



National culture and firm-level tax evasion[☆]

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ABSTRACT

A significant research stream provides evidence that institutional, demographic, and attitudinal factors influence the likelihood of tax evasion. Assessments of culture's role in tax evasion are far more scarce and limited. Absent are investigations of how theoretically derived culture variables predict tax evasion likelihood. Institutional anomie theory (IAT) informs this research gap, suggesting cultural values that likely influence deviant firm behaviors. Accordingly, a cross-cultural perspective examines the influence of important cultural forces (individualism, achievement orientation, assertiveness, humane orientation) on tax evasion, simultaneously controlling for institutional, demographic, and attitudinal factors. Multilevel analysis, with both country- and firm-level data, examines actual reports of firm tax illegal evasion from over 3000 companies in 31 countries using hierarchical generalized linear modeling. After controlling for the above-mentioned factors, a subset of influential cultural values stipulated by IAT surfaces to predict tax evasion. Findings suggest a number of theoretical and practical cross-cultural research implications.

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1. Introduction

Tax evasion generally involves economic activities hidden from revenue agents. The [United States Internal Revenue Service \(2005\)](#) reports tax evasion numbers, also referred to as the tax gap (difference between what taxpayers should pay and what they actually pay), in excess of \$300 billion per year, representing 2.7% of Gross Domestic Product (GDP). Other countries experience hidden economies between 6% of GDP (Switzerland) and 27% of GDP (Italy) ([Giles, 1998](#)). In both developed and developing countries, income taxation is necessary for the country's investment in social services and economic infrastructure. Accordingly, income tax evasion, both

personal and business, potentially hurts the poorest within that taxing jurisdiction.

Research examining cross-national differences in tax evasion considers an array of factors including institutional (e.g., rule of law, corporate tax rates), demographic (e.g., firm size, ownership, audit likelihood), and attitudinal (e.g., tax fairness, perceived burden) ([Richardson, 2006](#)). Cross-national research on tax morale and stated willingness to pay taxes uses similar predictors ([Alm and Torgler, 2006](#)). Although some research considers how certain aspects of cultural values relate to tax evasion or morale ([Richardson, 2006](#)), only two previous studies ([Richardson, 2008](#); [Tsakumis, Curatola, and Porcano, 2007](#)) use any of the major national culture models (such as [Hofstede, 1980](#)). However, no study examines the influence of culture while controlling for institutional, demographic, and attitudinal predictors of tax evasion.

This paper examines whether cultural values continue to influence tax evasion after controlling for institutional country-level factors, demographic factors, and attitudes toward taxes. Controlling for these factors is important because some of these previously identified variables may be proxies for cultural values held. In omitting institutional, demographic, and attitudinal information when examining the impact of culture on tax evasion, researchers may misidentify cultural influences where none exist, or fail to see more nuanced cultural effects on tax evasion.

In addition to the above, this work contributes to knowledge on other fronts. First, rather than focusing on all possible dimensions of culture, the institutional anomie theory (IAT) of deviance provides a

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rigorous framework for selecting relevant variables. Second, the analysis employs hierarchical linear modeling (HLM), which is a statistical technique appropriate for cross-level, cross-national data (Bryk and Raudenbush, 1992). Finally, while other studies operationalize tax evasion using either individual taxpayer reports or broad estimates of national tax evasion rates, this study uses self-reports from firms about tax evasion practices as the dependent variable.

Most tax evasion theories focus on the individual decision to avoid tax payments. For instance, economists question why people or firms pay taxes when the probability of an audit or penalty is so low (Dhami and al-Nowaihi, 2007). Often referred to as the “Yitzhaki puzzle” (Yitzhaki, 1974), this failure of expected utility theory encouraged investigation of more psychological, ethical, and social predictors of evasion and compliance (Hanno and Violette, 1996). Still lacking, however, is the application of a macro sociological theory explaining how context can affect rates of deviant behavior: in this case tax evasion. This study suggests that national culture creates a context that encourages or discourages different rates of tax evasion by firms regardless of other influential individual firm characteristics or other national institutional components.

The classic sociological theory of anomie provides the basic insights and theoretical foundations for this investigation of the cultural influences on tax evasion. Specifically, the most recent rendition of anomie theory, institutional anomie theory (IAT) (Messner and Rosenfeld, 2001), identifies specific cultural values that might influence tax evasion. IAT suggests conditions where the willingness, through any means, legitimate or not, to achieve pecuniary benefits like monetary rewards displaces normative behavior or, in this case, tax compliance (e.g., Cullen, Parboteeah, and Höegl, 2004).

The remainder of the paper describes the conceptual background and hypotheses development, explains the research approach and methodology, reports the results and concludes with a discussion of the findings and implications.

