THE IMPACT OF ENTREPRENEURIAL CHARACTERISTICS ON BRIBERY INCIDENCE IN TRANSITION ECONOMIES

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ABSTRACT

Entrepreneurs in Asian economies face many difficulties in starting up and running their businesses. Relationships with government officials help to, e.g., mobilise resources and cope with the constraints imposed by bureaucratic structures. In this context, bribery can be regarded as an investment that entrepreneurs need to make in order to operate successfully in an institutionally weak transition economy. However, not all entrepreneurs pay a bribe. In this paper the relationship between demographic characteristic and bribery incidence has been investigated. This relationship was estimated using unique data derived from a survey of 606 Vietnamese entrepreneurs. The author controlled for various organisational and industrial characteristics. The exploratory results show that in particular well-educated entrepreneurs are more inclined to bribe than others.

Keywords: corruption, work experience, formal education, non-formal education, Vietnam

INTRODUCTION

Many Asian economies show impressive growth rates. Countries such as China, Indonesia, South Korea, Taiwan and Vietnam all report growth rates of on average 8% annually since the 1960s (Wu, 2009). At the same time, these countries are consistently rated by agencies such as Transparency International as having the highest levels of corruption. This is a paradox because it is widely believed that corruption inhibits economic growth and lowers investments (Mauro, 1995), distorts competition (Hamra, 2000), increases income inequality (Li, Xu, & Zou, 2000), and reduces the levels of other economic drivers of growth such as financial debt, foreign trade and human capital (Friedman, Johnson, Kaufmann, & Zoido, 2000). To be sure, many of the Asian countries

have announced anti-bribery campaigns and signed international anti-corruption agreements. Nonetheless, despite the strong incentives for governments to limit corruption, bribery continues to exist (Johnson, Kaufmann, McMillan, & Woodruff, 2000).

During the past decades the number of corruption studies mushroomed. The majority of these studies have an empirical, country-level or "macro" orientation. Macro-level studies typically apply perception indices as measures of corruption. These data are publicly available from Transparency International or the World Bank. A key aim for the macro-level studies is to understand the effects of institutional factors and national policies on corruption (Herzfeld & Weiss, 2003). This line of research offered helpful explanations for the causes of corruption and shows that the openness of an economy, the quality of political institutions as well as legal- and cultural roots are key determinants of corruption (Treisman, 2007; Wu, 2009).

However, an analysis of country-level data can provide only limited insights of bribery at between individual actors or organisations. This lack of understanding may explain why it has proven to be so difficult to limit corruption. Recent studies therefore attempt to explain the bribery phenomena from a firm-level perspective. The assumption is that firms operating within the same country may vary in their propensity to pay bribes due to factors specific to firms or their perceptions of the environment. Gavira (2002), for instance, shows that bureaucratic interference is higher in firms that are more likely to pay bribes (cf. Swamy, Knack, Lee, & Azfar, 2001). Clarke and Zu (2004) use firm-level data on bribes in 21 transition economies and find that more profitable firms are more likely to pay bribes. This aligns with the findings of Svensson (2003) who tested similar firm-level hypotheses on the incidence and magnitude of bribes paid by 176 Ugandan firms (cf. Mocan, 2008). In a similar vein, Chen, Yaşar and Rejesus (2008) combine firm-level variables with macro-level indicators using information from approximately 3000 companies in 55 nation states. Among others, they show that firm characteristics and the business environment affect a firm's decision to bribe.

The firm-level line of research is valuable because it shifted the attention away from the demand side of corruption (i.e., the government) towards the supply side of bribery (i.e., the firm). Most policy discussions focus on public officials who are assumed to initiate bribery, which is not always the case. Notwithstanding the valuable insights that derive from the firm-level research, it still leaves many questions unaddressed because it does not account for the individual that performs the bribery activity. In a small-business setting, individuals are the entrepreneurs that represent an organisation. An individual-level of analysis is important because many companies are (very) small or medium-sized

organisations where one person dominates the company, for example, because (s)he is the (co-)owner. Understanding the actor-specific dimension of bribery may be important as guidance for developing effective policies to reduce bribery.

