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DOI: 10.1017/mor.2015.16, Published online: 02 July 2015

Link to this article: http://journals.cambridge.org/abstract_S1740877615000169

How to cite this article:

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Are Manager-controlled Firms More Likely to Bribe than Shareholder-controlled Firms: A Cross-cultural Analysis

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ABSTRACT To examine the bribing behavior of firms, we developed a cross-level moderation model using agency theory at the firm level and anomie theory at the societal level to investigate the relationship between manager control of firms and firm bribery activity. The results of this cross-cultural analysis using a sample of 1,799 firms from 38 nations showed that at the firm level, manager-controlled firms (MCFs) have a higher propensity to bribe than shareholder-controlled firms. At the country level, bribery is higher in MCFs (relative to shareholder-controlled firms) in societies with a low level of institutional collectivism, a high level of uncertainty avoidance, economic change, and income inequality. Contrary to the hypothesis, the relationship between bribery and manager control is stronger rather than weaker in societies with press freedom. Implications for future research and practices are discussed.

KEYWORDS agency theory, anomie theory, bribe, cross-cultural, firm control

INTRODUCTION

Corruption is a global phenomenon that continues to impact business operations worldwide. Because bribery is a widespread occurrence, the nongovernmental organization Transparency International began the Bribe Payers Index in 1999 to investigate the likelihood of firms from the world’s industrialized countries to bribe abroad. Scholars have paid much attention to bribery partly due to its multiple influences. At the national level, while some research suggested that bribery creates inefficiency in a country’s marketplace (Campos, Lien, & Pradhan, 1999; Hamra, 2000; Luo, 2004) and government policy (Esty & Porter, 2005), other studies found that corruption is beneficial for economic growth in some nations (Gyimah-Brempong & de Camacho, 2006). At the firm level, although engaging in bribery might affect a firm’s good will, performance, and operations (Spencer...
& Gomez, 2011), the firm decision makers may ultimately feel it is necessary to engage in the bribing behavior in order to conform to local conditions.

Since the consequences of bribery are multidimensional, making a definitive judgment about this organizational behavior was beyond the scope of this study. The main purpose of this study was to build a model illustrating factors contributing to the behavior of firm bribery. Although scholars have dedicated much effort to bribery research, previous studies (e.g., Ramdani & van Witteloostuijn, 2012; Wu, 2005) primarily focused on only one level of analysis. Conducting an analysis emphasizing either micro- or macrolevel research cannot provide sufficient information for behaviors occurring at either level (Porter, 1996). For instance, a study that focuses on firm-level bribery might miss an important point that the institutional disparities of different nations could influence firm bribing activity (Zhou & Peng, 2012). Meanwhile, researchers investigating the association between cultural values and bribery (e.g., Martin, Cullen, Johnson, & Parboteeah, 2007) might have also ignored firm-level factors that may simultaneously impact such firm behavior; however, firms from the same culture might not necessarily behave in the same way.

To fill the research gaps mentioned above, we formed a cross-level moderation model to examine the bribery activity of firms. We argue that firm bribery behavior is influenced concurrently by country-level factors and firm-level factors. We treated national-level factors as moderators. As recommended by Tsui (2007) and Tsui, Nifadkar, and Ou (2007), a cross-level moderation model will provide a more comprehensive understanding of firm-level behavior. At the firm level, we employ agency theory (Jensen & Meckling, 1976; Ross, 1973) to compare firm bribery activity between manager-controlled firms (MCFs) and shareholder-controlled firms. At the country level, we use anomie theory (Durkheim, 1897/1966; Merton, 1968) to examine whether the association between types of firm control and firm bribery activity changes under the influences of cultural values and social institutions. This study employs a sample of 1,799 firms from 38 nations.

THEORETICAL BACKGROUND AND HYPOTHESES

Bribery, a specific type of transaction involving the misuse of public resources for private gain, is one of the most common forms of corruption. In the public sector, corruption could undermine the regulation of laws and create uncertainty for law enforcement (Cuervo-Cazurra, 2006), and in the private sector, such behavior could decrease the level of trust among private institutions and parties (Coase, 1979). While corruption might be harmful for firm growth should they get caught (Tanzi, 1998), it may also be an opportunity for firms to become involved in political behavior (Boddewyn & Brewer, 1994).

According to Luo and Junkunc (2008), corruption is related to bureaucracy, which hampers governmental efficiency and induces firm bribing behavior. Because the context of every nation differs, Rodriguez, Uhlenbruck, and Eden (2005) developed
a two-dimensional model of corruption to predict how the pervasiveness and arbitrariness of corruption influence the entry modes of multinational enterprises and strategic decision making. Moreover, Montiel, Husted, and Christmann (2012) distinguished between policy-specific corruption and general corruption and investigated how these two dimensions of corruption predict the certification decisions of firms.