2. Background, related research and hypotheses

2.1. Taxation, ethics and norms

Businesses typically arrange operations and financial transactions to minimize taxes, which is commonly accepted practice. Defining appropriate arrangements or management of tax positions characterizes the primary debate between taxpayers and tax collectors. Tax accountants often push the envelope with legitimate means to reduce tax liabilities, sometimes breaching ethical and legal standards. The concern of this study is illegal tax evasion behaviors (i.e., not reporting sales revenue to taxing authorities) rather than the possible legal approaches to avoiding tax payments.

Research examining efficient and effective methodologies to improve tax compliance includes communicating legal sanctions to taxpayers for non-compliance with tax laws, as well as appeals to taxpayers' morals and other social norms regarding compliance (Wenzel, 2004, 2005). Other work probes taxpayers' ethical, moral, and social attitudes and considers the relationship between these attitudes and compliance (e.g., Hanno and Violette, 1996). Broadly, these research streams find that culture envelops attitudes toward tax compliance and evasion. Culture shapes these attitudes through social learning and environmental influences (Wenzel, 2004). As a result, taxpayer values reflect values generally held by others within the social environment (social norms) (Wenzel, 2005).

2.2. National culture

Hofstede (1984, p. 25) defines national culture as a “collective programming of the mind which distinguishes the member of one human group from another”. National culture informs societal

members on what is or is not acceptable with regard to values, beliefs, and actions (Schwartz, 1992). In the work environment, values regarding organizational operations are congruent with broader cultural values (Newman and Nollen, 1996).

Although a number of major culture models appear in business research (e.g., Hofstede, 1980; House, Hanges, Javidan, Dorfman, and Gupta, 2004; Schwartz, 1992; Trompenaars, 1994), this study employs the most recent perspectives from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study (House et al., 2004). The GLOBE study is a long-term multi-phase program involving scholars from around the world, and provides the most comprehensive model in terms of country coverage ($n = 62$) and the most recent data on measures of national culture. This examination of national culture's influence on tax evasion uses dimensions of national culture from the GLOBE study consistent with IAT.

2.3. Institutional anomie theory

Anomie refers to instability in society caused by the erosion or abandonment of moral and social codes. Changes within a society (e.g., modernization of commerce) contribute to the decline of traditional social controls and a weakening of pro-social norms (Durkheim, 1897/1966; Merton, 1968). As pro-social norms deteriorate, the potential occurrence of deviant behavior, such as tax evasion, can increase. This deterioration of pro-social norms is especially prevalent when existing cultural values emphasize gaining materialistic and economic rewards and set aside ethical considerations within the society or organization (Martin, Johnson, and Cullen, 2009). Examples of fraudulent financial statements generated by Enron, Worldcom, Tyco, and Adelphia and the allegedly abusive tax shelter products sold by international CPA firms provide powerful evidence of firms' deliberate acquisition of material wealth using any available means.

Appealing to anomie theory, these examples indicate normlessness permeating the social structure of the firm. They tell of the pressures that exist for firms to engage in non-conforming behavior to achieve various goals. Anomic state firms may deviate from generally accepted standards and procedures in favor of activities that promote material achievement even if they violate social norms. As a result, anomie may limit legitimate firm achievement of organizational goals (Martin et al., 2009).

IAT specifies the cultural values that generate deviant behavior, suggesting that detachment from social rules and norms can flourish under the influence of certain cultural systems (Messner and Rosenfeld, 1997, 2001). A predominant outcome of social rule detachment is the willingness of individuals to “have no moral qualms” (Rosenfeld and Messner, 1997, p. 214) about choosing paths to goal fulfillment irrespective of the ethical norms prescribed within that society. Indeed, scholars argue that IAT appears readily adaptable for examining the relationship between cultural values and tax evasion behaviors (Riahi-Belkaoui and Picur, 2000). Although IAT also suggests that social institutions affect rates of deviant behavior, the focus of this paper involves using IAT to provide a theoretical rationale for selecting a set of cultural dimensions that may lead to differences in rates of firm-level tax evasion among countries.

2.4. Tax evasion and national culture

IAT highlights four specific culture dimensions likely to promote or suppress illegal tax evasion. These parsimonious and theoretically derived sets of national cultural dimensions include individualism, achievement orientation, assertiveness, and humane orientation.

First, evidence shows that in more individualistic cultures, calculative decision-making based on goal achievement prevails (Robertson and Fadil, 1999). Individualistic cultural values set the stage for firm behaviors that emphasize the pursuit of firm self-interest, largely neglecting concern for ethical consequences (Cullen

et al., 2004). According to IAT, individualistic cultural values encourage firm decision makers to choose firm goal achievement beyond concerns for the ethical or legal means to achieve goals (Messner and Rosenfeld, 2001). Thus, in such societies, firms more willingly deviate from accepted norms and evade taxes.