Consequently, this paper studied the supply-side of bribery in a business setting within an Asian economy. It has been noted that the level and incidence of corruption not only varies across nation states but also within a particular country. Within-country studies of bribery are rare because of, among others, a lack of appropriate data. The objective is to fill this research gap. The points of departure for this study are threefold. First, in a business setting, bribery is a strategic tool that companies may use to overcome bottlenecks that may otherwise be experienced in Asian economies. That is, the intention of bribery is to avoid or reduce taxes, to bypass laws and regulations, to secure public procurement, to overcome long waiting times for particular licenses or permits, or to ensure public services such as electricity or telephone connections (Peng & Zhou, 2005). Second, bribery is a complex game. Very often the rules of the game, the player(s) and the pay-offs are unknown. As a result, an entrepreneur must learn how to pay the right amount of money to the right person at the right time. Third, not all entrepreneurs pay bribes. Entrepreneurs are different and typically vary in their levels of education and work experience. It is the key aim of this study to understand whether variation in these demographic characteristics determines variation in bribery.

The paper proceeds with a review of the literature on bribery determinants. Then hypotheses that are subsequently tested with data from a business survey of 606 entrepreneurs in Vietnam are presented. The final section concludes the study.

LITERATURE REVIEW

During the past decades, different fields of research studied the corruption phenomenon offering a wealth of explanations for bribery. From an economic perspective, for example, bribe-paying behaviour by firms can be considered as a rational market response aimed to adjust government failure or weak institutional structures that hamper entrepreneurship (Méon & Sekkat, 2005). Bribing behaviour is primarily driven by an efficiency-enhancing mechanism which explains that firms are willing to pay bribes in order to speed-up bureaucratic processes (Lui, 1985). From an organisational perspective it is suggested that internal antecedents (such as ownership structure and business integrity) and external antecedents (such as poor quality of public services) drive bribery (Luo & Han, 2009). Strategic management perspectives emphasize the conditions of outside pressures such as the scarcity of resources. A lack of resources explains why firms use corruption to adapt an organisation to situations of uncertainty and

secure firm survival (McKendall & Wagner, 1997). Ethical perspectives stress the importance of anomie theory (Martin, Cullen, Johnson, & Parboteeah, 2007). Anomie theory explains that firms use deviant alternatives when legal means to achieve goals fail.

To date, an overall theory of corruption does not exist and empirical results of bribery determinants are mixed. Macro-level studies suggest that the likelihood of bribes paid by firms depend on the legal attributes, cultural characteristics, the level of human capital and the institutional characteristics of a country (Chen et al., 2008). These determinants are valuable for international studies but obviously have no explanatory power for country studies. For country studies, industry analyses suggest that the control power of public officials and bargaining power of firms are central stage. Control rights theory argues that in an existing regulatory system public officials have discrete decision-making power to execute laws and enforce rules. Their decisions on licenses, permissions and taxes affect firms (Svensson, 2003). The theory also suggests that control rights may differ across sectors and locations. That is, the higher the discretional power over firms in a specific sector, the more likely public officials will choose to work in those sectors because it may create more opportunities for bribery demands. The bargaining theory argues that the bargaining power of firms depends on firm's ability to pay bribes and the firm's refusal power or the cost of not paying bribes. That is, the likelihood that a firms pays bribes will be positively related with the (expected, future) profits and a negatively with the expected alternative return to capital.

Futhermore, the empirical literature on corruption indicates that individual (actor-specific) characteristics can explain variation in bribes across firms. Guerrero and Rodriguez-Oreggia (2008), for example, find that men are more prone to corrupt behavior than women. In a similar vein, Swamy et al. (2001) suggest that women on average are less tolerant of corruption. Gatti, Paternostro and Rigolini (2003) find that employed, less wealthy, and older people appear to be more averse to corruption. Among other reasons, it is suggested that older people are less prone to corruption because they are less involved in bureaucratic procedures in daily life (Cabelkova & Hanousek, 2004). Guerrero and Rodriguez-Oreggia (2008) suggest that the higher a person's education level, the more likely (s)he will pay a bribe. They argue that education is a proxy for opportunity costs and that the higher the opportunity costs, the higher the probability of paying a bribe.

THEORETICAL FRAMEWORK AND HYPOTHESES

This study focuses on the incidence of bribe payouts by entrepreneurs. While it is difficult to observe an official's control rights over firms it is possible to

determine whether or not an entrepreneur (a firm) bribed an official. Thus, the dependent variable in this case is binary variable that equals 1 if an entrepreneur (a firm) pays a bribe and zero otherwise. I argue that in a small business setting individual attributes may affect bribery incidence. The focus on entrepreneurial attributes makes sense because in small firms the entrepreneur makes choices on the basis of perceptions of a particular problem or context. Thus, the aim is to analyse to what extent personal characteristics of entrepreneurs affect bribery incidence (Zahra, Priem, & Rasheed, 2005). It is a question which entrepreneurial characteristics matter. The selection of characteristics is embedded in the literature on entrepreneurship (Casson, 2010). These theories suggest that the choices that entrepreneurs make inherently reflect their educational background and their work experience. In what follows, the hypotheses that relate these characteristics to bribery incidence will be specified.