At the macrolevel analysis, Ades and Di Tella (1999) found that nations in which domestic companies are protected from foreign competition have a higher degree of corruption. Connelly and Ones (2008) examined the association between personality at the country level and the country’s corruption. The results showed that countries with low neuroticism and high extraversion tend to be less corrupt. Sanyal (2005) found that higher cultural values of power distance and masculinity contribute to more bribe taking. Also, the Seleim and Bontis (2009) study found that the cultural dimensions of uncertainty avoidance, humane orientation, and collectivism related to corruption. Some studies showed that the national policies (Cuervo-Cazurra, 2006) such as economic freedom of a country (Graeff & Mehlkop, 2003), GNP per capital (Husted, 1999), and historical development of a nation (Triesman, 2000) are all related to corruption.

Analyses of bribery at the microlevel have gained more attention recently. For example, Clarke and Xu (2004) used samples from Eastern Europe and Central Asia and found that profitable firms are more likely to bribe. Ramdani and van Witteloostuijn (2012) reported that the separation of ownership and control is associated with a firm’s likelihood to bribe. In addition, firm characteristics, such as growth rate, firm size, and corporate governance, are important factors when predicting firm bribery activity (Wu, 2009).

Societal Anomie as a Contingent Factor

Durkheim (1897/1966) argued that when societal values change – especially in the face of technological advancement, economic change, or modernization – social controls weaken and deviant behaviors increase as the result. Merton (1968) observed the pressure for deviance from cultural values and social structure. He contended that anomie is the result of overemphasizing socially desired values, especially economic-related ones, while ignoring the means to reach those ends. Merton also observed that access to legitimate means to reach socially desired ends was unequally distributed. He argued that, in comparison to people from upper social classes, people from lower social classes are more likely to obtain goals illegally, because they lack sufficient economic resources or possess inferior educational backgrounds. Contemporary anomie theorists (Messner & Rosenfeld, 2001; Rosenfeld & Messner, 1997) refined the original anomie theory to formulate the Institutional Anomie Theory. They identified specific cultural values and social institutions that stimulate an individual’s egoistic ethical reasoning. These
researchers argued that anomie will result when economic power penetrates noneconomic institutions, such as the family, the polity, and schooling.

Cullen and his colleagues quantified the dimensions of cultural values (achievement, individualism, universalism, and pecuniary materialism) identified by contemporary anomie theorists. They examined the main effects of national factors, including cultural values and social institutions, on managers’ willingness to justify ethically suspect behaviors. Martin et al. (2007) applied the anomie theory to investigate local firms’ bribery activity, extending the theory’s application by focusing on firms rather than on human beings. The authors showed how a company’s external environment influences its bribing behavior. Since a firm’s top management is usually the driving force behind the firm’s bribing behavior (Clinard, 1983; Zahra, Priem, & Rasheed, 2005), the controller of a firm might offer new insight into its bribing activity. We employed agency theory to argue that MCFs are more likely to bribe than shareholder-controlled firms and that this relationship changes under different societal conditions. Figure 1 presents a summary of two previous studies and the current study based on society-level anomie and firm-level agency problems in predicting a firm’s bribery activities.

Firm-level Hypothesis: MCFs vs. Shareholder-controlled Firms

Firm control refers to the firm’s ultimate decision maker who decides the broad policies and objectives that direct the company’s operations and activities (Mizruchi, 1983). Each firm may have different final-decision makers, leading the companies in various directions (David, Kochhar, & Levitas, 1998). For instance, a private firm usually treats profit as the top priority; however, government-controlled firms may consider political goals as their prime concern (Shapiro & Willig, 1990; Shleifer & Vishny, 1997). Following the same logic, because each type of firm control has its innate characteristics, we argued that different types of firm control carry varying degrees of propensity to bribe.

An MCF is defined as a firm in which the ultimate decision maker is its manager. Alternately, a shareholder-controlled firm implies that the firm’s board of directors is responsible for the final decision making of the company. According to agency theory (Jensen & Meckling, 1976; Ross, 1973), we argued that MCFs are more likely to bribe than shareholder-controlled firms. Agency theory suggests that the conflict between the principle and the manager of a firm comes from the different goals of these two parties. For a firm’s board of directors, the main goal is to protect shareholders’ interests and maximize the value of the firm (Ramdani & van Witteloostuijn, 2012); they are more interested in pursuing strategies for long-term profits. For shareholders, although bribery might bring them short-term profits, engaging in bribing activities might also jeopardize the long-term interests of the firm.