Although one study (Tsakumis et al., 2007) and its replication (Richardson, 2008) negatively relates individualism to tax evasion, this work lacks theoretical justification for such a relationship and contains only institutional control variables. However, previous empirical tests of IAT show that individualistic cultures promote ethically questionable decision making by managers (Cullen et al., 2004) and individualistic cultures have higher rates of firm-level bribery (Martin, Cullen, Johnson, and Parboteeah, 2007). Conversely, collectivist cultures downplay individual goal achievement favoring greater focus on group goal achievement. Collectivism, in contrast to individualism, arises from values rooted in belongingness and the notion that societal members are interdependent (Triandis, 1995) and, as such, should deter individual gains at the expense of the collective. As such, from the perspective of IAT, this argument suggests that individualistic, self-interested cultural values, rather than allegiance to the greater collective, should inflate temptations for firms to evade taxes illegally.

H1. Country-level individualism relates positively to the likelihood of firm illegal tax evasion.

Second, IAT stipulates that goal accomplishment influences personal self-worth determination and prevails in high achievement-oriented cultures (Cullen et al., 2004). Cultures emphasizing goal achievement often do so at the expense of maintaining reasonable expectations, potentially creating a “strain of inflated expectations” (Zahra, Priem, and Rasheed, 2005, p. 808). This goal achievement focus creates a hyper-competitive environment where the cliché – it’s not how you play the game, it’s whether you win or lose – becomes the predominant organizational paradigm (Messner and Rosenfeld, 2001). In these societies, individuals and firms more often consider outcomes only (whether you win or lose) as opposed to valuing processes (how to play the game) and outcomes jointly.

The central tenets of IAT suggest that valuing outcomes over processes increases the inclination and pressure to engage in ethically questionable behaviors like tax evasion. Supporting this contention in an empirical test of IAT, Cullen et al. (2004) find that the country-level cultural dimension of achievement orientation increases managers’ willingness to view ethically suspect behaviors as legitimate.

H2. Country-level achievement orientation relates positively to the likelihood of firm illegal tax evasion.

Third, House et al. (2004) advance previous culture dimensions of masculinity versus femininity as behavioral traits by assessing stereotypical views of cultures as assertive versus non-assertive. Assertiveness represents “the degree to which individuals in organizations or societies are assertive, tough, dominant, and aggressive in social relationships” (House et al., 2004, p. 395). According to House et al. (2004), assertive cultures value competition and success. Calculative logic rather than benevolence forms relationships, which suggests a means justifies ends approach to achieving one’s goals, consistent with IAT.

Grounded in IAT, and supported by Becker’s (1968) work on the economic returns from crime, calculative cultural values likely inflate the propensity for firms to evade taxes. Indeed, illegal tax evasion can represent an easier and cheaper, albeit riskier, mechanism for a firm to achieve important performance outcomes. Thus, as with achievement orientation, IAT suggests that high assertive cultures encourage deviant behaviors to reach important goals, including using illegal tax evasion to hide income and increase profits.

H3. Country-level assertiveness relates positively to the likelihood of firm illegal tax evasion.

Finally, IAT proposes that cultures with a stronger humane orientation value mutually beneficial actions between their citizens and organizations than they value benefits accrued by and limited to individuals. Humane orientation is, “the degree to which an organization or society encourages and rewards individuals for being fair, altruistic, friendly, generous, caring, and kind to others” (House et al., 2004, p. 569). According to House et al. (2004), countries with stronger humane orientation cultural values consider the interests of others, possess a need for belonging and affiliation, and embrace norms and responsibilities for protecting the well being of others.

Central to IAT, sacrificing self-interest in exchange for sustaining the good of others abates unfettered goal achievement for the sake of one’s self or one’s firm, creating diminished levels of anomie in these cultures (Messner and Rosenfeld, 2001). That is, a humane orientation reduces the pursuit of material and other competitive goals that create the anomic pressure for deviance (Passas, 2000). Ultimately, IAT states that when the concern for others preempts norms to succeed at any cost, cultural incentives to take from the common good diminish.

H4. Country-level humane orientation relates negatively to the likelihood of firm illegal tax evasion.

2.5. Institutional and firm-level controls

This paper explores whether cultural values influence tax evasion—even after controlling for well-known institutional, demographic, and attitudinal factors. Previous work (Tsakumis et al., 2007) links culture and a measure of hidden economy, but only controls for country-level GDP (i.e., institutional). Effectively isolating the effects of national culture on tax evasion requires a simultaneous evaluation of institutional, demographic, and attitudinal control variables with tax evasion. After controlling for these characteristics, the four cultural values stipulated by IAT should remain significant predictors of illegal tax evasion, supporting the hypotheses.

