



Drivers of Firm Formalization in Vietnam: An Attention Theory Explanation

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| Journal: | <i>Entrepreneurship & Regional Development</i> |
| Manuscript ID: | TEPN-2013-0294.R2 |
| Manuscript Type: | Original Paper |
| Keywords: | Informal economy, Formalization, Innovation, Government support, Corruption |
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RESEARCH ARTICLE

Drivers of Firm Formalization in Vietnam: An Attention Theory Explanation**Abstract**

Informal enterprises are widely viewed as a mechanism to engage unemployed people in the economy and thereby alleviate poverty in developing economies. However, over-representation in an economy may lead to both economic growth and broader employment opportunities being sacrificed. This paper presents a process model to investigate three potential drivers for firms to formalize: the first from a desire to grow and develop the firm through innovation; the second from the wish to access government financial support; and the third stimulated by the payment of unofficial payments or bribes. We use data from surveys of Vietnamese firms in 2005, 2007, 2009 and 2011 to investigate these drivers of formalization. Although we find support for all three of these drivers, the results differ in significance across years and firm types. We explain these differences using attention theory to show how different situations and events can make the formalization decision more likely over time.

Keywords: Formalization; informal economy; government support; innovation; corruption; attention theory

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3 The informal economy is a significant part of economic activity in emerging economies (Hart
4 1973; Levenson and Maloney 1998). This unlisted sector of the economy that does not always comply
5 with government regulations (Loayza 1997), accounts for over 36 percent of GDP in developing
6 economies, as compared to 14 percent for OECD nations (Schneider 2007). The contribution that
7 informal firms make in alleviating unemployment has been well-recognized (Jackle and Li 2006).
8 Indeed, authors such as Pisani and Patrick (2002) argue that bolstering this sector may have positive
9 socio-economic outcomes for developing economies. The efficiency of these firms' use of capital,
10 resulting from their lack of the cost structures of employment and business processes associated with
11 formalized firms, means that they are considered important for the survival of the desperate poor
12 (Gërkhani 2004).

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15 However, the informal sector is also characterized by limited growth, low probability of
16 survival, lower productivity, reduced technical efficiency, and limited access to credit markets,
17 government services and legal institutions (Henley, Arabsheibani and Carneiro, 2009; Hernández-
18 Trillo, Pagán and Paxton, 2005:). In Vietnam, where this study takes place, researchers have identified
19 increased profits and investments, coupled with a decrease in the use of casual labor as firms have
20 formalized; concluding that formalization is beneficial both to firms and their workers (Rand and
21 Torm, 2012). Therefore, over-representation of this sector in a developing economy, where
22 government and financial institutions are becoming more transparent, efficient and reliable (Hakkala
23 and Kokko, 2007), may hamper economic growth. As a result, governments in developing economies
24 focus on removing the transition barriers for informal firms and encourage them to move to the
25 formalized economy. Formalization provides these firms with benefits, such as better access to
26 finance and government services, contract enforcement, and increases in customer-visibility and profit
27 (Nugent and Sukiassyan, 2009; McKenzie and Sakho 2010). It also benefits employees because
28 formalization invariably improves employment conditions (Galiani and Weinschelbaum 2012;
29 Henley, et al. 2009). For governments, formalization increases tax revenues. Therefore, informality
30 should be considered as a stage in the journey of a firm in a developing economy, with transition to
31 the formalized economy (formalization) and growth as potentially the next stage (Bennett 2010;
32 Coolidge and Ilic 2009).

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3 The factors that promote the transition to formalization are therefore of interest to policy
4 makers in emerging economies. To this end, there has been much focus on the investigation of the
5 nature and determinants of informality (e.g., Smallbone and Welter 2012; Williams and Nadin 2012).
6
7 The purpose is to help policymakers to design programs and policies that promote the transition of
8 informal to formalized firms. However, research into the antecedents of the transition process is less
9 understood, especially in Asian countries where the informal economy is not fully comparable to
10 Latin American, Africa or other developing or transitioning economies (Jackle and Li 2006; Nugent
11 and Sukiassyan 2009a, 2009b). Therefore, research that explains the reasons why informal firms
12 transition to the formalized small and medium enterprise (SME) economy in Vietnam is timely.
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21 In this study, we use panel data from government surveys of Vietnamese firms in 2005, 2007,
22 2009 and 2011 to understand why some firms transition from the informal to formalized economy.
23 While obtaining data on the informal economy is notoriously difficult, our data allow us to propose
24 three drivers that may motivate informal firms to formalize: first, informal firms are motivated to
25 build capabilities to grow by introducing innovative products or processes; second, firms may seek
26 improved access to government services; and third, informal firms that have been exposed to the dark
27 side of the informal economy, marked by bribery, are motivated to formalize as a means to avoid it.
28 The first part of this paper summarizes the related literature while the second part presents a model of
29 the determinants of the transitioning process, based on data from Vietnamese firms. The paper
30 concludes by highlighting implications such as the impact of government support on finance,
31 innovation, and corruption on the transition process. We suggest that the supporting policies should
32 change their focus to reducing corruption in order to support firm formalization.
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48 **Background**