On the other hand, managers’ natural inclination is to allocate the firm’s resources for their own benefits (Jensen & Meckling, 1976) and to maximize their private interests (Ramdani & van Witteloostuijn, 2012) at the expense of others (even
Managers are likely to be replaced if they do not show satisfactory short-term firm performance (Khorana, 1996). Hence, managers tend to have a short-term orientation (Hoskisson, Hitt, Johnson, & Grossman, 2002) and would focus on initiatives that benefit their reputation and also help them gain financial rewards in a short period of time (Villiers, Naiker, & Staden, 2011). Engaging in bribery might be an acceptable way to reduce their job risk, because bribes can help shareholders). Managers are likely to be replaced if they do not show satisfactory short-term firm performance (Khorana, 1996). Hence, managers tend to have a short-term orientation (Hoskisson, Hitt, Johnson, & Grossman, 2002) and would focus on initiatives that benefit their reputation and also help them gain financial rewards in a short period of time (Villiers, Naiker, & Staden, 2011). Engaging in bribery might be an acceptable way to reduce their job risk, because bribes can help
them gain a short-term financial advantage (Jeong & Wiener, 2012). As Zhou and Peng (2012) suggest, bribery may help firms to gain competing financial capital, obtain appropriate policy information, and avoid cumbersome bureaucracy. In other words, engaging in bribery might help MCFs attain better firm performance in the short term and, thus, help managers preserve their job positions as well as financial gains.

**Hypothesis 1:** MCFs are more likely to engage in bribery than shareholder-controlled firms.

**Country-level Hypothesis: The Anomic Societal Context**

Although the agency theory has been employed in many areas (Eisenhardt, 1989), the assumption that human nature is self-serving is considered over simplified (Doucouliagos, 1994). Davis, Schoorman, and Donaldson (1997) suggested that cultural values may influence people’s self-interested orientation. In other words, the agency theory’s assumption about managers’ selfishness may not hold true across all contexts. Managers may exhibit self-interested behavior more in certain cultures than in others.

We argued that anomie theory could complement agency theory to provide a better explanation of firm bribing behaviors. Contemporary anomie theorists contend that certain cultural values and social institutions could stimulate egoistic thinking. That is, a manager’s egoistic nature could be analyzed through country-level factors under anomie theory (see Cullen, Parboteeah, & Hoegl, 2004). Because of managers’ assumed egocentric nature, we also argue that managers are influenced by anomie social context. Therefore, from an anomie theoretical perspective, a society’s cultural values and social institutions could change managers’ self-seeking orientation and the relationship between firm-level control and firm bribery activity.

In this study, we focus on the two cultural values (institutional collectivism and uncertainty avoidance) and three social institutions (economic change, income inequity, and press freedom) to develop the moderating-effect hypotheses.

**Institutional Collectivism**

The cultural values of collectivism and individualism influence an individual’s likelihood to be opportunistic (Doney, Cannon, & Mullen, 1998). Individualistic societies encourage detachment from the collective; thus, social control becomes weaker (Cullen et al., 2004). Individualistic societies also stimulate competition, pressing people to ignore traditional normative limits when pursuing personal accomplishment (Messner & Rosenfeld, 2001).

According to Gelfand, Bhawuk, Nishii, and Bechtold (2004), the cultural dimension of collectivism can be divided into institutional collectivism and in-group collectivism; whereas the former focuses on group loyalty and collective interests, the latter emphasizes the relationship between children and parents.
Institutional collectivism is relevant considering its influence on managers’ self-interested behaviors.

Under collectivistic cultures, people take pride in the groups they are members of, including their families, their close friends, or the organizations in which they work (Javidan & House, 2001). People are more interdependent in collectivistic cultures where individuals are more likely to consider the needs of their close group members when making decisions (Waldman, de Luque, Washburn, House et al., 2006). That is to say, in highly collective societies, people prioritize the needs of other group members above their own.

According to anomie theory, collectivist cultures emphasize group goals, which would reduce a manager’s egoistic thinking. In this context, managers become less self-centered when making decisions. Hence, managers are less likely to engage in bribery, and the original positive relationship between firm control and a firm’s bribery activities is reduced.

**Hypothesis 2:** As institutional collectivism increases, the positive association between bribery and MCFs (relative to shareholder-controlled firms) decreases.

**Uncertainty Avoidance**

The cultural value of uncertainty avoidance refers to the ‘extent to which the members of a culture feel threatened by uncertain or unknown situation’ (Hofstede, 1997: 113). In low uncertainty avoidance societies, people are more spontaneous and more readily accepting of unpredictable situations. On the other hand, in societies scoring high on uncertainty avoidance, people prefer planning ahead and expected situations. People under this cultural context also tend to establish regulations, follow existing rules or norms, and avoid change. Research suggests that individuals in high uncertainty avoidance cultures tend to be more anxious (Hofstede, 2001) and may consider engaging in risky or unethical behaviors to reduce such anxiety as acceptable (Hofstede, 1997).

According to anomie theory, people in high uncertainty societies have a strong tendency to prefer an expected outcome. This anomic pressure increases the likelihood of people to engage in deviant behaviors to reach an anticipated result. For managers, job insecurity is a strong cause of anxiety in high uncertainty avoidance societies. Managers may be more willing to engage in deviant behaviors, including bribery, to reduce job insecurity; that is, high uncertainty intensifies a manager’s egoistic thinking. Under societies high on uncertainty avoidance, managers become more inclined to engage in deviant behaviors, such as bribery; thus, the original positive manager firm control–firm bribery activity association becomes stronger.