Work experience is the first demographic characteristic. Management literature emphasizes the importance of work experience for the design of a firm's strategy (Finkelstein, Hambrick, & Canella, 2009). Entrepreneurs with much experience tend to place more weight on the process of developing formal strategies than those who lack relevant managerial experience (Karami, Analoui, & Kakabadse, 2006). Experience might influence the likelihood of bribery because more mobile, short-tenured entrepreneurs are more likely to engage in high-risk activities such as bribery. Work experience is associated with moral development, deliberateness in decision-making, and more accurate diagnosis of information. Work experience allows entrepreneurs to develop more (tacit) knowledge about corruption or particular experience with bribery as well as adequate shared information through social networks (Lam, 2000). This may increase bribe efficacy, reduce the risk of being asked for bribes, increase the ability to understand optimal levels of bribes per particular event, or to develop competencies that increase bribe refusals. For that reason, entrepreneurs with much work experience are expected to engage less likely in bribery activities. Hence, the hypothesis is:

> H1: There is a negative relationship between work experience and the likelihood to pay bribes.

The level of formal education is the second demographic characteristic. Formal education refers to knowledge that is obtained in primary or secondary schools, technical colleges or universities (Eshach, 2007). Formal learning environments are formally structured in which learning occurs when knowledge is transferred from teachers to students within a systematic educational setting (Gerber, Marek, & Cavallo, 2001). In such settings, attendance typically is obligatory, topics are guided by teachers, motivation is primarily extrinsic, and learning outcomes explicitly evaluated (Tamir, 1991).

The effects of formal education on cognitive abilities is a key subject of research in developmental psychology (Haynie & Shepherd, 2009). The level of formal education measures an individual's knowledge and competence base (Hitt & Tyler, 1991). Formal education positively affects an individual's cognitive ability such as open-mindedness and a receptivity to innovation (Becker, 1970), strategic choice and firm performance (Usai, Delmestri, & Montanari, 2001). Wally and Baum (1994), for example, find that the amount of formal education for executives is positively associated with a measure of cognitive complexity or the ability to interpret patterns and differentiate among subjects. Therefore, managers with high levels of formal education are expected to generate a wide range of creative solutions and rational decisions when facing with complex problems (Bantel & Jackson, 1989). Well-educated managers are known as persons who can see and capture market alternatives better than low-educated managers because of their superior awareness levels, information processing capabilities, productivity and decision-making skills (Barros & Alves, 2003). For that reason a negative relationship between formal education and bribery incidence are expected. This hypothesis is in line with macro-level studies that have found that countries with higher levels of education are positively correlated with lower figures of corruption (Ades & Di Tella, 1999; Mocan, 2008). This correlation, in turn, has been interpreted as proof that education decreases corruption supported by the argument that a more educated society would be expected to tolerate bribes less (Rest & Thoma, 1986). Therefore, the hypothesis is:

H2: There is a negative relationship between formal education and the likelihood to pay bribes.

Non-formal education is the third demographic characteristic of the entrepreneur. Non-formal education is different from informal education. Like formal education, non-formal education occurs in a structured system and is usually planned; however, it often incorporates more intrinsic motivation than formal education and takes place in institutions other than regular schools (Eshach, 2007). Informal education and non-formal education are more or less similar in terms of the voluntary nature and intrinsic motivation. Informal education, however, refers to less structured, spontaneous learning in everyday situations.

Non-formal education in this research setting refers to entrepreneurs who actively participate in management courses. Attending (short-term) management courses allows entrepreneurs to update their business competencies and knowledge (Schamp & Deschoolmeester, 1998). The content of business courses, however, offers an explanation for a positive effect of non-formal education on bribery incidence. It is argued that business education may cause a decline in moral development because these programs typically focus on learning competitive strategies that stress the importance of free riding, defection and selfishness

(Goshal, 2005). Additionally, in Asian economies it has been pointed out that education offers opportunities to establish networks. Management courses are often attended not only to update knowledge and improve managerial skills but also to initiate and develop personal networks. Privileged knowledge is the key advantage of a business network. Hence, by attending management courses, entrepreneurs may build networks and learn about prevailing norms and practices of bribery (Brass, Butterfield, & Skaggs, 1998). The effect of a social network can be pervasive because existing network members might enforce their norms to new participants at the threat of exclusion from the network (Cartier-Bresson, 1997). Ongoing inter-personal ties with government officials to access e.g., government contracts manifest opportunities for engaging in bribery transactions (Buchan, 2005). Taking the above into account, the hypothesis is:

H3: There is a positive relationship between non-formal training and the likelihood to pay bribes.

