The impact of petty corruption on firm innovation in Vietnam

Abstract Corruption has been found to have complex effects on firm innovation. Limited theoretical and empirical evidence to date has been rather inconclusive. This study employs econometric estimation techniques to analyze data from small and medium manufacturing enterprises in Vietnam to assess the impact of petty corruption on firm innovation. The empirical results tend to support the Bgreasing impact of corruption on innovation. Specifically, informal payments

by Vietnamese firms are shown to encourage overall innovation, product im

provement, innovation and new innovation. In view of the commonplace business practice of paying small informal fees to speed up transactions in the inefficient public sector in Vietnam, this finding is not entirely unexpected, though troubling.

Introduction

Innovation is widely regarded as a key driver of increased productivity worldwide, a view which is put forward most prominently by advocates of the new growth theory [1 3]. Innovation can also be viewed as an important channel for economic growth. Different types of innovation in the production and distribution process have been identified in the literature, including, for example, process innovation, product innovation, organizational innovation and marketing innovation [4, 5]. We will draw from these distinctions for our analysis.

Corruption refers to the abuse of public office by civil servants or officials for illegitimate private gains [6]. In countrylevel empirical studies, corruption is often measured by summary indexes (e.g., Transparency Internationals Corruption Perceptions Index or the World Banks Worldwide Governance Indicators) while at the firm level, the focus is on bribery behaviors. Some authors (see, for example, [7]) further classify corruption by scale (grand vs. petty). It has been argued that firms engage in grand corruption to gain market advantages (e.g. to win a governments procurement contract) and in petty corruption to get things done (e.g. to speed up business applications). While grand corruption, associated with highlevel public officials and large sums of money, is generally seen as detrimental to long term economic viability ([8 11]; see also [12], in this issue), the impact of petty corruption associated with smaller amounts of money and lower level public officers, can be positive in certain situations, especially where inefficient institutions prevent businesses from operating effectively. Small payments can be used to speed up and improve the quality of public services, that is, the socalled greasing the wheels hypothesis (see, for example, [13 15]. Empirical evidence of the positive impact of corruption at the country level can be found in and Weill [16], while Kato and Sato [17] provide such evidence at the state level in India, where corruption greases the wheels of productivity and growth.

The impact of petty corruption is often studied using firm/plant level data. Overall, the literature shows that the impact of corruption is not uniform and depends on the effectiveness of local institutions. While there is evidence of the negative impact of corruption on performance of firms (see, for example, [18]), at the micro (firm/plant) level, Dreher and Gassebner [19] provide evidence that corruption may temper the negative effect of regulation on earlystage entrepreneurship. Zhou and Peng [20] find that bribery hurts growth for smalland mediumsize firms, but not for large firms due to the fact that large firms may choose to engage in bribery strategically while smaller firms are forced to do so. Chen et al. [21] report that bribery helps private firms access bank credit in China. Interestingly, an empirical microanalysis of Indonesian firms by Vial and Hanoteau [22] demonstrates the coexistence of negative and positive impacts of corruption at the plant level, where those offering bribes enjoy higher productivity growth, but corruption remains harmful at the aggregated level of manufacturing industries.

In this article, we contribute to this body of empirical literature by estimating the impact of petty corruption on an important factor of growth, namely, the innovation activities of firms. In a country like Vietnam, where competitiveness of the private sector is hampered by bureaucratic burdens and poorly paid public sector officials, firms may be tempted to make small informal payments to speed up transactions with the government.1

The study makes use of the small and medium enterprise (SME) survey data conducted biennially since 2005 by the Central Institute of Economic Management (CIEM) and Danish International Development Agency (DANIDA). Our empirical analysis suggests that bribery in the form of informal payments by Vietnamese SMEs greases the wheel of the bureaucratic machinery.

The remainder of this article is organized as follows. The next section provides a succinct summary of theoretical arguments concerning the possible effects of corruption on innovation. This is basically a review of the sand vs. grease the wheel hypotheses as applied to innovation. This theoretical discussion is followed by a review of the evidence from empirical studies, focusing on definitions of key variables, data sources, estimating methods and key findings. The research methodology and the dataset employed in the present study are discussed next. This is then followed by the findings of the present study, which confirm that corruption has a greasing impact on different types of firm innovation in Vietnam.

Review of theoretical models

The literature on the theoretical relationship between corruption and innovation is meager in terms of the number of studies and their indeterminate findings. A related and much more substantial strand of literature relates to corruption and economic efficiency/growth. The competing sandthewheels and greasethewheels hypotheses concerning the impact of corruption and economic growth apply equally well in the case of corruption and innovation. That is, these hypotheses can be modified to provide arguments on how corruption sands or greases innovation.

The sandthewheels hypothesis is the formal statement of the commonsense observation that corruption, however defined, is detrimental to innovation and economic development. This is basically how international organizations such as the International Monetary Fund (IMF), the World Bank or the Organization for Economic Cooperation and Development (OECD) perceive corruption, culminating in international initiatives such as the United Nations Convention against Corruption (UNODC [23]) or the OECDs Convention on Combating Bribery of Foreign Public Officials in International Business Transactions [24].