**Hypothesis 3:** As uncertainty avoidance increases, the positive association between bribery and MCFs (relative to shareholder-controlled firms) increases.
Economic Change

Economic change and economic development are two distinct concepts. Economic development refers to the current status of an economic unit; it represents the level of economic well-being (Ralston et al., 2009) and available resources in a given country. Economic change refers to the shifting of a group’s economic condition. When a country’s economic condition changes, its level of obtainable resources also shifts; thus, the country must use a new method to allocate the new larger or smaller pool of resources.

According to Durkheim, a society encounters more anomic conditions when it encounters sudden economy-related changes (Martin, Johnson, & Cullen, 2009), suggesting that economic change may affect the firm control–firm bribery relationship. According to Durkheim, an individual’s needs are limitless and may also be controlled by society (Olsen, 1965). However, when society is influenced by a sudden economic change, whether good or bad, the established norms begin to break down (Marks, 1974). Before new rules are established in the society, the original control mechanism in a society is unable to control the aspirations of individuals. People, thus, tend to become more self-seeking, thereby increasing deviance in society. Research has shown that, as China has undergone fast economic growth during recent decades, it has also experienced a significant increase in crime (Liu, 2006). Likewise, incidences of crime rose in Great Britain during the economic crisis of the 1970s (Jennings, Farrall, & Bevan, 2012).

From an anomie theoretical perspective, economic change would subject people to anomic pressure and force them to become more self-seeking. When confronting economic change, the self-centered nature of managers would become more apparent and their temptation to engage in deviant behaviors, such as bribery, would increase. In other words, managers would become more likely to engage in bribery during economic change; hence, the original positive relationship between manager firm control and firm bribery would increase.

Hypothesis 4: As economic change increases, the positive association between bribery and MCFs (relative to shareholder-controlled firms) increases.

Income Inequality

We further argue that the income inequality of a country influences the firm control–firm bribery activity association. As income inequality increases, people tend to believe that societal rules and institutions favor certain classes of people and that such people tend to protect and advance their own social statuses by any possible means (You & Khagram, 2005). As income inequality increases, resources tend to shift toward a small group of wealthy people (You & Khagram, 2005); therefore, most people do not have access to such resources and, consequently, deviant behaviors increase. It has been observed that, as income inequality increases,
corruption becomes an accepted norm and is perceived as ‘the way things are done’ (You & Khagram, 2005: 154).

According to anomie theory, societies with high income inequality force people to become more self-seeking to protect their own employment, wealth, and reputation. This situation should be more salient for managers, because managers confront a higher employment risk. In other words, income inequality strengthens managers’ selfish nature, and their inclination toward deviant behaviors, such as bribery, should strengthen. Hence, the initial positive firm control–firm bribery activity relationship would increase.

*Hypothesis 5: As income inequality increases, the positive association between bribery and MCFs (relative to shareholder-control firms) increases.*

**Press Freedom**

Mass media is a social institution related to deviance (Messner & Rosenfeld, 2001), and it also plays an important role in the distribution of information. Unlike other country-level factors previously mentioned that influence firm bribery activities from the supply side, mass media influences corruption from the demand side.

Corruption can be linked to the existence of asymmetric information between two parties (Rose-Ackerman, 1978); when government officials have access to information that private firms do not have access to, this asymmetry of information might lead a firm to engage in illegal behaviors, including bribery, to reach the valuable resource. However, a free press is considered one effective way to control corruption (Brunetti & Weder, 2003). The concept of free press means that a country’s media is free from governmental control (Picard, 1985). Freedom of the press is also an important part of the corruption detection process (Lessmann & Markwardt, 2010). It could allow greater access to information for members of the society, making it more difficult for governmental officials or business leaders to hide their corrupt behavior. Studies (e.g., Chowdhury, 2004; Kalenborn & Lessmann, 2013) have shown that freedom of the press is negatively associated with level of corruption. Also, a free press would reduce anomie, because people would have more information about important matters that may affect them in a society. As a result, freedom of the press can impact corruption from the demand side, by decreasing managers’ temptation to bribe. Hence, the original positive relationship between MCFs and firm-bribery activity would be reduced.

*Hypothesis 6: As freedom of the press increases, the positive association between bribery and MCFs (relative to shareholder-controlled firms) decreases.*
METHOD

Sample

We use data from the World Business Environment Survey (WBES, 2000) as the source of firm-level information. This survey addresses many issues related to firm bribery activity. The WBES was conducted by the World Bank, whose researchers conducted personal interviews with firm owners and managers in 80 nations, including nations from developed economies to emerging and developing economic units. Further information about the WBES can be found at the World Bank Governance website (www.worldbank.org).