RESEARCH METHODS

Research context

Among the transitional economies, Vietnam offers an interesting research context, for it is an extreme case in its lack of formal market-institutions but it reports a robust growth of de novo private firms (Heberer, 2003). The country is the third largest transitional economy after China and Russia, with 80% of its population of more than 80 million people living in rural areas (Masina, 2006). Despite its rich natural resources, Vietnam remains a poor country with per capita GDP at US$832 (in 2007). The war for independence against the French stretched from the late 1950s to the early 1960s leading to the division of the country into North and South. This was soon followed by the war against the United States, which continued until the country was reunited in 1975. Under the rule of the Vietnamese Communist Party, Vietnam's economy was built on a Soviet-style central planning model. This was not successful, and by the mid-1980s Vietnam was close to bankruptcy after withdrawal of Soviet assistance and several years of conflict with China. Prior to the mid-1980s, essentially all economic activity in Vietnam was undertaken by state-owned firms or cooperatives. The transition to a market economy began in 1986 when a series of economic reforms (Doi Moi) were introduced. Most importantly, under state supervision, entrepreneurship was encouraged.

Along with other Asian countries, Vietnam has a reputation for bribery; for decades it has been among the top ten of the most corrupt countries (World Bank, 2000). There have been many attempts by the Vietnamese government to limit

bribery by means of legislation, sentencing people to long periods in prison or even imposing the death penalty (Johnson et al., 2000). Nonetheless, bribery continues to exist. There are at least three explanations for the persistence of bribery in Vietnam. First, bribery tends to take place in secret; no contracts are written, making it hard to detect in the first place (Bardhan, 1997). There are many cases were bribery is mutually beneficial, which fosters tacit collusion between the participants. Furthermore, policy measures aimed at detecting and correcting bribery have to be sustained over long periods of time in order to be credible. The campaigns in Vietnam are usually ad hoc and induce bureaucrats to direct bribery transactions towards lower-detection activities (McMillan & Woodruff, 2002). Also, the content of anti-bribery regulations in Vietnam is often of a low quality and complex. The resulting difference between "law on paper" and "law in reality" has often created more rather than fewer opportunities for bribery. Second, those who complain may, in turn, become the subject of retaliatory measures themselves. Many Vietnamese do not feel guilty about their own personal attempt at bribery (Masina, 2006). Close family and business structures (Guanxi) are an integral part of Vietnamese society. It is widely accepted that these social relationships have to be fostered through favours, gifts or hospitality such as invitations to restaurants or karaoke bars. Those who oppose bribery become outcasts in a society where bribery has become an ever-present and "legal" phenomenon that extends throughout all areas of life (Heberer, 2003). Third, Vietnam is a growing and strongly decentralised economy. It is a state with an advanced system of permits and licenses that especially affects entrepreneurs because their activities need government approval. As the economy expands and becomes more complex, public officials see more opportunities to make money (Bardhan, 1997). Different agencies, ministries and local governments have broad autonomy to introduce their own regulations. Subsequently, they all set their own bribes in order to maximise their own revenues. Hence, bribery also persists due to a decentralised local government with badly trained and poorly paid bureaucrats who operate in a poorly developed institutional framework and use all power at their discretion to maximise their income.

Sample

In Vietnam, secondary data can be easily collected for each province; using local administrative offices such as those concerned with statistics, investment and tax, but these data are often aggregated and thus are not applicable at the firm level. For this reason, the key activities of this research project included the design and implementation of a large-scale business survey to collect firm-level information. Such business surveys are rare in Vietnam. One of the implications is that business managers will not be used to providing confidential business information to outsiders or to providing opinions on Likert-scale-rated questions

(see, e.g., Aidis & van Praag (2007) for a list of similar challenges). This study applied a dataset from 2004.

This research proceeded in three stages. In the preparatory phase of the fieldwork, an existing business questionnaire has been revised (Le, 2003), discussing it with researchers and business practitioners, and consulting other business questionnaires. Next, several pilot surveys were implemented in two provinces of the Mekong River Delta, namely, Can Tho and Kien Giang. This resulted in a number of modifications to the questionnaire. The final questionnaire contained 35 questions that offered us rich information to measure the constructs. Additionally, I also learned that personal interviews would be the best strategy for collecting firm-level data in Vietnam. The reason for this was two-fold. First, given the sensitive nature of some of the questions (e.g., bribery), a very high level of non-response from a mail survey was expected (computerised surveys via the internet are not a feasible alternative at this moment in Vietnam). Personal contacts are pivotal in the Vietnamese (business) culture. Bribery, for example, is a well-known phenomenon and to some extent a subject for debate but then only in a personal conversation. Second, while secondary data first provided us with a list of private firms, the reliability of this data are doubted due to the fact that it was not up-to-date, especially with respect to the number of newly established firms, mergers or changes of ownership type. Therefore, it was decided that a personal interview with business managers would be the best strategy in order to collect the required data in Vietnam.