49 Our first contribution is theoretical. We focus on the drivers that motivate firms to formalize,
50 rather than issues facing firms that choose to remain informal (e.g., Thornton et al. 2010). While
51 governments in developing economies do not want to discourage the creation of informal firms
52 (McPherson and Liedholm 1996), it is also important that a substantial amount of these firms
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3 formalize eventually (Loayza, Oviedo, and Servén 2005; Porta and Shleifer 2008). Yet, an
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5 understanding of the factors that underpin such a transition remains elusive (Rand and Tarp 2012).
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7 The overwhelming majority of existing publications are based on cross-sectional data (Dabla-
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9 Norris, Gradstein, and Inchauste 2008; Jackle and Li 2006; Nugent and Sukiassyan 2009a, 2009b;
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11 Porta and Shleifer 2008, 2011), and therefore tend to compare informal and formalized firms without
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13 examining the factors that lead to formalization. These researchers acknowledge that access to firms
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15 that have transitioned is complicated, and that consequently many findings remain conjecture (Porta
16
17 and Shleifer 2008). Therefore, much of the model development that is presented in the next section is
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19 based on research that has examined determinants of informality such as tax evasion or access to
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21 government services (Coolidge and Ilic 2009; Levenson and Maloney 1998; Paula and Scheinkman
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23 2007). Our means of understanding the decision to formalize is attention theory (Occasio 1997; Scott
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25 1992), which also informs the development of the hypotheses in the model. Our purpose is to show
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27 that firms shift attention as changes occur within the firm itself, and with its relationship with
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29 external actors over time, both of which makes it more likely for formalization to occur.
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31 Researchers who explain why informal firms formalize have been restricted by the invisibility
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33 of, and/or low research access to, informal firms. Those that gained access (e.g., Dabla-Norris,
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35 Gradstein, and Inchauste 2008; Jackle and Li 2006; Nugent and Sukiassyan 2009a; 2009b; Porta and
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37 Shleifer 2011; Schneider 2007) typically focus on micro firms with fewer than 10 employees. For
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39 example, the data in Jackle and Li (2006) comes from micro enterprises in Peru. The data in Dabla-
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41 Norris, Gradstein and Inchauste comes from China, India, Brazil, Indonesia, and Russia, while Nugent
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43 and Sukiassyan (2009a) use data from micro firms in Mexico. From a methods point of view, our
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45 second contribution is therefore also to include SMEs more broadly in our analysis.
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48 Coupled with this, the third contribution of this paper arises from our extending the research
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50 beyond non-formalized economies in South America, Africa and East Europe. By focusing on
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52 Vietnam, we move this research into South East Asia, which has recently experienced rapid economic
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54 development. GDP in Vietnam has expanded at around six percent per annum since 2008, indicating a
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56 country which is fast becoming an important player in the subcontinent. The Vietnamese context is
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58 interesting, with policy makers tolerating informal firms; gently encouraging formalization by making
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3 it attractive to do so, thereby signaling the institutionally acceptable choice (Tonoyan, Strohmeier,
4 Habib and Perlitz, 2010) rather than punishing firms that provide a living to owners who could
5 alternatively be unemployed. To this extent, the Vietnamese government has introduced a range of
6 policies to reduce the number of compliance procedures, as well as the time and costs of enterprise
7 registration between 2003 and 2013, which spans the period of our four surveys. This has led to a
8 decrease in procedures from 12 to ten, in registration time from 59 days to 34 days and in cost of
9 registration from 31.9 percent to 7.7 percent of gross national income per capita (World Bank, 2014).
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11 In addition, the longitudinal dataset behind our investigation is also unique to this setting, as we
12 describe in our methods section.

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21 Vietnamese firms can be registered at two levels, namely district level and provincial level.
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23 Firms that register at district level are called household firms. This type of registration is less onerous
24 and, for practical and legal purposes, these firms are categorized as informal firms. While these
25 registered informal firms are known to local government, their business operations are very much in
26 the shadow economy. The household firms in our sample have no status as a legal entity and are not
27 required to pay employee insurance. There is no corporate tax requirement and while business owners
28 are supposed to pay income tax, in practice the tax taken from these firms is almost zero. Therefore,
29 similar to the definition of Webb, Bruton, Tihanyi and Ireland (2013, p. 598), these firms' activities
30 are "technically illegal yet are not antisocial in intent". In contrast, firms that register at the provincial
31 level and operate under Enterprise Law (Nguyen 2005) or Cooperative Law (Nguyen 2003) are
32 considered to be formalized firms. Formalized firms include limited liability firms, joint stock
33 companies, cooperatives, partnerships and private firms. Currently, around four million individual
34 business households are registered in district registration agencies (GSO 2010) while there are
35 600,000 registered enterprises (MPI 2011) at a provincial registration level.