Richardson (2008) examines the quality of a nation’s social institutions, including the *rule of law* (Kaufmann, Kraay, and Mastruzzi, 2004) related to tax evasion. These studies find that nations with stronger regulations prohibiting and punishing illegal activities, including tax evasion, promote an environment of compliance among citizens. Indeed, strong regulations within a jurisdiction may reduce the effect of cultural variables on illegal tax evasion. For example, certain individualistic or achievement-oriented cultures may also have a strong rule of law.

On the other hand, other institutional and firm variables can increase evasion likelihood. High levels of corporate and individual taxes levied by a country can affect illegal tax evasion (Richardson, 2006). When a legitimate end or goal is difficult to achieve through legitimate (legal or ethical) means, or is blocked entirely, firm decision makers more likely resort to illegitimate means to achieve their objectives (Cloward and Ohlin, 1966). Assuming firms hold profitability as an important end goal, then a greater tax burden (either individual or corporate) may promote illegal tax evasion likelihood.

Organizations spend billions of dollars on external audits and other attestation services, and as the perception of detection increases, the likelihood of tax evasion decreases (see Jackson and Milliron, 1986). Audits are well-documented detection techniques (Kinney and Martin, 1994). Consequently, audit likelihood may effectively limit an organization’s likelihood of illegal tax evasion. In the economics and criminology literatures, deterrence theory also suggests that the likelihood of an audit reduces tax evasion, as advanced in the classic article by Becker (1968).

Illegal tax evasion also may differ for small and individually owned firms versus large, incorporated firms. Large incorporated firms have the ability to reduce their tax burdens by hiring CPAs to minimize and avoid taxation legally. Research links firm size to corruption (e.g., Baucus and Near, 1991), including tax evasion (Jackson and Milliron, 1986). Recent evidence (Besim and Jenkins, 2005) suggests that the proportionally greater compliance costs for small businesses increases their likelihood of tax evasion. Smaller, individually owned firms have limited options, and may opt for engaging in illegal tax evasion (Cloward and Ohlin, 1966).

Research also shows lower tax compliance for the self-employed and for firms in industries with fewer formal organizations (Besim and Jenkins, 2005). Evidence supports the notion that the self-employed generally underreport their income (e.g., Lyssioutou, Pashardes, and Stengos, 2004). Just as self-employment provides added opportunities to hide income, so may certain industries characterized by common attributes. For instance, evidence suggests that farmers and other craft-based occupational groups often have lower tax compliance (Besim and Jenkins, 2005). Thus, the analyses also control for both *individual ownership* and the *industry* in which the firm operates.

In spite of these measures, within countries, firm managers likely vary in the degree to which they believe that tax regulations hinder firm economic performance. We expect that firm-level perceptions of the degree to which taxes are a burden also influences illegal tax evasion. Specifically, research by Hibbs and Piculescu (2005) suggests that the degree to which firms regard taxation as burdensome correlates positively with tax evasion. Thus, the analysis controls for individual firm perceptions of tax burden.

3. Research method

3.1. Sample

A multilevel model testing the predictions about tax evasion and culture utilizes secondary data from the World Bank, which was gathered from private enterprise firms located in countries worldwide. World Bank researchers identified and pre-qualified respondents using personal interviews. Respondents represent firms of varied size and age from a variety of industries (agriculture, construction management, manufacturing, services). The initial

sample of firms and countries included 10,032 firms in 80 countries based on data collected for the World Business Environment Survey (World Bank, 2000). Of the 80 total WBES countries, culture indicators were available for 31, and measures of tax evasion were available for 3331 firms. Table 1 lists the countries included.

The minimum sample size for a country was 100 firms. Characteristics of the firms mirrored those of the total WBES sample overall. Firms included were mostly small to medium, with employees numbering less than 100 and sales less than \$10 million (U.S. dollars). Firms included in the analysis averaged 21 years of age at the time of the WBES data collection. In addition to firm demographics, the WBES measured local economic policy, governance, regulatory environment, infrastructure, and financial barriers (Batra, Kaufmann, and Stone, 2003). Focused generally on business environments and practices, managers also responded to items related to firm tax evasion. The World Bank researchers translated and back-translated the questionnaire to ensure consistency in the instrument.

3.2. Variables and data sources

The WBES survey asked firm respondents “What percentage of total sales would you estimate the typical firm in your area of activity keeps ‘off the books?’” Survey participants responded using a 7-point scale with endpoints labeled “None At All” and “More Than 50%” with the intermediate responses increasing by 10%. Additional responses “Don’t Know” and “Refuse to Answer” were removed from the analysis. Approximately 50% of the respondents kept some level of activity off the books, with more than 40% of those businesses keeping less than 20% of sales activities from taxing authorities. Since the study is interested in the likelihood of evasion rather than the magnitude of the evasion activity, the dependent variable was transformed into a 0–1 binary response. Firms that responded “None At All” received a “0” code, representing no likelihood of tax evasion. Firms giving any other response received a “1” code, representing likelihood of tax evasion. Statistical prescriptions advocate dichotomizing the dependent variable when highly skewed. Indeed, researchers attest to “more realistic and meaningful measure of strength of relationship” obtained by dichotomizing variables rather than treating such a variable as categorical (Farrington and Loeber, 2000, p. 100).