In the second stage, a team of interviewers was trained, consisting of teachers and students from the School of Economics and Business Administration, Can Tho University, Vietnam. The selected interviewers were required to have experience in conducting surveys. The interviewers have been trained on the key topics of the survey. They also have to aware of the importance of the data they would be collecting for the university, with the intention of motivating the interviewers to take personal responsibility for the data collection as a means of improving data quality. The interviewers were generally younger than the participants and hence, not a threat for the entrepreneurs. In addition, the interviews were conducted in the local dialect of Vietnamese, which interviewees respond to more easily, making their answers more precise. In the third stage, intensive interviews with entrepreneurs of 606 firms identified in six out of the thirteen provinces of the Mekong River Delta (one of which had recently been reclassified) has been conducted. The reason to concentrate only on the Mekong River Delta was because it has shown a significant increase in the number of private firms in recent years. Additionally, the key role of private firms in this region contributes greatly to the GDP of the entire country. The six provinces were Kien Giang, An Giang, Dong Thap, Can Tho, Vinh Long and Soc Trang. Because of cost

efficiency reasons, we concentrated the efforts on these six provinces; the density of firms is the greatest in these provinces.

A sample was not selected prior to the interviews; rather, the sample was selected on the basis of those entrepreneurs willing to cooperate. The interviewees were either the owners or the persons who directly managed the company, defined as entrepreneurs. If the prospective interviewees agreed, the interview will be started, whereas if they refused we apologized and proceeded to the next firm. The questionnaire was conducted only if the owner was available to answer personally in order to obtain complete and correct information. If the prospective interviewees were absent, left the questionnaire and returned having made a new appointment. At the start of the interview, the interviewers showed their university employee card and an introduction letter from the Dean of the university that, among other things, ensured full anonymity of the company and information provided. During the interview, the main topics, such as work experience, education, and industry context, were discussed. Some extra questions were added to invigorate the interview and to enable the respondents to tell their own story to some extent.

This approach resulted in a satisfactory response rate. Approximately 1000 prospective firms have been contacted, and then obtained 606 useable responses. Occasionally this sample included missing observations for particular items. For the regression analysis, all observations with missing values on any questionnaire item has been deleted. This resulted in a conservative dataset with 395 full observations, giving an effective response rate of approximately forty percent. This response rate is considered to be adequate for analysis and reporting (Aidis & van Praag, 2007). The reasons for not participating in the survey included not wishing to disclose information, being too busy or feeling uncomfortable when being asked about their business. The interviewers were not able to collect information from the non-respondents. Often survey research collects data from secondary data sources on simple but key characteristics, such as firm size or turnover, and applies bivariate tests to determine whether significant differences between the sample and non-respondents exist. This information was not available, and for that reason sample bias tests could not be performed. Although this contributes to the exploratory nature of this research, the quality of the survey, the interview process and the substantial number of respondents ensures sufficient confidence in the quality of the dataset (for an extensive discussion on related methodological issues in entrepreneurship research (see, e.g., Coviello & Jones, 2004).

Control Variables

Two sets of control variables are included (Zahra et al., 2005). The first set concerns firm characteristics, that is, firm age, firm size and the firm's type of ownership. The size of a company is a proxy for a firm's bargaining power. Small and medium-sized firms are more likely to pay a bribe than their larger counterparts because large companies can use their resources to influence public officials are pursue legal action. In addition, older firms are presumed to have different concerns regarding survive ability than younger firms. It stands to reason that young private firms are more likely to pay bribes than established companies because bribes help to develop a network of relationships with government officials, which, in turn, helps to overcome "liabilities of newness". The ownership structure may influence the likelihood of bribery as well. For instance, with substantial ownership of cash-flow rights, sole proprietorship provides the incentive and power to undertake actions that will benefit the owner at the expense of the firm's performance. In contrast, firms with shareholders are presumed to evaluate investments using market-value rules that maximise the value of the firm's residual cash flows (Anderson & Reeb, 2003). The second set concerns the industry context. Firms in new, expanding industries operate under more challenging conditions than those operating in old, declining industries (in Vietnam, the new industries are predominantly service-related, which are usually more relationship-intensive and rely more on external resources). The final control variable was the level of competition. Some firms operated in emerging markets, that is, in new markets characterised by modest competition due to low demand and high uncertainty, since potential customers are often unfamiliar with the products and services offered (Eisenhardt & Schoonhoven, 1990). Others operated in growth markets that were characterised by severe competition due to high rates of entry. The level of competition takes into account external pressures that may offer incentives for bribery so as to escape from these pressures.