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50 To facilitate movement to the formalized economy, the Vietnamese government has
51 introduced several support programs for entrepreneurs. For example, Enterprise Law covers the entry
52 process of new formal firms and provides tax credits and tax exemption for these firms over a certain
53 period; the Credit Guarantee Fund covers the loan application of small and medium enterprises.
54
55 However, the informal economy still accounts for a significant part of Vietnamese GDP

(Razafindrakoto, Roubaud, and Duy Van 2008; Schneider 2007), which is estimated to be around 20 percent of national accounts (Cling, Razafindrakoto, and Roubaud 2011). In addition, the proportion of informal employment in non-farm sectors has remained persistently high in recent years (47.1 percent in 2007, 68.1 percent in 2009 and 67.2 percent in 2013) (Cling, Razafindrakoto, and Roubaud 2011; ILO 2013; Le 2014), which further makes this an ideal location for our research.

A Model of Firm Formalization

This research proposes a model that explains the conditions that enable or drive informal firms to transition to the formalized economy. To this end, a number of hypotheses are presented. Our model is predicated on the assumption that informality is not costless. Loayza (1997) identifies a number of pecuniary costs, including those associated with penalties, a lack of access to government services, and a lack of legal protection. Avoiding these costs is what drives informal firms to eventually formalize. We extend this research (Scheinkman2007) to include not only government support, but also the role of innovation and bribes or corruption, while controlling for firm size, age, industry sector and location.

However, cost-avoidance alone is not a sufficient catalyst for formalization. Owners of these firms must also pay attention to the costs arising from the decision to be informal or formal, and this attention is influenced by interrelated cognitive and institutional factors. Occasio (1997) describes three interrelated types of attention that are relevant to the following model of formalization. What decision-makers do depends on the issues they focus upon (focus of attention), but this focus depends on the context in which they find themselves (situated attention). At a broader level, these two forms of attention depend on the rules of the institutions and relationships in which decision-makers find themselves (structural distribution of attention). Consequently, these forms of attention motivate decision-makers to take action on formalization, but act through different levels of analysis (Kahneman, 1973; Occasio, 1997; Simon 1957).

This model implies that the decision to formalize depends on processes of change within the firm's position within the broader industry network (Steen and Liesch, 2007; Axelsson and Easton, 1992). As shifts occur in external relationships, which change the structural distribution of attention,

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3 the focus of attention on the costs of informality will change over time, making it more likely that the
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5 decision to formalize will occur. Similarly, changes within the business caused by growth may
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7 redirect situated attention to the costs of informality and, if successive **events** attract attention to these
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9 costs, then it is likely that a formalization decision will be the end result.

13 **The Cost of Access to Government Financial Support**

15 Governments develop policies and programs that support the establishment and development
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17 of SMEs, including informal firms (McQuaid 2002). There are several types of government-supported
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19 measures for SMEs, such as developing managerial expertise including business and marketing
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21 strategies, market research, advertising, public relations, product or service design, new technology,
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23 computer services, personnel and recruitment, taxation and finance (Bennett and Robson 2003). Most
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25 of these programs target formal firms rather than their informal counterparts (Loayza 1997).
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27 Therefore, informal firms tend to have less access to government support programs than formalized
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29 firms, and may even actively avoid accessing such programs to avoid **taxation and regulation**. This is
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31 confirmed by Levenson and Maloney (1998) and De Paula and Scheinkman (2007), who find that
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33 formalized firms are more likely to access government contracts than informal firms. Although a
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35 government contract is only an indirect form of support, informal firms clearly find it difficult to
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37 obtain this type of assistance.

39 In addition, because of illegal activities such as tax evasion, informal firms rarely take full
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41 advantage of government support, especially if provided through the legal, judicial and security
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43 system (Loayza 1997). Because informal firms often view such illegal activities as beneficial, they are
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45 discouraged from formalizing in that accessing government support may lead to prosecution. In some
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47 instances where business owners do not accept the legitimacy of government, the informal economy
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49 can become entrenched in society (Richardson and Pisani, 2012). These owners therefore remain
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51 invisible to governments and their support programs. In Vietnam, informal firms can access some
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53 forms of government support such as human resource training or soft loans. However, access to these
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55 is limited because most supporting policies target formalized firms. Informal firms are restricted from
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3 accessing such support because they lack a viable accounting system (account books) and other
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5 regulatory documents (CIEM 2007, 2008, 2010).
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7 From a firm perspective, literature evidence on the effect of government support is
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9 contradictory. Most government support programs for the informal economy target individuals rather
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11 than firms, which does not encourage informal firms to formalize and thereby benefit from support
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13 programs (Paula and Scheinkman 2007). However, informal firms are more likely to register as
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15 formal firms if the benefits of formalization such as tax incentives, soft loans, and government support
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17 for human resource development and technology are greater than the costs such as registration fees,
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19 and other payments occurred during the registration process. Coolidge (2009) agrees and argues that
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21 one of the most important reasons why firms formalize is to gain better access to government services.
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23 Therefore, early exposure to some forms of government support, coupled with anecdotal evidence
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25 from other firms that have received such support, may strengthen the resolve of firms to formalize. In
26
27 other words, the structural distribution of attention is most important in the effect of government
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29 support on the probability of formalization. Engaging firms in the structural institutions of the
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31 formalized economy shifts their attention from the benefits of being informal to the costs of not being
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33 formalized (Prahalad, 2004). Eventually, as Hansen et al. (2009) and Fajnzylber et al. (2009) explain,
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35 firms that receive government financial support have higher growth rates than non-receivers. The
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37 effect of such a change may take time to manifest through the connection to multiple institutions and
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39 the consequent focus of attention on the costs of informality, which means that we need to build a lag
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41 effect into our model. Overall, these processes of shifting attention to costs make it more probable that
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43 a formalization decision will occur. Hence, we hypothesize that:
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46 *H1: Government financial support in the previous period will be positively associated with*
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48 *formalization in the current period*
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50 51 52 **The Cost of Corruption**