Various theoretical arguments have been put forward in the literature to support the above orthodox viewpoint. Myrdal [25] suggested that corrupt public servants may cause unnecessary delays to extract a bribe. Such delays tend to harm innovative efforts. Likewise, Veracierto [26] constructed a game theoretic model that demonstrates a positive effect of corruption controls on production innovation, although his model does not shed light on the precise channel of this positive effect. As pointed out by RoseAckerman [27], although corruption and competitive auction are analogous, the highest briber may also be the one who is most willing to compromise on the quality of the goods produced once a license is obtained. It is also quite possible that corruption may divert entrepreneurial efforts away from improved production coordination activities, including innovation, into dealing with bureaucracies as suggested by and Rossi [28]. In this case, corruption may reduce rather than increase the incentive to innovate.

Corruption has also been argued to increase uncertainty and transaction costs and thus make a potentially promising innovative opportunity much less attractive commercially (see, for example, Luo [29]. It has also been suggested that innovative activities may be adversely affected by corruption due to the lack of resources (from investment) or lack of trust in institutions ( [4]: 81). Shleifer and Vishny [30] also argue in a similar fashion that the true level of innovation may get inflated in the presence of corruption. This is because corrupt firms would often report having advanced technologies, even though they are not necessarily needed.

Corruption may also act as a barrier to innovation through various indirect channels. For example, Murphy et al. [31] argue that, due to the economic benefits of corruption to some individuals, economic agents are likely to move from productive to unproductive rentseeking activities. Such a suboptimal reallocation would harm human capital accumulation and consequently, innovation. Along a similar line, Kurer [32] contends that corrupt officials have an incentive to create distortions in the economy to protect their illegal income. Such distortions may hinder innovation. Further, corruption in a host country may also have a negative impact on the inflow of foreign direct investment, which is a wellknown source of technology transfer for the host country. Additionally, corrupt practices by foreign firms may also potentially retard the host countrys innovative activity [7].

The greasethewheels hypothesis represents the alternative viewpoint. According to this line of thinking, advanced by Leff [14] and Leys [15], corruption can be efficiencyor innovationenhancing. This is so because corruption may alleviate the distortions in an economy caused by illfunctioning institutions or poor governance structure. An important bureaucratic inefficiency that can be compensated for through corruption is time lost in legally establishing new firms [15]. This idea has been supported by Lui

[33] who demonstrated in a formal model that corruption could reduce time spent in a queue. Another important bureaucratic inefficiency is caused by the governments inability to attract quality public servants. In this context, it has been argued by Leys

[15] and Bailey [34] that corruption can improve the quality of public servants when government salaries are low. A similar argument offered by Leff [14] is that the most generous briber can also be the most efficient producer. Subsequently, Lien [35] and Beck and Maher [36] formally demonstrate that corruption can duplicate the outcome of a competitive auction aimed at assigning government procurement contracts. In this sense, corruption can stimulate innovation by assigning the projects to the most efficient firms.

Opponents of the efficiencyor innovationenhancing schools of thought have argued that the positive impact of corruption is based on weak and unjustifiable assumptions. For instance, the size of the bribe may be determined by corrupt officials rather than by corrupt firms. Similarly, corrupt bureaucrats are most unlikely to work to promote economic growth or innovation. Challenging Leffs argument [14], Tanzi [37]

claims that the rigidities are not natural in bureaucracy, but created by government officials, especially if such obstacles can attract more bribes. Consequently, it is unreasonable to claim that corruption can enhance efficiency or innovation by removing these rigidities. Myrdal [25] also states that in case of corruption, rather than accelerating the administrative procedure, officials would maintain the rigidities in order to receive more bribes. Kaufmann and Wei [38] support this view, arguing that since bureaucrats can endogenously choose regulatory burdens and delays, they tend to extract the largest amounts of corruption. Thus, firms are likely to spend more time negotiating with corrupt officials, leading to higher costs of capital.

In contrast to Beck and Mahers claim [36], firms that pay the highest bribe may not necessarily be the most economically efficient ones. The firm which offers the highest bribe may simply do so because they consider bribery an investment with a high rate of return. A subsequent study by Acemoglu and Verdier [39] suggests that property rights enforcement, which is decided by public officials, is the key condition for wealth creation. Firms need to get it to resolve environmental problems by internalizing externalities and relying on incentives of private owners to conserve resources for the future; it would be difficult and costly for firms if public officials require bribes to complete the administrative process. Consequently, it is necessary to prevent all corruption.

In summary, there are different ways to view the theoretical impact of corruption on innovation, particularly in countries with weak governance structure and institutions. It is necessary to turn to empirical studies to resolve this difference. It is important to note that it is conceivable for both hypotheses to hold simultaneously. A more recent and perhaps more plausible approach is to disaggregate corruption into different types which may in turn have opposite effects on different types of innovation. This approach will be considered below.