Estimation Method

A (logit) binary choice model has been used to empirically test the hypotheses (cf. Chen et al., 2008) while controlling for individual characteristics, organisational characteristics, and opinions about the bureaucratic system. A firm has a choice between paying a bribe to public officials or not. From the perspective of expected utility maximisation (Svensson, 2003), a firm will pay the bribe if the expected utility from this action is greater than the expected utility of not paying it. Since the expected utility of paying the bribe is unobservable, the difference between the expected utility of paying bribe and not paying the bribe have been modelled as follows:

$$y^* = \beta'x_i + \varepsilon \tag{1}$$

Where y^* is latent unobservable difference in expected utilities. The x_i vector represents the characteristics of personal ties, networks and control variables affecting the likelihood of bribery and the β' vector is the corresponding parameters. ε is assumed to have a logistic (logit model) distribution.

The latent variable y^* was not been observed, only observe whether a bribe has been paid out or not. Thus, the y binary variable can be defined as:

$$y = 1 \text{ if } y^* > 0 \tag{2}$$

$$y = 0 \text{ otherwise} \tag{3}$$

It follows that,

$$prob\ (y_i = 1 | x_i) = prob\ (\varepsilon + \beta'x_i) = F(\beta'x_i) \tag{4}$$

Where F is the cumulative distribution function of ε (Greene, 2003). The probability of observing an event given x is the cumulative density evaluated at $x_i\beta'$. The logit distribution is given by:

$$prob\ (y_i = 1 | x_i) = \varepsilon^{\beta'xi} / + \varepsilon^{\beta'xi} \Lambda\ (\beta'xi) \tag{5}$$

The logit form has been estimated because I assume a bell-shaped distribution for ε that has thicker tails than a standard normal distribution. Maximum likelihood (ML) procedure is used to estimate the parameters of the binary choice model.

Measurement

The likelihood of bribery was measured by a dummy variable that takes the value of 1 if the firm reports to have paid a positive amount of money to government officials to conduct their business, and 0 otherwise. The question was asked in Vietnamese. The usual forward and backward translation process have been used to obtain the English version. The specific question was: "Monthly, how much must your enterprise pay "to lubricate" its business affairs". The expression "bôi trơn" in the original Vietnamese question literally means, "to lubricate". This is a colloquial, synonym reference to money paid as bribes at government offices or administrative regulators. The closest English equivalent is "to grease someone's palm". In the survey, "to lubricate" was explicitly defined as money spends. The

measure does not include other forms of bribery such as gifts that may have monetary value as well. The measure is very similar to the ones used by Transparency International and the World Bank. Work experience was measured by the total number of years the respondent had worked for both the focal firm and at other firms (Hambrick & Fukutomi, 1991). Formal education was measured by a dummy variable that equalled 1 if a respondent had a university degree and 0 otherwise (Aidis & van Praag, 2007). Non-formal education was measured by the number of times a respondent had participated in management training courses (Aidis & van Praag, 2007). The age of the company was calculated by subtracting the year the firm was founded from the current year (Goll & Rasheed, 2005). Firm size was measured by the actual number of employees who worked frequently for the company in 2004 (Peng & Heath, 1996). Firm ownership was measured by a dummy variable that equals to 1 if the firm was a sole proprietorship, and 0 for otherwise (Gundry & Welsch, 2001). The respondents operate in three main industries, namely services, trading and manufacturing. Two dummy variables were constructed to account for industry differences, that is, one for services (that equals 1 if the firm operates in the service sector, and 0 otherwise) and one for trading (that equals 1 if the firm operates in the trading sector, and 0 otherwise). Manufacturing was considered as the base case in the model and was thus not included. Competition is the final control variable in this model. A perceptual measure has been used because, among other things, it has been argued that small and medium-sized enterprises form their competitive maps based on perceived information and events (Daniels, Johnson, & Chernatony, 2002; Hodgkinson, 1997). The respondent's opinion of the level of competition in their industry has been asked in this survey. The level of (perceived) competition was measured using a dummy variable that equals 1 if the respondent indicates that the company operates in a sector with a high or very high competition level, and 0 otherwise (Lang, Calantone, & Gudmondson, 1997).