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54 Corruption is a major problem in the informal economy (Friedman et al. 2000). In our dataset,
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56 we consider corruption to be in the form of unofficial payments or bribes, which could therefore not
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58 be integrated into official accounts (Rand and Tarp 2012). The relationship between informality and
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3 corruption was first identified by De Soto (1989) who found that, in most cases, the detection of
4 informal enterprises is accompanied by some form of corruption. In fact, in developing economies,
5 informal firms can incur bribes of up to 20 percent of their revenue (Djankov et al. 2002). At the
6 macro level, Friedman et al. (2000) suggest that countries with more corruption have a higher share of
7 the unofficial or informal economy; firm level data in Poland, Romania, Russia, Slovakia, and
8 Ukraine confirm this argument (Johnson et al. 2000). This research investigates the relationship
9 between the under-reporting of sales and the bribing of officials to find that firms have incentives to
10 hide their activities to reduce the unofficial payments that they have to pay and to also evade tax.
11 More recently, in their study of the informal economy in 41 countries, Dabla-Norris, Gradstein and
12 Inchauste (2008) again confirm the positive correlation between corruption and informality.
13 Therefore, at both macro and micro levels, paying bribes is positively associated with hidden
14 economic activities (Dreher and Schneider 2010).

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However, less research focuses on this relationship in firms that are transitioning between the
informal and formalized economy. Using cross-sectional regression analysis to investigate 394
informal firms not paying bribes in the 2005 survey of Vietnamese SMEs, Rand and Tarp (2012)
show that the probability of paying bribes is relatively low when a firm is informal, while the
probability of paying bribes by transitioning firms is higher than those remaining informal. These
authors argue that formalizing firms become more visible, which could potentially increase the
probability of paying bribes.

Nevertheless, based on Misati (2010), who shows that corruption in the shadow economy can
indeed push firms into the formal economy and the lagged effects built into our model, we disagree.
The lack of legal instruments and weak regulation compliance in developing countries could result in
a higher share of bribe payments by the informal economy. In the case where improvements have
been made in public sector institutions, formalization and engagement with official institutions may
afford more protection from bribery. We therefore argue that firms will be more likely to formalize if
they have previously been exposed to these forms of corruption in an attempt to avoid it in future.
Payment of bribes imposes a cost on the firm and creates situated attention of these costs. We argue
that situated attention is more important in this instance because the personal impact and loss of

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3 income will be felt most acutely by the owner of the firm. When these costs are great enough and
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5 accrued over time, firms will formalize to avoid these costs. Therefore, it is proposed that:

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7 *H2: Payment of bribes in the previous period will be positively associated with formalization in the*
8
9 *current period*

10 11 12 **Innovation and the Cost of Missed Growth Opportunities**

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15 Inspired by Schumpeter (1912, 1917), the definition of innovation is widely debated while, as
16
17 a concept, it is widely studied (Acs 1988; Freeman 1982; Rothwell and Zegveld 1985). However, in
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19 this research, we use the most commonly used classification of innovation provided by the OECD
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21 (2005), namely, that innovation involves the introduction of either new or significantly improved
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23 goods, services or process, or a new marketing or organizational method.

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25 We view innovation as a catalyst for formalization because it directs an owner's situated
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27 attention on the potential for lost opportunities, arguing that informal firms are limited in their ability
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29 to grow and capitalize on new business options. Remaining informal can hamper growth, as the
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31 choice of technology and access to finance is curtailed (Mole et al. 2004). In addition, because of sub-
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33 standard working conditions, non-formalized firms may not attract educated workers, and thus have
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35 less incentive to invest in training and other learning activities (Perry et al. 2007). Consequently,
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37 informal firms are less likely to continually innovate than their formal counterparts.