The original WBES contains data from 10,032 firms. This study focuses only on MCFs and shareholder-controlled firms, deleting firms in countries that either did not offer firm bribery information or those without available cultural measures in the GLOBE study. The final sample used in this study consists of 1,799 firms from 38 nations. MCFs occupy approximately 10% of the original WBES sample and approximately 28% of the final sample in this study. The composition of participants in the WBES showed 34% and 40% of firms originating in manufacturing and service industries, respectively, while the sample for this study shows a similar pattern with 36% and 43% of firms from the same sectors. About 80% of the firms in the original WBES sample are small to medium-sized firms; nearly 75% of the samples used in this study are small to medium-sized firms.

Measures

Dependent variable: Firm bribery activity. We used the same measure from Martin et al. (2007), indicating the degree and frequency of firm bribing activity. The validation of the bribery items was provided in the study of Uhlenbruck, Rodriguez, Doh, and Eden (2006). The measure was composed of two parts, including six items in total. The first part with only one item asked participants the degree to which they believed: ‘It is common for firms in my line of business to have to pay some irregular “additional payments” to get things done’ (answers were made on a response scale from 1, ‘always’, to 6, ‘never’). The second survey question asked firms, ‘Do firms like yours typically need to make extra, unofficial payments to public officials for any of the following’, with five situational responses including, ‘To get connected to public service’, ‘To get licenses and permits’, ‘To deal with taxes and tax collection’, ‘To gain government contracts’, and ‘When dealing with customs/imports’. We reverse coded the items so that higher scores would indicate a greater degree of firm bribing behavior. The six-item measure has an alpha value of 0.92.

Firm-level independent variable: Firm control. The WBES asked participants to select their firm controllers, who were responsible for making the firms’ final decisions. We coded the selection of ‘Its managers’ as ‘1’ to present an MCF and ‘Its board of directors/supervisory board’ as ‘0’ to represent a shareholder-controlled firm.
Country-level moderators: Cultural values. We obtained the measures of institutional collectivism and uncertainty avoidance from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study (House, Hanges, Javidan, Dorfman, & Gupta, 2004). The study is described as ‘probably the most sophisticated project undertaken in international business research’ (Leung, 2006: 881). The cultural information involved 62 societies. The research results represent the opinions of over 17,000 middle-level managers from the following industries: food processing, financial services, and telecommunications services. The GLOBE researchers distinguished between cultural values and cultural practices in their nine cultural dimensions. Cultural values represented ‘how things should go’ in a society, reflecting values held by individuals. As to cultural practices, they implied ‘how things are going’ in a group, indicating values shared by the society. We used cultural practices as the country-level moderators, because they reflect social outcomes (Stephan & Uhlaner, 2010).

The GLOBE study measures the cultural value of institutional collectivism in terms of the degree to which people are encouraged and rewarded for engaging in collective actions (House et al., 2004). The questions asked in the GLOBE study for uncertainty avoidance focus on the extent to which life is arranged, expected, organized, and constant, as well as how social practices are ruled and regulated (Sully de Luque & Javidan, 2004).

Country-level moderators: Social institutions. We used economic research (e.g., De Long & Summers, 1992) and research from the field of sociology (e.g., You & Khagram, 2005) to derive the measures for the three social institutions. We used gross domestic product (GDP) annual percentage change as the measure of economic change. GDP is defined as the economic output of a country, including consumption, investment, public spending, and trade. Because Durkheim originally argued that economic change, both good and bad, would eventually lead to deviance, we used the absolute value of GDP annual percentage change as the measure. We obtained the data from the International Monetary Fund’s website (http://www.imf.org/external/index.htm).

The Gini index was used to measure income inequality. The index indicates the degree to which the distribution of individual income or household income within an economic entity deviates from a perfectly equal distribution (World Bank, 2005). The Gini index has been previously used to examine income inequality within a given nation (e.g., Parboteeah & Cullen, 2003; Western, Percheski, & Bloome, 2008) or between nations (e.g., Fogel, 2006). A Gini of 0 implies perfect equality, while an index of 100 represents perfect inequality. The data were collected from the World Bank World Development Indicators (World Bank, 2005).

The measure of press freedom has been conducted annually by the Freedom House since 1979. The measure is composed of three parts: the first part relates to laws and regulations; the second part is associated with political pressure, controls, and violence; and the third part is concerned with economic pressure and control.
Each part has multiple criteria. The measure divides countries into three groups according to the index: free media (0–30), partly free media (31–60), and unfree media (61–100). We recoded the variable by subtracting the nation’s index of freedom of the press by 100; a high score means a high degree of freedom.

Control variables. We included several control variables. Industry characteristics play an important role in driving a firm to engage in illegal behaviors. Industry culture may promote interactions among players, including government officials, thus influencing the chance for firms to engage in unethical behaviors (Daboub, Rasheed, Priem, & Gary, 1995). The majority of firms in the study were from the manufacturing and service industries. We controlled for these two sectors, using dummy codes, with other industries as the omitted category.