The culture dimensions (individualism, achievement orientation, assertiveness, humane orientation) derive from measures from the

Table 1
Descriptive statistics and Spearman cross-level correlations.^{a,b,c}

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Tax evasion															
2. Individualism	.10														
3. Achievement orientation	-.26	.42													
4. Assertiveness	-.23	-.35	.03												
5. Humane orientation	-.48	-.16	-.23	-.20											
6. Rule of law	-.34	-.45	-.19	.14	.37										
7. Corporate tax burden	.04	-.05	.10	-.07	.13	.13									
8. Individual tax burden	-.10	.07	.12	-.10	-.01	.33	.35								
9. GDP ^d	-.08	-.16	-.18	-.17	.37	.42	.58	.37							
10. Firm audit likelihood	-.41	.27	.30	.02	.07	.14	.02	-.08	-.10						
11. Firm size	-.15	.47	.46	.10	-.05	-.21	.30	-.18	.09	.46					
12. Individual ownership	.45	-.23	-.11	-.25	-.38	-.26	-.10	-.08	-.23	-.51	-.47				
13. Industry: agriculture	.18	-.34	-.02	-.16	.09	-.07	-.16	.07	-.07	-.47	-.52	.22			
14. Industry: construction	.08	-.43	-.53	-.16	.17	.19	.22	-.19	.30	-.18	-.27	.23	.04		
15. Perceived tax burden	.13	.06	-.13	-.63	.13	-.30	-.03	.04	.30	-.27	-.05	.26	.13	.12	
Mean	0.48	4.85	6.03	3.81	5.42	0.27	0.30	0.32	25.8	1.70	1.87	0.41	0.02	0.09	2.74
Standard deviation	0.17	0.52	0.29	0.61	0.22	1.01	0.06	0.10	1.81	0.18	0.21	0.15	0.04	0.05	0.46

^a n = 3331, level 1; n = 31, level 2. Countries in the analysis include Argentina, Bolivia, Brazil, Canada, Colombia, Costa Rica, Ecuador, El Salvador, France, Georgia, Germany, Guatemala, Hungary, India, Indonesia, Italy, Malaysia, Mexico, Philippines, Poland, Portugal, the Russian Federation, Singapore, Slovenia, Spain, Sweden, Thailand, Turkey, the United States, the United Kingdom, and Venezuela.

^b Nonparametric Spearman correlations used as several variables are categorical. Correlations computed by calculating means for firm level variables across each country.

^c Correlation coefficients italicized significant at $p < .05$, one-tailed. Correlation coefficients bolded significant at $p < .01$, one-tailed.

^d GDP was log transformed prior to computation.

Global Leadership and Organizational Behavior Effectiveness (GLOBE) study (House et al., 2004). Grounded in theoretical notions developed by foundational culture researchers (e.g., Schwartz, 1992), House et al. conducted a broad-based, cross-national, cross-industry study involving 62 countries with the aim of advancing and refining cultural variables.

To separate potentially confounding effects from the multilevel investigation of national culture and firm-level tax evasion, the institutional, demographic, and attitudinal control variables were included. Kaufmann et al.'s (2004) governance database provided the rule of law measure.

Included in the model are two measures of institutional tax. Highest marginal corporate tax rate, obtained from the University of Michigan (2010) (<http://www.bus.umich.edu/otpr/otpr/default.asp>), represented the corporate tax burden. Mean individual income tax rate for each country represented individual tax burden, as reported in the CIA [Central Intelligence Agency] (2010). (<https://www.cia.gov>). The United Nations Human Development Report (United Nations Development Program, 2002) provided dollar values for GDP. As is typical in nation-level research, GDP was log transformed.

Demographic variables include audit likelihood, firm size, individual ownership, and industry with each derived from the WBES. Firm perceived tax burden originates from a WBES question "How problematic are tax regulations/administration for the operation and growth of your business?" using a 4-point scale (No Obstacle, Minor Obstacle, Moderate Obstacle, and Major Obstacle).

3.3. Analysis: hierarchical generalized linear modeling

Hypotheses suggest that national culture attributes significantly influence likelihood of firm-level illegal tax evasion after controlling for other well-known predictors. Because this question crosses levels of analysis, a multilevel modeling technique is appropriate. Further, because tax evasion is a binomial response variable (0, 1), precluding the use of standard linear empirical analyses, a hierarchical generalized linear model (HGLM) tests the hypotheses (Bryk and Raudenbush, 1992).