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39 While limited research investigates the relationship between formalization and innovation, we
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41 argue that those informal firms that innovate are more likely to formalize to ensure easier access to
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43 loans via the broader network of banking institutions. Innovation may also facilitate formalized firms
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45 receiving subsidies from government to meet the increasing demand of capital, market and human
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47 resource for innovation implementation. Indeed, as the situated attention focuses on the potential for
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49 lost opportunities, structural attention on formalization is reinforced through the institutions of the
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51 formalized economy. As attention shifts over time from the costs to the benefits of formalization,
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53 motivation for formalization will ensue, thus increasing the likelihood of the transition to the
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55 formalized economy. It is therefore proposed that:

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3 *H3: Innovation in the previous period has a positive relationship with firm formalization in the*
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5 *current period.*
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8 9 **Research Method**

10 11 *Sample*

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13 This research uses data from the “Small and Medium Scale Enterprise Survey in Vietnam”
14 conducted in 2005, 2007, 2009 and 2011 as a collaboration between the Institute of Labor Science and
15 Social Affairs, the Central Institute for Economic Management, and the Department of Economics of
16 the University of Copenhagen under the Business Sector Support Programs, which was sponsored by
17 Danish International Development Agency. The four surveys covered around 2,600 manufacturing
18 firms in three cities in each of the four years, namely Hochiminh City, Hanoi, Haiphong and seven
19 rural provinces, namely Nghean, Longan, Hatay, Quangnam, Phutho, Khanhhoa and Lamdong (see
20 Figure 2). In each survey, a stratified sampling method was employed to ensure representativeness
21 across all types of enterprises. Therefore, the sample from the four surveys included both firms
22 operating under Enterprise Law and Cooperative Law (Nguyen 2003, 2005), which are considered as
23 formalized firms, as well as household firms that do not operate under these laws (Nguyen 2003,
24 2005), which are considered to be informal firms. The number and locations of the total population of
25 interviewed firms are described in Appendices 1 and 2. The response rate was nearly 98 percent
26 across surveys, which is typical for surveys in Vietnam where firms are expected to participate in data
27 collection aimed at improving policy outcomes. Because of the high response rate, no tests for
28 response bias were conducted. After data cleaning and checking the consistency of time-invariant
29 variables between the four survey rounds, we were left with a panel of 1,023 firms that were informal
30 in 2005. Most of these firms employed fewer than 20 employees, as shown on Figure 1. In this study,
31 we followed these informal firms to see if they had transitioned to become formalized firms, and if so,
32 what conditions supported the change.
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Variables

Our hypotheses identified one dependent variable, three explanatory variables, and four control variables, as summarized in the Appendix 3 and briefly explained next.

In the database, the unique dependent variable in our model was 'Formalization', representing a change in the legal status of informal firms from one period to the next. If firms changed from informal to formal, the 'Formalization' variable was assigned a value of 1 and, if firms did not change from informal to formal, the value was zero.

The three explanatory variables in this study were government financial support, corruption and innovation. If firms had received government support in terms of tax credits, tax exemption or reduction, or policy lending or soft loans from the Vietnam Development Bank or Vietnam Bank for Social Policy, they were regarded as having received government financial support (GOVERNMENT). The second explanatory variable was the total amount paid as bribes or unofficial payments (CORRUPTION). In addition, firms were regarded to innovate if they declared the introduction of a new product, new technology or processes improving current products (INNOVATION). A Wald test indicated that the covariates in our regression model were appropriate, with at least one having an effect that is not equal to zero.

We further included **four control variables that have been shown to be important in studies like this, namely firm growth, firm age, firm location and industry**. Firm growth was measured as growth of total employee numbers, including casual, part-time and full-time staff. Firm age was measured by the number of years in business. Firm performance was calculated by the ratio of sales on assets. Firms' locations were categorized as urban (Hanoi, Haiphong, and Hochiminh City) or rural (Hatay, Phutho, Nghean, Lamdong, Khanhhoa, Quangnam, and Longan). Industry was classified into low technology, medium low technology, medium high technology and high technology industries based on the OECD definition (OECD 2009) as shown in Table 1.

Table 1 here

Regression Models

As the variable representing formalization is a binary variable and the total proportion of transitioned firms was only around ten percent, rare-event logistic regression models (King and Zeng 2001) are used to test the relationship between formalization and government financial support, corruption and innovation. This method allows us to achieve unbiased estimates and, although these results mirrored logistic regression results well, we report the more accurate estimates of rare-event logit regression here. Our models, based on the hypotheses shown earlier, are as follows:

$$\text{Prob}(\text{FORMALIZATION}=1) = \tilde{p} = \frac{1}{1+e^{x_0\tilde{\beta}}}$$

where $\tilde{\beta}$ is the bias - estimated of β

$$\text{Model 1: } \text{Log} \left(\frac{\tilde{p}}{1-\tilde{p}} \right) = \tilde{\beta}_0 + \tilde{\beta}_1 \text{GOVERNMENT} + \tilde{\beta}_2 \text{CORRUPTION} + \tilde{\beta}_3 \text{INNOVATION} + \varepsilon_i,$$