We included firm size as a control variable. Researchers have developed different measures of firm size, such as sales, assets, and number of workers—all of which are highly correlated (Kimberly, 1976). We used the number of workers as it is considered the most common measure of firm size (Hall, 1987).

Analyses

Since the research involved cross-level analysis, it was necessary to use hierarchical linear modeling (HLM, Bryk & Raudenbush, 1992) to test hypotheses. In testing the moderating hypotheses, we used a slope-as-outcome model (as opposed to an intercept-as-outcome one) to analyze the data, because we proposed that the firm’s bribing activity is determined by firm control under different contexts. Furthermore, we used the group-centering method in the model, because this method produces an unbiased within-group level estimate (Hofmann & Gavin, 1998) and removes all the variation among countries from the predictor. Furthermore, we employed multiple regression analysis for multicollinearity diagnostics; the variance inflation factors were less than 10 and the condition index statistics were less than 30 in the models, suggesting no multicollinearity issue (Studenmund, 1992).

RESULTS

Table 1 shows the distribution of samples in regard to types of firm control and firm size. Table 2 shows a matrix of correlations and sample statistics from the firm-level and country-level variables. To calculate correlations between firm-level and country-level variables, we assigned the measures of country-level factors to firms from each nation. To make the contribution of each nation equal regardless of its sample size, we counterweighted data by sample size. Because of the counterweighting, the level-2 correlations were the same as those based on 38 countries, and the level-1 correlations were not influenced by the differences in sample sizes.
Table 1. The distribution of firm control and firm size

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<th>Shareholder-controlled firm</th>
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<td>1290</td>
<td>411</td>
<td>898</td>
<td>485</td>
<td>1799</td>
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</table>

Notes: a Size = 1 < 50 (workers), 2 = >50 and <249, and 3 = >250.

Table 3 reports the analytical outcomes for the main and moderating effects. Model 1 presents the results of the firm-control–firm-bribery activity association. Model 2 exhibits the cross-level main effect from the country-level factors on firm bribery activity. Model 3 presents the consequences of country-level moderating effects on the firm-level association. Figure 2 exhibits plots of supported hypotheses of cross-level moderating effects. We plotted the interacting effects by using the
Table 2. Descriptive statistics and cross-level correlations

| Variable                   | Mean | S.D. | 1   | 2    | 3       | 4       | 5        | 6       | 7   | 8   | 9   |
|----------------------------|------|------|-----|------|---------|---------|----------|---------|-----|-----|-----|-----|
| **Firm-level variable**    |      |      |     |      |         |         |          |         |     |     |     |     |
| 1. Firm bribery activity   | 2.62 | 1.56 |     |      |         |         |          |         |     |     |     |     |
| 2. MCFs                    | 0.28 | 0.45 | 0.09** |     |         |         |          |         |     |     |     |     |
| **Country-level variables**|      |      |     |      |         |         |          |         |     |     |     |     |
| 3. Institutional collectivism | 4.13 | 0.33 | -0.16** | -0.18** |     |         |          |         |     |     |     |     |
| 4. Uncertainty avoidance   | 4.00 | 0.56 | -0.19** | -0.00 | 0.54** |         |          |         |     |     |     |     |
| 5. Economic change         | 4.27 | 2.02 | -0.08** | -0.01 | 0.44** | 0.16** |         |         |     |     |     |     |
| 6. Income inequality       | 42.61 | 11.02 | 0.05** | 0.10** | -0.23** | -0.19** | -0.12** |         |     |     |     |     |
| 7. Press freedom           | 62.74 | 18.70 | -0.11** | 0.10** | -0.06** | 0.17** | -0.53** | -0.33** |     |     |     |     |
| **Control variables**      |      |      |     |      |         |         |          |         |     |     |     |     |
| 8. Firm size               | 2.04 | 0.71 | -0.04** | -0.15** | -0.04** | 0.02    | -0.08** | 0.11** | 0.02 |     |     |     |
| 9. Industry (manufacturing) | 0.36 | 0.48 | -0.01 | 0.02 | -0.09** | 0.08** | -0.04*  | -0.03*  | 0.16** |     |     |     |
| 10. Industry (service)     | 0.43 | 0.50 | 0.01  | 0.00 | 0.01    | 0.14** | -0.03*  | -0.06** | 0.11** | -0.10** | -0.64** |     |

Notes: *n = 1,799, level 1; n = 38, level 2.
**Correlations of 0.027 or greater are significant at \( p < 0.05 \), and correlations of 0.038 or greater are significant at \( p < 0.01 \).
Table 3. Results for HLM analysis of firm bribery activity