The model is a random effects intercept-as-outcomes model (see Table 2). Standard HLM models follow a normal sampling method using an identity link function. However, because the dependent variable, tax evasion, is dichotomous (yes/no response), the analysis employs a binomial sampling model with a logit link function (Bryk and Raudenbush, 1992). Because the dependent variable has a binomial distribution with m_{ij} trials where m equals 1, the model uses the special case of the binomial distribution known as the Bernoulli distribution. As such, the tax evasion outcome also reflects the probability of success or $Y_{ij} = \varphi_{ij}$.

4. Results

Table 1 features correlations and descriptive statistics for variables at both level 1 (firm) and level 2 (country). Since the dependent variable, TAX EVASION, and other control variables (e.g., AUDIT and SIZE) are categorical variables, correlations are non-parametric Spearman correlations. Firm-level (level 1) correlations with level 2 variables use the mean level 1 values for the 31 different countries. Correlations, even when derived from aggregated variables, signal the importance of examining cultural values while considering the previously identified institutional, demographic, and attitudinal variables concurrently.

Table 2 presents the results from the HGLM model specified above. Results reflect the intercept-as-outcomes random effects HGLM model and include parameter estimates of national culture variables predicting tax evasion likelihood, as well as control variables. Again, since the dependent variable is a 0–1 binary response variable, construction of the HGLM model follows a Bernoulli distribution.

Table 2
Results for HGLM analysis of firm tax evasion likelihood.

Variables	Parameter estimates			
	b	s.e.	p-value ^a	Odds ratio ^b
<i>Nation level</i>				
<i>National culture</i>				
Individualism/collectivism (H1) ^c	−0.51	0.16	0.003	0.603
Achievement orientation (H2)	−0.46	0.22	0.025	0.629
Assertiveness (H3)	−0.43	0.13	0.002	0.652
Humane orientation (H4)	−1.59	0.38	0.001	0.204
<i>Country level variables</i>				
Rule of law	−0.18	0.09	0.024	0.836
Corporate tax burden	0.02	0.02	0.154	1.016
Individual tax burden	0.00	0.01	0.403	1.002
Ln (GDP)	−0.02	0.05	0.345	0.982
<i>Firm level</i>				
Firm audit likelihood	−0.18	0.11	0.046	0.833
Firm size	−0.28	0.06	0.001	0.760
Individual ownership	0.12	0.09	0.112	1.122
Industry: agriculture	−0.01	0.10	0.475	0.994
Industry: construction	0.36	0.17	0.020	1.157
Perceived tax burden	0.15	0.04	0.001	1.280

HGLM model:

Level 1 (firm level).

$$EVADE_{ij} = \beta_{0j} + \beta_1(AUDIT)_{ij} + \beta_2(SIZE)_{ij} + \beta_3(OWNER)_{ij} + \beta_4(AGRIC)_{ij} + \beta_5(CONST)_{ij} + \beta_6(TAXBURD)_{ij} + R_{ij}$$

Level 2 (country level).

$$\beta_{0j} = \gamma_0 + \gamma_1(INDIV) + \gamma_2(ACHEIVE) + \gamma_3(ASSERT) + \gamma_4(HUMANE) + \gamma_5(LAW) + \gamma_6(CORPTAX) + \gamma_7(INDIVTAX) + \gamma_8(\lnGDP) + U_{0j}$$

^a p-values are one-tailed.

^b The odds ratio is the ratio of the likelihood of tax evasion occurring given certain levels of national culture variables, country level variables, and firm level variables. An odds ratio less than 1 indicates that the likelihood of illegal tax evasion is greater for lower values of national culture.

^c Based on the coding from GLOBE, lower values of Individualism/Collectivism represent individualism, while higher values represent collectivism.

Table 2 features these results and includes corresponding odds ratios for each variable.⁴

Discussion of control variables precedes hypotheses examination. For the institutional control variables, as expected, rule of law significantly limits the likelihood of illegal tax evasion ($\gamma_5 = -0.18$, $p < .05$). This result echoes past research, demonstrating that significant regulation and control within a country lead to lower levels of deviant behavior (Schneider and Torgler, 2007).

Results show that corporate tax burden, individual tax burden, and GDP do not significantly influence tax evasion, returning prior research findings that tax evasion occurs in economically (dis) advantaged countries (Tsakumis et al., 2007) or simply as a response to oppressive tax rates (Cebula, 1997).