$$\begin{aligned} \text{Model 2: } \text{Log} \left(\frac{\tilde{p}}{1-\tilde{p}} \right) = & \tilde{\beta}_0 + \tilde{\beta}_1 \text{GOVERNMENT} + \tilde{\beta}_2 \text{CORRUPTION} + \tilde{\beta}_3 \text{INNOVATION} + \\ & \tilde{\beta}_4 \text{GROWTH} + \tilde{\beta}_5 \text{SIZE} + \tilde{\beta}_6 \text{PERFORMANCE} + \tilde{\beta}_7 \text{LOCATION} + \tilde{\beta}_8 \text{LOW_TECHNOLOGY} + \\ & \tilde{\beta}_9 \text{MED_LOW_TECHNOLOGY} + \tilde{\beta}_{10} \text{MED_HIGH_TECHNOLOGY} + \tilde{\beta}_{11} \text{YEAR2007} \\ & + \tilde{\beta}_{12} \text{YEAR2009} \varepsilon_i, \end{aligned}$$

where \tilde{p} is the probability that a firm transitions to being a formalized firm.

Further, to ensure that there was no multi-collinearity among independent variables, VIF values were examined. The results (Appendix 4) show that these values range between 1.00 and 1.45; all within acceptable limits.

Results

During the period of the four surveys, around five percent of informal firms transitioned from informal to formal, as summarized in Table 2. As Elgin (2010) shows, using panel data from 152 countries, transitions are economically counter-cyclical, with greater numbers formalizing before the effects of the global financial crisis (GFC) than after. In our sample, firms that formalized generally received less government financial support than firms that remained informal. Formalized firms also

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3 tended to be larger, older, more innovative, and more likely to pay bribes before formalization, and
4 more likely to be located in urban areas. These results are shown in Tables 3.
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Table 2 here

Tables 3 here

Table 4 summarizes the main relationships between the variables studied here. An overview of these relationships highlights that a number of them are interesting. In addition to the patterns identified above, we also saw that government financial support was positively related to corruption. Government financial support was also negatively associated with firms operating in medium-low industries, more likely to be paid to rural firms, and younger firms tended to be more likely to have government financial support. Innovation coincided with the payment of bribes and tended to occur in older firms. Moreover, corruption was more likely to be associated with urban firms.

Table 4 here

Table 5 here

H1 was first explored using correlations, and then tested using rare-event logistic regression. A positive relationship was found between government financial support and the probability of transition to the formalized economy, taking into account a lag of one period (two years), which means that firms receiving this type of support in the previous period were more likely to formalize than those that did not receive support. Hence, H1 was accepted.

Following a similar procedure for H2 and H3, we found both that firms that remained informal tended to pay bribes/unofficial payments more than firms that formalized, and that the relationships were significant. Therefore, our hypotheses that the payment of bribes or other unofficial

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3 payments supported formalization were accepted. H3 was accepted because regression results
4 indicated that firms that introduced new technology or new products, or improved current products
5 were significantly more likely to formalize.
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10 11 **Discussion and Conclusions**

12
13 The results supported the proposed relationship between government support and
14 formalization in that government support for informal firms makes them more likely to formalize as
15 structural attention drives decision-makers to consider the costs of informality and the benefits of
16 operating in the formalized economy. Structural attention is enacted through a network of distributed
17 actors in the broader economy and the institutions of the public sector (Simon, 1957). While the
18 decision to formalize might be made by the owner of the firm, the attention on missed opportunities is
19 enabled by the business becoming embedded within the network of people and processes that are part
20 of the formalized economy. Government support draws firms into this network and shifts the attention
21 of the owner to the costs of remaining informal.
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31 Findings regarding government support on finance in terms of tax credit, tax exemption or
32 loans support are consistent with Hansen et al. (2009) and Fajnzylber et al. (2009). According to these
33 authors, firms that receive government financial support grow faster than non-receivers.
34 Consequently, informal firms are motivated to formalize to achieve higher growth. While Vietnamese
35 firms can access support through investment incentives, tax exemptions or reductions, or soft loans
36 from the Vietnam Development Bank or Vietnam Bank for Social Policy, only formalized firms can
37 apply for investment incentives, tax exemptions or reductions. In contrast, informal firms could access
38 only a small number of soft loans from the Vietnam Development Bank or the Vietnam Bank for
39 Social Policy that focus on poverty alleviation rather than business development. Therefore,
40 formalization underpins the importance of focused attention (Paula and Scheinkman 2007). In our
41 Vietnamese data, both informal and formal firms paid bribes to deal with tax collectors and to become
42 better connected to public services, which mean that bribes were paid to get things done. It also
43 supports Welter's (2012) assertion that trust of individuals precedes trust of institutions. This is a
44 different conclusion from another study that suggested that Vietnamese firms paid bribes to hide from
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3 the regulations and costs of the formalized economy (Rand and Tarp 2012). Informal firms that paid
4 bribes were more likely to formalize during all the periods that we observed. The consistency of this
5 result is important because it emphasizes the importance of situated attention throughout the
6 immediate environment in which businesses find themselves. Although structural attention that draws
7 owners into the wider network of attention through interaction with formalized institutions clearly
8 matters, it is reinforced and mediated through situated attention (Occasio 1997).