DESCRIPTIVE STATISTICS – ANALYSIS

Means, standard deviations (SDs) and correlations are provided in Table 1. From the observations, 75% (297 firms) reported that they did not pay bribes. According to the data, for the firms reporting positive bribes, the yearly average amount of bribes that firms paid was VND 60.2 million (US$3,815). The average payment for all firms including the zero-bribe firm is VND 16.1 million (US$1,024). On average, entrepreneurs have 8.05 years of working experience. From the observations, 22% (87 firms) obtained a university degree (or above). On average, most of entrepreneurs obtain high school degree. The number of times a manager had participated, on average, in management training courses is 1. On average, firm age is 7.66 years. Firm size is, on average, 18.54 employees.

Of the observations, 95.4% (377 firms) are (very) small firms. Sole proprietorship accounts for 52.4% (207 firms). 16.2% (64 firms) operates in service industry while 49.8% (197 firms) operates in trading.

The data from the research has been used to explore the research question, that is, to analyse why some entrepreneurs' bribe and some do not. For this, a logit model has been estimated to differentiate the bribing and non-bribing firms using data on entrepreneurs' personal attributes, firm characteristics, and industry sectors. Before running the logit model, this research investigated whether being corrupt or not is driven by a different process from the level of corruption given that entrepreneurs are corrupt. For this, the Heckman two-step or Tobit-2 procedure have been used that includes two submodels: one of which is the probit (or logit) and the other OLS is served to explain the amount of bribery. The idea is that if the second submodel (OLS) is estimated and the link to the first submodel (probit/logit) is ignored, the estimators are not consistent (Cameron & Trivedi, 2005). The results from the Heckman model, however, show no connection between these two stages with insignificant values for the Mills ratio (B = –279.97; n.s. = 0.30). Hence, sample selection issue is thus of less concern and thereby logit or probit models are an appropriate choice. Therefore one stage approach is continued.

A logit model differentiating bribing and non-bribing firms have been estimated. The results are in Table 2. Model 1 includes the control variables. In Model 2 the main effects are added to the control variables. Variance inflation factors (VIF) did not report multicollinearity between constructs. The max VIF value is 1.80 and thus far below the threshold value of 10 (Chen et al., 2008).

Table 1
Correlations, means and standard deviations (SD)

	Mean	SD	Bribery	Working experience	Formal education	Non-formal education	Firm age	Firm size	Ownership	Services	Trade	Competition
Bribery	0.25	0.43	1.00									
Working experience	8.05	6.56	0.01	1.00								
Formal education	0.22	0.41	0.13	–0.09	1.00							
Non-formal education	1.00	2.58	0.23	0.00	0.11	1.00						
Firm age	7.76	7.72	–0.06	0.63	–0.19	0.06	1.00					
Firm size	18.54	58.04	0.19	0.05	0.11	0.18	–0.03	1.00				
Ownership	0.52	0.50	0.09	–0.11	–0.01	0.04	–0.09	–0.07	1.00			
Services	0.16	0.37	0.18	–0.08	0.05	0.07	–0.14	0.17	0.01	1.00		
Trade	0.50	0.50	–0.06	–0.14	0.12	0.03	–0.12	–0.17	0.04	–0.44	1.00	
Competition	0.67	0.47	0.02	0.02	–0.01	–0.01	–0.06	–0.02	0.10	0.00	0.05	1.00

Table 2

The impact of entrepreneurial characteristics on bribery incidence

Variables	(1)	(2)	(3) β_p^{SY*}	(4) β_p^{FS}	Marginal effects
Main Effects					
Working experience		0.026	0.013	0.086	0.004
		(0.024)			
Formal education		0.500*	0.251	0.104	0.095
		(0.291)			
Non-formal education		0.160***	0.080	0.207	0.028
		(0.048)			
Control-Firm					
Firm Age	−0.004	−0.022	−0.011	−0.085	−0.003
	(0.017)	(0.024)			
Firm Size	0.008***	0.006**	0.003	0.183	0.001
	(0.003)	(0.003)			
Ownership	0.488**	0.488*	0.245	0.122	0.086
	(0.248)	(0.256)			
Control-Industry					
Services	0.976***	0.836**	0.420	0.155	0.169
	(0.355)	(0.365)			
Trade	0.232	0.056	0.028	0.014	0.009
	(0.292)	(0.305)			
Competition	0.035	0.060	0.030	0.014	0.010
	(0.262)	(0.271)			
Constant	−1.833***	−2.085***			
	(0.372)	(0.406)			
Log likelihood	−208.296	−199.512			
Pseudo R^2	0.059	0.098			
LR chi^2	26.000	43.560			
Prob > chi^2	0.000	0.000			
Observations	395	395			

Notes: (a) Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. β_p^{SY*} = y–standardised coefficient and

β_p^{FS} = fully standardised coefficient.