For demographic control variables, the likelihood of an audit significantly relates to tax evasion ($\beta_1 = -0.18$, $p < .05$), and firm size is a significant negative predictor ($\beta_2 = -0.28$, $p < .001$). Individual ownership and illegal tax evasion, however, only weakly relate likely due to significant correlations between audit likelihood and firm size shown in Table 1. Strong correlations also exist between firms designated as agricultural and audit likelihood and firm size, providing a likely explanation for the lack of results in the analysis

⁴ When examining statistical significance for level 1 and level 2 variables, the power of each test varies by the sample size of the level. For level 1 variables, the sample size is equal to the number of firms from the WBES survey (3331 firms). The level 2 statistical tests in HGLM do not use the total firm level sample size, as would be the case in a logistic regression approach with country-level variables assigned to each individual firm. Rather, HGLM parameter estimates and standard errors are a combination of group-level sample size weighted by the reliabilities of the individual-level dependent variable in each group. Although parameter estimates are usually similar, the HGLM approach counters the tendency of regression techniques to underestimate standard errors of level 2 variables based on the larger individual-level sample size (Hofmann et al., 2000).

for agricultural firms ($\beta_4 = -0.01, p > 0.10$). By contrast, construction firms more likely avoid taxation ($\beta_5 = 0.36, p < .05$). The last firm-level measure is the attitudinal measure perceived tax burden. Managerial perceptions of firm tax burden significantly increase propensity to avoid taxation ($\beta_6 = 0.15, p < .001$), suggesting that, irrespective of actual tax burden, perception of tax burden weighs heavily in illegal tax evasion activity.

Analyses consider national culture (individualism, achievement orientation, assertiveness, humane orientation), after controlling for institutional, demographic, and attitudinal forces. For H1, higher individualism (measured by lower collectivism) negatively relates to tax evasion as predicted ($\gamma_1 = -0.51, p < .01$). Collectivist cultures are less likely to evade taxation illegally, while individualistic cultures are likely to engage in activities for personal betterment. For H2, contrary to the tenets of IAT, achievement orientation negatively effects tax evasion ($\gamma_2 = -0.46, p < .05$). Specifically, the lower the achievement orientation, the more likely the firm will resort to illegally hiding income from taxing authorities. Similarly for H3, the cultural value assertiveness negatively effects tax evasion, also counter to the theoretical predictions of IAT ($\gamma_3 = -0.43, p < .01$). These findings suggest that low achievement oriented and low assertive cultures resort to deviant behaviors like tax evasion. The discussion and conclusion sections of the paper further explore these counterintuitive findings.

Humane orientation has a strong and substantive negative effect on illegal tax evasion ($\gamma_4 = -1.59, p < .001$), supporting H4. Consistent with IAT, national cultures possessing values that emphasize a humane orientation are less likely to engage in deviant behaviors such as tax evasion. This finding evidences that high cultural priorities for altruism, benevolence, kindness, love, and generosity can effectively dampen the likelihood that firms would purposely hide income for self-interested benefit. Cultures high in humane-oriented values likely urge members to provide social support to each other through various means, including providing for the greater good through redistributive efforts made possible through taxation.

5. Conclusions and implications

Recent iterations of classic sociological work on deviance inform this research. Analyses extend the questions to a multilevel framework testing hypotheses relating theoretically grounded culture variables to the likelihood of illegal tax evasion. The multilevel framework also controls for relevant country and firm characteristics demonstrated to influence deviant behavior in past research. The advantages of a cross-cultural, multilevel approach involve the ability to span a variety of national contexts representing 31 countries. This perspective on culture mapped to the theoretical tenets of institutional anomie theory is useful in predicting deviant firm behaviors cross-culturally. However, results provide mixed support for the predictions of IAT. Specifically, findings for individualism and humane orientation are consistent with the central tenets of IAT. The IAT theoretical framework holds that more individualistic countries have stronger drives for success at the expense of the collective, and will therefore have more societal actors that choose deviance or illegitimate means to success. Findings support this notion. Findings also support the notion that more humane-oriented societies will foster behaviors that reduce deviance in the form of illegal tax evasion. Yet, significant findings for achievement orientation and assertiveness on tax evasion likelihood counter IAT stipulations.

IAT predicts that high achievement-oriented and high assertive cultures will more likely engage in illegal tax evasion behaviors. Instead, results suggest that lack of opportunities and lack of ambition to succeed can encourage firms in low achievement, low assertive cultures to engage in deviant behavior like tax evasion.

Past research using an IAT approach to understand firm deviance (e.g., Cullen et al., 2004) might provide some insights for interpretation. Specifically, achievement orientation and assertiveness possibly

lead people to search first to minimize tax burden legitimately by taking full advantage of loopholes in the laws and tax advice. This interpretation echoes previous research showing that those who approach a tax system with strong motivation to avoid paying can gain economically (Bartelsman and Beetsma, 2003). Firms hire aggressive tax advisors to sift through complex tax codes to find legal alternatives to minimize the overall tax burden (Erard, 1993). If firms can achieve the same outcome of paying lower taxes via less risky and legal means, then assuming economically rational decision-making, the high achievement orientation/high assertive cultural values should, indeed, reduce tax cheating rates in favor of tax avoidance.