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<tr>
<th>Variables</th>
<th>Estimate</th>
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<td>Model 2</td>
<td>b</td>
<td>s.e.</td>
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<tr>
<td>MCFs ($\beta_3$)</td>
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<td>0.15***</td>
<td>0.02</td>
<td>0.03</td>
<td>0.02</td>
<td>0.01</td>
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<tr>
<td><strong>Country-level main effect</strong></td>
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<td>–0.06</td>
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<td>Uncertainty avoidance ($\gamma_{02}$)</td>
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<td>–0.11</td>
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<td>–0.15</td>
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<td>Income inequality ($\gamma_{04}$)</td>
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<td><strong>Country-level moderating effect</strong></td>
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<td>0.01</td>
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<td>Economic change × MCF ($\gamma_{13}$)</td>
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<td>0.02</td>
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<tr>
<td>Income inequality × MCF ($\gamma_{14}$)</td>
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<td>0.04**</td>
<td>0.01</td>
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<td>Press freedom × MCF ($\gamma_{15}$)</td>
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<td>Industry (manufacture) ($\beta_3$)</td>
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<td>0.03</td>
<td>–0.02</td>
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<tr>
<td>Industry (service) ($\beta_4$)</td>
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<td>–0.04</td>
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Notes: Level 1: n = 1,799, level 1: n = 38, level 2.
† p < 0.10, * p < 0.05, ** p < 0.01, and *** p < 0.001.

Figure 2. The cross-level moderating effects between national-level factors and firm control on firm bribery activity.
standardized variables and divided the group into high and low cultural values or social institutions by using +1SD and −1SD of the measures.

In Hypothesis 1, we proposed that MCFs are more likely than shareholder-controlled firms to engage in firm bribery activity. The statistical result in model 1 supports the finding ($\beta_{1j} = 0.15$, $p < 0.001$), as manager control has a significant effect on firm bribing behavior. For Hypothesis 2, we posited that a higher level of collectivism reduces the positive association between manager control (relative to shareholder control) and firm bribery activity. This hypothesis is supported ($\gamma_{11} = -0.04$, $p < 0.05$). In Figure 2a, the slope is 0.067 ($p < 0.05$) at low institutional collectivism but not significant at high institutional collectivism. Hypothesis 3 posited that the positive firm-level association between manager control and firm bribery activity becomes stronger as uncertainty avoidance increases. The statistical result shows support for this hypothesis ($\gamma_{12} = 0.02$, $p < 0.10$). Figure 2b demonstrates that, at high uncertainty avoidance, the slope for manager control and firm bribery activity is 0.074 ($p < 0.05$), but it is nonsignificant at low uncertainty avoidance.

Hypotheses 4–6 pertain to the moderating effects from social institutions. In Hypothesis 4, we theorized that economic change increases the positive relationship between manager control and firm bribery activity. The HLM results support this hypothesis ($\gamma_{13} = 0.05$, $p < 0.05$). As the measure of economic change increases, MCFs become even more likely to bribe than shareholder-controlled firms (Figure 2c). The slope for firm control is highly significant for firms in settings of high economic change ($B = 0.074$, $p < 0.001$), whereas the slope for firms in settings of low economic change is not significant. Hypothesis 5 predicted that income inequality positively impacts the firm control–firm bribery relationship. The statistical result supports this hypothesis ($\gamma_{14} = 0.04$, $p < 0.01$). Figure 2d shows that, as the measure of income inequality increases, the slope of firm control–firm bribery activity steepens ($B = 0.093$, $p < 0.01$ for the slope of high income inequality, and is nonsignificant for the slope of low income inequality). The statistical result does not support Hypothesis 6 that press freedom would negatively influence the firm-level association between firm control and firm bribing activity. Instead, MCFs engaged in more bribery in context with a higher level of press freedom.

With regard to the control variables, firm size has a negative effect on firm bribery. The influence of the service industry is significant only in Model 1.

DISCUSSION

We integrated the agency theory from economics and the anomie theory from sociology into a multilevel framework to develop the hypotheses regarding firm and society level factors contributing to firm bribery. This study offers two major contributions to the field of management. First, we propose multilevel arguments from an interdisciplinary perspective, combing theories from both economics and sociology. Agency theory is used to predict the selfish behaviors of managers,
and anomie theory is employed to explain deviant behaviors at the society level. However, the two theories explain individual behaviors from different angles; while agency theory examines one’s inner intentions, anomie theory considers the larger social environment. Using both theories gives us a more comprehensive picture of firm bribing activity. Conducting research by merging different academic disciplines presents substantial challenges (Hitt, Beamish, Jackson, & Mathieu, 2007), with calls for such integration continuing for some time (Roberts, Hulin, & Rousseau, 1978). We have answered this call by integrating related social science disciplines and, hopefully, providing a promising direction for future research.

Furthermore, firm bribing behavior is a complicated phenomenon that is not easy to explain completely by using a traditional one-level model. For instance, MCFs are more likely to bribe than shareholder-controlled firms; however, the relationship becomes stronger under contexts of low institutional collectivism, high uncertainty avoidance, high economic change, and high income inequality. By combing these factors together, we found that the relationship between firm control and firm bribery is influenced by higher level (society) factors.

