutions and Perceived Tax Evasion

VARIABLES	(1) FORMAL = *POLSTAB*	(2) FORMAL = *GOVTEFF*	(3) FORMAL= *RULELAW*	(4) FORMAL= *FORMAL*
FORMAL	-3.369	-2.016	-1.923	-2.418
	(-9.97)***	(-4.30)***	(-4.67)***	(-7.47)***
TAX_RATE	1.351	1.293	1.346	1.314
	(6.39)***	(6.06)***	(6.34)***	(6.20)***
TAX_ADMIN	0.669	0.760	0.781	0.737
	(3.17)***	(3.59)***	(3.69)***	(3.49)***
AUDIT	-1.331	-1.189	-1.156	-1.225
	(-3.37)***	(-3.01)***	(-2.92)***	(-3.10)***
FOREIGN	-0.033	-0.036	-0.036	-0.035
	(-4.86)***	(-5.28)***	(-5.29)***	(-5.15)***
EXPORT	-0.033	-0.031	-0.032	-0.032
	(-3.73)***	(-3.53)***	(-3.59)***	(-3.66)***
AGE	-0.885	-0.958	-0.955	-0.890
	(-3.54)***	(-3.82)***	(-3.81)***	(-3.55)***
EMP	-0.882	-0.871	-0.883	-0.895
	(-6.63)***	(-6.52)***	(-6.60)***	(-6.71)***
INF_PMT	0.561	0.572	0.572	0.567
	(8.07)***	(8.14)***	(8.17)***	(8.12)***
CORRUPT	1.903	1.933	1.940	1.910
	(10.06)***	(10.17)***	(10.20)***	(10.06)***
SMALL_CITY	-0.546	-1.256	-1.205	-0.893
	(-1.20)	(-2.78)***	(-2.66)***	(-1.97)**
CAPITAL_CITY	2.028	1.203	1.298	1.593
	(3.68)***	(2.20)**	(2.37)**	(2.90)***
TAXPMT	-3.006	-3.357	-3.333	-3.669
	(-12.99)***	(-10.65)***	(-11.21)***	(-13.16)***
GDPGR	-0.284	-0.260	-0.256	-0.298
	(-6.29)***	(-5.50)***	(-5.43)***	(-6.36)***
IFRS	-7.498	-8.702	-8.762	-7.625
	(-14.29)***	(-14.99)***	(-15.71)***	(-13.40)***
Constant	35.840	38.702	38.242	38.743
	(19.55)***	(19.52)***	(19.88)***	(20.54)***
Observations	18,166	18,166	18,166	18,166
R-squared	0.118	0.113	0.113	0.115

This table reports the regression results of the relation between formal institutions and perceived tax evasion. Column 1 shows the results when formal institutions is proxied by *POLSTAB*; Column 2 shows the results when formal institutions is proxied by *GOVTEFF*, Column 3 shows the results when formal institutions is proxied by the *RULELAW*, and Column (4) when formal institutions is proxied by the first principal component of the three formal institution variables, *FORMAL*. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year and industry indicator variables are not tabulated for brevity. The t-statistics reported in parentheses are based on robust standard errors controlling for heteroscedasticity. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 5
Relation between Media and Perceived Tax Evasion

VARIABLES	(1) MEDIA= *FPRESS*	(2) MEDIA = *TV_INDEP*	(3) MEDIA = *MEDIA*
MEDIA	**-0.050**	**-1.121**	**-1.299**
	(-2.89)* **	**(-6.89)*** **	**(-6.34)*** **
TAX_RATE	1.355	1.310	1.325
	(6.38)***	(6.17)***	(6.24)***
TAX_ADMIN	0.742	0.726	0.713
	(3.50)***	(3.44)***	(3.37)***
AUDIT	-1.226	-1.480	-1.441
	(-3.09)***	(-3.72)***	(-3.62)***
FOREIGN	-0.036	-0.035	-0.035
	(-5.23)***	(-5.12)***	(-5.11)***
EXPORT	-0.031	-0.031	-0.032
	(-3.54)***	(-3.57)***	(-3.60)***
AGE	-0.990	-0.879	-0.882
	(-3.96)***	(-3.52)***	(-3.53)***
EMP	-0.870	-0.820	-0.847
	(-6.51)***	(-6.16)***	(-6.36)***
INF_PMT	0.574	0.569	0.570
	(8.15)***	(8.07)***	(8.08)***
CORRUPT	1.985	1.946	1.965
	(10.46)***	(10.28)***	(10.38)***
SMALL_CITY	-1.358	-1.095	-1.105
	(-3.02)***	(-2.41)**	(-2.44)**
CAPITAL_CITY	1.203	1.419	1.439
	(2.20)**	(2.59)***	(2.62)***
TAXPMT	-2.912	-3.256	-3.367
	(-10.88)***	(-13.26)***	(-13.06)***
GDPGR	-0.248	-0.179	-0.227
	(-5.21)***	(-4.04)***	(-5.15)***
IFRS	-8.880	-10.729	-9.532
	(-13.28)***	(-22.48)***	(-19.23)***
Constant	39.793	38.511	38.039
	(17.31)***	(20.73)***	(20.50)***
Observations	18,166	18,166	18,166
R-squared	0.113	0.115	0.114