Further, anomie theorists elaborating on Merton's early ideas (e.g., Cloward and Ohlin 1960) suggest that deviance occurs in part from differential opportunities available to seek both deviant and legitimate means to achieve ends. Strong achievement orientation and/or assertiveness cultures typically embody values motivating firms to avoid payment using any available means. Given available legal means, blunt methods, including hiding sales revenue, become less preferable. Weak achievement orientation and/or assertiveness cultures may be less motivated to invest psychic energy and resources to avoid government payments legally, and may therefore hide funds as more passive resistance to taxation.

Specifically, in low achievement-orientation cultures, where people are less likely to pursue means to lower their tax burden legally, illegal cheating in the form of tax evasion may present a desirable option when firms face the actual payment. In an earlier test of IAT, Cullen et al. (2004) also found achievement orientation negatively associated with managers' willingness to justify ethically suspect behavior. Cullen et al. (2004) also argue that managers prefer to use stronger ethical reasoning when given the opportunity to obtain achievement goals via legitimate paths. Similarly, although low assertive cultures lack ambition on a number of fronts (House et al., 2004), these cultures remain committed to generating wealth. This commitment to wealth coupled with the culturally predominant lack of ambition means that success through illegitimate means, including implementing tax avoidance strategies, may provide the more available opportunity to wealth achievement. Cloward and Ohlin (1966) do, in fact, suggest that low assertive/low ambition cultures will promote greater tax evasion behaviors by firms.

A more fine-grained consideration of the cultural value of achievement orientation and its polar opposite, ascription, suggests further explanation for the findings. In contrast to high achievement-oriented cultures, low achievement-oriented cultures tend to value ascription. That is, ascription-oriented societies view status and legitimation as rightly based on the actor's location in a social system (e.g., high social status). Achievement-oriented cultures promote values that regard status and legitimation as linked to accomplishments based on outcomes of fair competition. When applied to companies in low achievement societies, more companies use connections with other companies or government entities to achieve success and legitimation based on ascription rather than through competitive performance. Such cultures may tolerate more tax evasion because the rules of the game downplay company accomplishments in favor of firm location in a social system. By contrast, in high achievement societies, success norms promote equal application of the rules of the game and suggest stronger sanctions for those who attempt to evade taxes.

The unexpected findings for the cultural values of achievement orientation and assertiveness signal the need for additional empirical studies to understand more completely the key tenets of IAT when applied to organizational or white-collar deviance. For example, what unique characteristics of deviant firm behaviors (bribery, unethical reasoning, and tax evasion) cause firms and their decision makers to respond differently to cultural forces? Future research should examine strategically aggressive behaviors like tax avoidance and the association with high achievement and high assertive cultures.

The possibility of interactions between assertiveness and achievement also warrants further investigation.

More broadly, IAT provides a theoretical explanation for why a behavior like tax evasion, although universally denounced as wrong, continues to thrive in firms across the world. Specifically, IAT facilitates understanding of why deviant behaviors differ by country, based on variations in the cultural context. Results signify the potential value in applying this broad based framework as a cross-cultural, cross-level explanatory backdrop in global business research, particularly relevant to the contemporary international competitive landscape. With widespread globalization, managers cannot afford to be uneducated or misinformed about predominant host country business practices. These results augment previous empirical tests of IAT that shed light on cross-national bribery practices and ethical reasoning described above. As cross-cultural research continues to investigate critical variation in such behaviors, multinational enterprises will become even better equipped to confront and manage prevailing cultural forces—many of which have the potential to create severe competitive obstacles or blockages.

From a regulatory perspective, the findings suggest cultural and national contexts that are increasingly prone to illegal tax evasion. The results may provide national and international lawmakers a clearer picture of why some countries experience greater prevalence of tax evasion than others. Local economies that continue to face significant firm illegal tax evasion may better understand forces at play through this framework. These authorities also may craft strategies and responses for subverting such behavior, or perhaps devise alternate approaches for garnering resources to redistribute to the population's most needy and for supplementing established social welfare nets.

Although this study presents many important findings, an important limitation exists. Specifically, limits inherent in the use of secondary data constrain empirical testing of the questions. Nonetheless, this study provides important insights for a relatively large number of countries, potentially outweighing limitations. Future research might apply IAT via a cross-level lens to other areas of corporate wrongdoing, such as the practices leading to the worldwide financial crisis. In addition, the strength and certainty of legal sanctions or other punishment mechanisms in response to tax evasion or other deviant behaviors might prove an important area for future research. As suggested by this study, different or additional cultural factors, possibly paired with institutional factors, may be required for such investigations.

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