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15 Importantly, our results show that, when a time lag is built into the relationship, it solves
16 some of the conflicting findings in previous studies (e.g., Dreher and Schneider 2010), which often
17 indicate that, once firms became involved in the shadow economy, they feel compelled to remain
18 'invisible'. Situated attention may need to accumulate for some time before the owner feels compelled
19 to act on the costs of being informal brought about by corruption and bribes.

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25 We must emphasize that our finding into the relationship between bribery and formalization
26 needs to be understood in the context of Vietnam during the survey period between 2005 and 2011.
27 Unlike other examples, such as de Soto's (1989) Peru data where the costs of being in the formalized
28 economy were persistently high (Bromley, 1990), reforms in Vietnam during our survey period
29 lowered the cost of operating in the formalized economy (World Bank, 2014). This would explain the
30 difference between our findings and those of Rand and Tarp (2012) who used 2005 cross sectional
31 data and found that firms remained informal to hide from the costs of the formalized economy.

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Last, we found a positive significant relationship between innovation within informal
businesses and the transition to formal status, which means that the informal firms that have either
product or process innovation are more likely to transition to formal firms. The important role of
innovation for profitable growth is stated in a range of studies (Schumpeter 1912, Thom 1990).
Therefore, the structural attention shifts firms from the narrower network in the informal sector to a
wider network of business and government institutions in the formalized sector. In addition, the time-
lag effect supports the notion that innovation does not directly draw the focus of attention to the costs
of being informal. Rather the structural distribution of attention caused by connection to the
institutions of the formalized economy gradually shifts the focus of attention to the costs of
informality over time, making a formalization decision more likely.

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3 Our study has some important limitations that should be considered. First, we were unable to
4 distinguish between corruption and unofficial payments, which may partially affect our findings
5 regarding the relationship between formalization and the cost of corruption. **Second, we use data from**
6 **a particular section of the informal Vietnamese economy and do not include the micro-firms that are**
7 **completely invisible and virtually impossible to survey.**
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13 This paper used data from a survey of Vietnamese firms to understand why informal firms
14 transition in formalized firms. The results showed that this transition process benefits from
15 government-supported finance. Such support encourages firms to enter the formalized economy rather
16 than face the costs associated with remaining informal. In sum, government-financed support for
17 businesses to transition to formalization can lead to two positive outcomes: first, in removing any
18 growth constraints of individual businesses; and second, in enforcing the property rights of these
19 businesses when they register and so gain the full benefits of accessing credit and skilled labor. Added
20 to these positives can be that corruption in the economy reduces as participation in the formalized
21 economy increases when those yet to transition acknowledge that the cost of being informal is greater
22 than the cost of being formal. **This formalization** 'equation' is subjectively evaluated by business
23 owners and affected by attention bias.
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35 Last, our results also emphasize the importance of supporting innovation in all types of firms.
36 Innovation most likely drives the probability of transition through both situated attention (focusing
37 attention on growth) and structural attention (innovative firms are drawn into the network of other
38 instructions), both of which draw attention to the benefits of being part of the formalized economy.
39 Therefore, locating and engaging with innovative businesses should be a potent lever for governments
40 to transition them into the formalized economy.
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48 Theoretically, these results are consistent with an attention-theory perspective on the decision
49 to formalize (Occasio 1995, Occasio, 1997). Changes within the business and the relationships with
50 external actors over time shift the focus of attention thus making it more likely for a business owner to
51 formalize their business. Taken together, these results suggest that pull-through policies that create
52 structural attention on the formalized economy by creating better operating conditions for formal
53 firms are more effective policy instruments in developing economies wanting to decrease their
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3 reliance on the informal economy. Last, we call for a greater use of institutional perspectives to
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5 explain the transition to formalization. Although attention theory is one branch of institutional theory
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7 (Occasio 1997), modelling based on other theories may be highly useful to predict transition and
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9 guide policy makers in emerging economies.
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FIGURE
Figure 1: Size distribution of informal firms in the 2005 round survey