This table reports the regression results of the relation between media and perceived tax evasion. Column 1 shows the results when media is proxied by *FPRESS*; Column 2 shows the results when media is proxied by *TV_INDEP*, and Column 3 shows the results when media is proxied by the first principal component of the two media variables, *MEDIA*. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year and industry indicator variables are not tabulated for brevity. The t-statistics reported in parentheses are based on robust standard errors controlling for heteroscedasticity. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

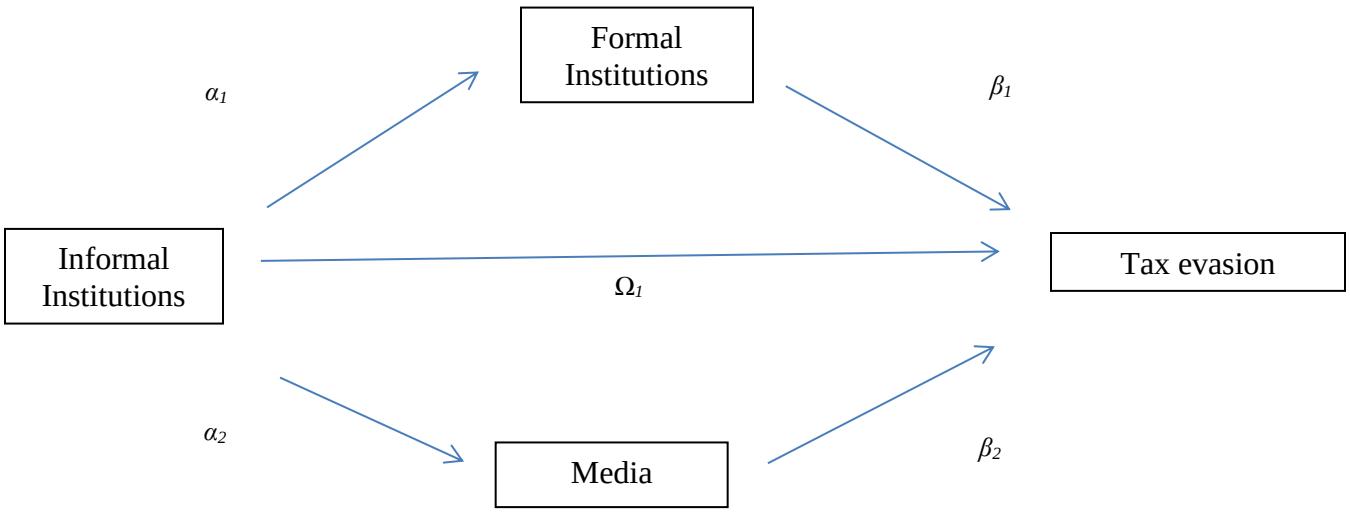
TABLE 6
Relations between Informal institutions, Formal institutions, and Media, and Perceived Tax Evasion