In order to check whether the logit model is suitable, the Hosmer-Lemeshow test for goodness-of-fit is used. The Hosmer and Lemeshow's goodness-of-fit test measures the predicted frequency and observed frequency that should match closely, and that the more closely they match, the better the fit. This is confirmed in the model (Hosmer-Lemeshow chi^2 = 5.05; n.s. = 0.75).

The regression results are in Table 2. Model 1 includes the control variables. In Model 2 the main effects are added to the control variables.

The first column of Table 2 presents the partial change in $Y*$ $(\beta_p = \partial Y_i^* / \partial X_p)$ and the corresponding *p*-values. The second and the third columns illustrate the Y_i^* (β_p^{SY*}) standardised coefficients and the results of the fully standardised coefficients for X_p $(\beta_p^{FS} = \sigma_p \beta_p / \sigma_{Y*} = \sigma_p \beta_p^{SY*})$, respectively. The fourth column presents the marginal effects.

CONCLUSIONS

The contribution to the existing field of corruption research is threefold. First, corruption theory has been extent by explaining how personal characteristics determined bribery. More in particular, it has been hypothesised that the incidence of firm-level bribery is influenced by work experience, formal and non-formal education. In so doing, the attention shifted away from institutional and macro-level variables towards individual traits of entrepreneurs as determinants of bribery incidence. Most contemporaneous studies of bribery have an inductive nature and use aggregate, country-level data. It goes without saying that this line of research has significantly enhanced the understanding of the causes of corruption. At the same time, however, I know relatively little about whether and how personal attributes of entrepreneurs determine bribery. Therefore it is suggested to look beyond organisational characteristics and study characteristics of individual leaders in order to come to grips with the enduring business corruption phenomenon. Furthermore, while most studies focus on the recipients (such as officials), a comprehensive understanding of the suppliers of bribes is virtually absent. Hence, existing theories insufficiently account for variation in entrepreneurial characteristics that may determine corruption at the organisation level. This research aims to fill this gap.

Second, building on a unique dataset of 606 Vietnamese entrepreneurs, bribery at the level of the firm can be quantified and the key concepts can be measured. Although much anecdotal and case-study evidence of bribery in Vietnam is available (Heberer, 2003) they focus on single events and therefore lack the scope needed to generalise findings, determine correlations and discuss causalities. This study intended to move beyond case-study literature and to collect firm-level information for a sample of companies that enabled us to develop a good insight into both factual information and subjective interpretations concerning the role of bribery in entrepreneurship.

Third, the research points to the importance of education and the likelihood of bribery. The positive impact of non-formal education on bribery incidence is in

line with the predictions. However, the positive impact of formal education on bribery incidence is counterintuitive. I expected that well-educated entrepreneurs would see and capture market alternatives other than bribery opportunities better and therefore would be less susceptible to bribery demands. Formal education, however, may already induce prevailing business norms and network effects that materialize in future careers. Whether there is the possible significance of culture in practices of corruption may be a good research question for future agenda. Additionally, bribery involves uncertainty and ambiguity. Entrepreneurs with more formal education are perhaps better able to plan and play bribery games to their advantage than others.

This study suffers from several limitations that offer opportunities for future research. First, the use of cross-sectional data from Vietnamese entrepreneurs in the Mekong River Delta limits the generalisation of the results. Future studies could replicate this research not only in other Asian or transition economies but also in advanced economies. The dominant perspective suggests that bribery typically is a phenomenon of less developed countries. Case-based evidence, however, reveals that bribery is omnipresent and that Western entrepreneurs are involved in corruption as well. Third, the measure of bribery considers solely the payment of cash. The interaction between an entrepreneur and a public official may also incorporate other forms of bribery. For example, entrepreneurs may indirectly spend money on bribery via e.g., gifts or visits to bars. New data with other bribery measures allows us to test the role of different forms of bribery. Finally, it is well known that cross-sectional data prevent inter temporal, causal analysis of processes that determine the outcomes observed with the use of a questionnaire. Future research may search for a longitudinal or panel study that incorporates bribery levels over time so that a clearer causality between individual preconditions and firm-level corruption may be identified.

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