However, the statistical report on press freedom is unexpected. Counter to the original hypothesis, the results show that the degree of press freedom has a significantly positive impact on the firm control–firm bribery activity relationship. A possible explanation for this may be that, although a free press makes transactions with a government more transparent, it could also make firms’ periodical financial reports more available. To achieve superior firm performance in a short period, managers might need to resort to illegal methods such as bribery. The result would be an enhanced positive firm control–firm bribery activity association. Future research should further clarify the role of the press for a nation’s corruption practices.

Other than cultural values, we also used additional variables for further analysis. We divided the sample into two groups, with one group comprising firms from advanced economies and a second group comprising firms from both emerging and developing economies. We found that firms from emerging and developing economies are more likely to bribe. However, we did not find firm control to have an interacting effect with these two groups on bribery. That is, the firm control-firm bribery association is the same for firms in both developed and developing economies. In addition, we categorized the samples according to continents to test firm bribing behavior. The results showed that firms from Asia and America (including North and South America) are more likely to bribe than firms from Europe (including Eastern and Western Europe) and Africa. However, the relationship between firm control and firm bribery is the same in all continents.

Limitations and Future Research Directions

This study has a few limitations. First, the data collection process is not uniform across nations. This could result in some systematic bias that may influence the results. In addition, we did not include any country-level control variables,
such as GDP, that might influence corruption. Moreover, the dataset did not include information about firm ownership structure. We did not know whether the managers in the MCFs own firm stock. Future research can analyze the bribery behavior of managers as shareholders, compared to managers who do not own shares.

Future research can examine other types of corruptive behaviors beyond bribery, such as tax evasion or lobbying, that could be predicted by anomie theory. For example, research has shown that firms with strong affiliation with politicians tend to donate more (Jia & Zhang, 2013). This suggests that government-encouraged donation may be a creative form of bribery. Future research could examine the relationships between other types of firm control and firm wrongdoings. For instance, future research could investigate the deviant behaviors of foreign-controlled firms and family-controlled firms. Future studies also could consider other cultural practices in the GLOBE study and in Hofstede’s model to investigate their effects on firm-level bribing activity.

Corruption has been a major hindrance to the economic reforms in China (Chow, 2006; Yao, 2002), and Chinese firms are considered one of the groups of national firms most likely to bribe (Gao, 2011). To understand and improve the situation, we need to explore other determinants of this phenomenon. The ownership and control of firms in China has begun to change (Walder, 2011); different types of firms will be formed in the future as changes continue. Those types of firms that are more likely to engage in wrongdoings could influence government policy. Chinese firms have long been known to cultivate relationship with government officials to facilitate access to scarce resources and to gain favorable treatment (Chen, Chen, & Huang, 2013). This relationship could involve some elicit behavior that may fall into the category of bribery. However, the influence of government ties on firm performance has been declining in recent years (Luo, Huang, & Wang, 2012). Last, China has many provinces, each with vast land, and every region has its own institutions and regulations. Hence, using a more complex multilevel model or research method will be beneficial.

**Managerial Implications**

The findings of this study can inform public policy, firm governance, and firm decision making. Corporate corruption is a serious issue, and governments are still trying to find ways to cope with these ubiquitous fraudulent practices. The results of this study show that MCFs are more likely to bribe than shareholder-controlled firms, especially in contexts with high uncertainty avoidance, high economic change, high income inequality, and high freedom of the press. If governments hope to reduce the bribing behaviors of MCFs, they can develop policies to improve corporate governance and reward firms that are shareholder controlled, Government also can set up more inspection mechanisms such as requiring additional disclosure of operational information for MCFs.

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From the firm owner’s point of view, this study can inform the board of directors whether the manager-controlled or shareholder-controlled structure fits the situation of the countries in which their firms operate. For managers, the research may be beneficial in several ways. Managers may anticipate competitors who might potentially use bribery as a strategy in certain markets. If managers do not consider such behavior a feasible or desirable business tool, they will need to educate their workers not to engage in such firm activity.

For the Chinese context, the results highlighting economic change and income inequality have important practical implications. Many regions in China have experienced fast economic change and faced severe income inequality. Firm bribing activity is more complicated in these regions. Since corruption has been one major issue in Chinese businesses, the central government should first focus its attention on regions with high economic change and income inequality. Local governments in these regions should emphasize scrutinizing MCFs first if they want to deal with the root issues in firm bribing activity.

CONCLUSION

The empirical findings of this study suggest that firm control can indeed predict firm bribery activity, and this relationship changes under the influence of national factors. We hope this research can serve as an example to support the cross-level model for investigating complicated firm behaviors, such as bribery activity, as well as to stimulate additional studies on this important topic of understanding and reducing firm wrongdoing.

NOTE

The authors thank the China Foundation for the Promotion of Education and Culture, Taiwan. With the financial support from this foundation, the paper was presented at the 2012 Western Academy of Management Conference.

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Manuscript received: December 21, 2012

Final version accepted: January 3, 2015

Accepted by: Yadong Luo

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