	OLS	WLS
	(1)	(2)
	Standardized	Standardized
Parameter	Estimate	Estimate
INFORMAL	**-0.108**	**-0.062**
	(-10.75)* **	**(-4.64)*** **
FORMAL	**-0.063**	**-0.057**
	(-3.55)* **	**(-2.55)*** **
MEDIA	**-0.029**	**0.003**
	(-2.10) **	**(0.86)**
TAX_RATE	0.060	0.050
	(5.32)***	(3.27)***
TAX_ADMIN	0.041	0.025
	(3.82)***	(1.66)*
AUDIT	-0.031	-0.032
	(-4.02)***	(-3.23)***
FOREIGN	-0.033	-0.020
	(-4.77)***	(-1.79)*
EXPORT	-0.030	-0.026
	(-3.55)***	(-2.01)**
AGE	-0.025	-0.037
	(-3.13)***	(-3.55)***
EMP	-0.057	-0.057
	(-6.43)***	(-5.13)***
INF_PMT	0.089	0.089
	(8.10)***	(6.71)***
CORRUPT	0.092	0.089
	(9.71)***	(7.30)***
SMALL_CITY	-0.014	0.014
	(-1.73)*	(1.28)
CAPITAL_CITY	0.029	0.034
	(3.21)***	(2.60)***
TAXPMT	-0.073	-0.039
	(-7.10)***	(-3.18)***
GDPGR	-0.049	-0.054
	(-6.37)***	(-5.86)***
IFRS	-0.142	-0.117
	(-13.59)***	(-8.59)***
Observations	18,166	18,166
R-squared	0.120	0.086

This table reports the regression results of the relative importance of informal institutions, formal institutions, and media on perceived tax evasion. The table shows the standardized coefficient estimate the gauge the relative importance of the variable. Column 1 shows the results using OLS estimation, and Column 2 shows the results using WLS estimation so that each of the countries receive equal weight in the regression estimations. The detailed definitions of all variables are provided in the Appendix. Coefficients on the year and industry indicator variables are not tabulated for brevity. The t-statistics reported in parentheses are based on robust standard errors controlling for heteroscedasticity. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 7
Path Analysis of the Relation between Informal institutions, Formal institutions, and Media and Perceived Tax Evasion

Panel A: Path Diagram



Panel B: Path Analysis

Direct path	
P(*Informal Institutions, Tax Evasion*)= Ω1	-0.1090
	(-9.55)***
Mediated path of Formal Institutions	
P(*Informal Institutions, Formal Institutions*)=α1	0.2781
	(40.62)***
P(*Formal Institutions, Tax Evasion*) =β1	-0.0632
	(-8.66)***
Total mediated path of Formal Institutions =(α1*β1)	-0.0176
	(-8.97)***
Mediated path of Media	
P(*Informal Institutions, Media*)=α2	0.1954
	(27.38)***
P(*Media, Tax Evasion*) =β2	-0.0289
	(-4.04)***
Total mediated path of Media=(α2*β2)	-0.0057
	(-4.02)***
Observations	18,166

Panel A provides a path diagram that depicts the prediction of how informal institutions can affect perceived tax evasion indirectly via formal institutions and media. The path coefficient Ω_1 is the magnitude of the direct path coefficient from informal institutions to perceived tax evasion. The path coefficient α_1 (α_2) is the magnitude of the path coefficient from informal institutions to formal institutions (media). The path coefficient β_1 (β_2) is the magnitude of the path from formal institutions (media) to perceived tax evasion. The path coefficient $\alpha_1*\beta_1$ ($\alpha_2*\beta_2$) measures the magnitude of the indirect path from informal institutions to perceived tax evasion mediated through formal institutions (media). The predicted signs of the path coefficients are included in parentheses.

Panels B report the results from a path analysis. The path analysis examines the effect of informal institutions on perceived tax evasion through formal institutions and media. p(X1,X2) stands for the standardized path coefficient. The *t*-statistics of the coefficients are reported in parentheses.
We estimate the following model:

$FORMAL = \alpha_0 + \alpha_1 INFORMAL + \alpha' X_{it} + \varepsilon_{it}$
$MEIDA = \alpha_0 + \alpha_2 INFORMAL + \alpha' X_{it} + \varepsilon_{it}$
$EVADE\_RATIO = \beta_0 + \Omega_1 INFORMAL + \beta_1 FORMAL + \beta_2 MEDIA + \beta' X_{it} + \varepsilon_{it,}$

Path coefficient Ω_1 is the magnitude of the direct path from *INFORMAL* tenure to *EVADE_RATIO*. The path coefficient $\alpha_1*\beta_1$ is the magnitude of the indirect path from *INFORMAL* to *EVADE_RATIO* mediated through *FORMAL*. Similarly, the path coefficient $\alpha_2*\beta_3$ is the magnitude of the indirect path from *INFORMAL* to *EVADE_RATIO* mediated through *MEDIA*. The significance of the indirect effect is estimated using the Sobel (1982) test statistics. The table reports the path coefficients of interest. We define all variables in the appendix. *, ** and *** denote significance at the 10%, 5% and 1% levels (two-tailed), respectively. The t-statistics reported in parentheses are based on robust standard errors controlling for heteroscedasticity.