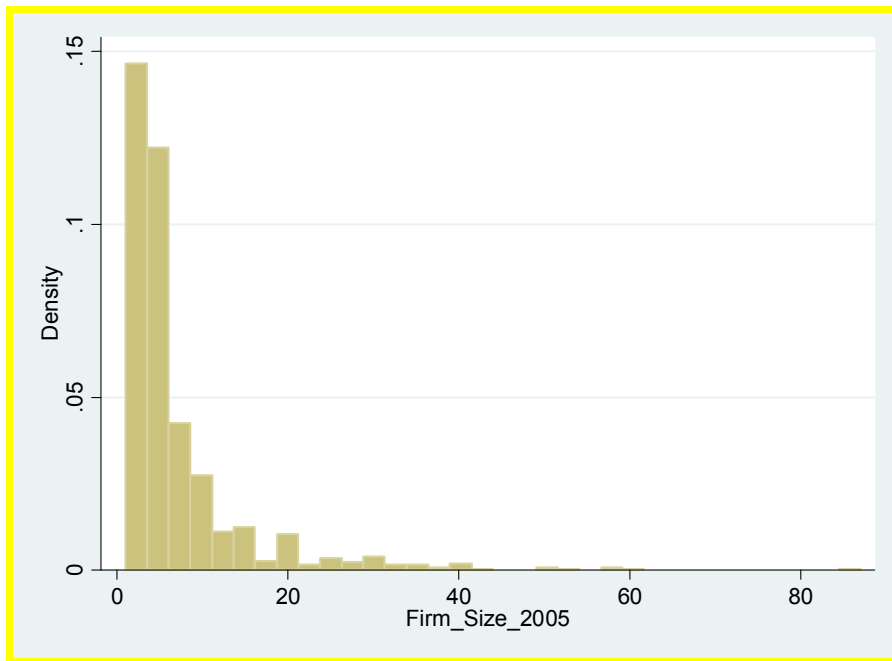
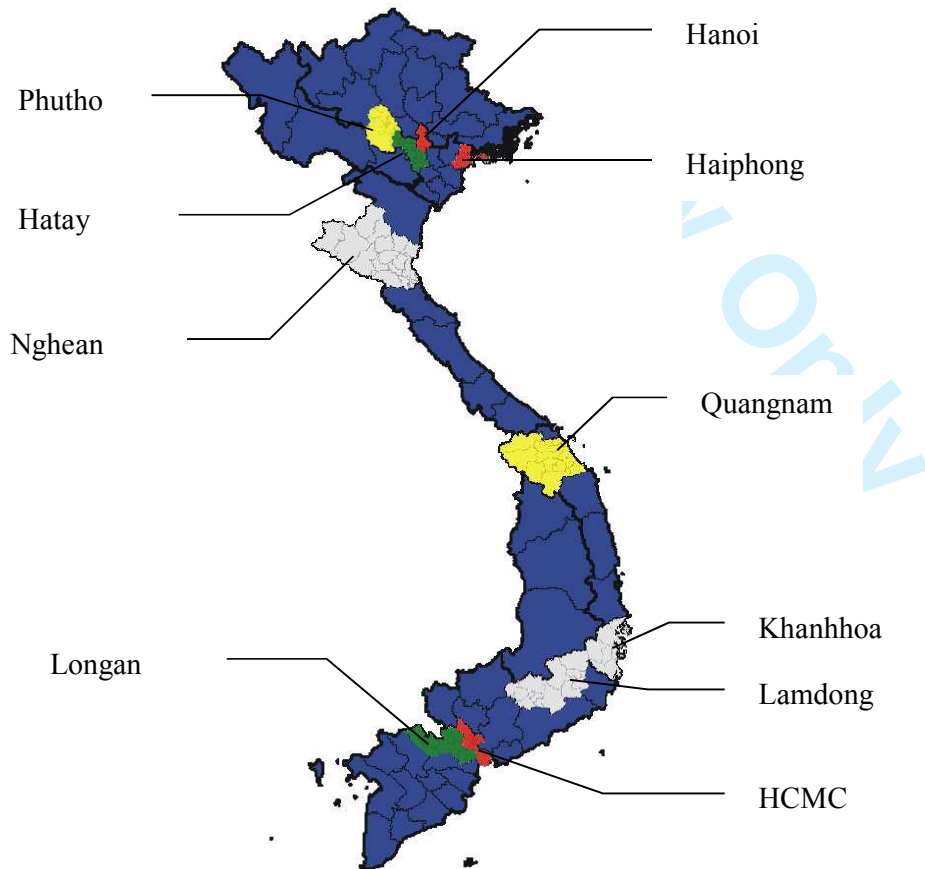


Figure 2: Map of Vietnam and locations of interviewed firms



TABLES

Table 1: Classification of technology

| | |
|---|------------------------|
| Food and beverages | Low Technology |
| Tobacco | Low Technology |
| Textiles | Low Technology |
| Apparel | Low Technology |
| Leather | Low Technology |
| Wood | Low Technology |
| Paper | Low Technology |
| Publishing and printing | Low Technology |
| Furniture, jewelry, music equipment, | Low Technology |
| Recycling | Low Technology |
| Rubber | Medium Low Technology |
| Non-metallic mineral products | Medium Low Technology |
| Basic metals | Medium Low Technology |
| Fabricated metal products | Medium Low Technology |
| Chemical products etc. | Medium High Technology |
| Motor vehicles etc. | Medium High Technology |
| Other transport equipment | Medium High Technology |
| Electronic machinery, computers, radio, | High Technology |

Source: (OECD 2009)

Table 2: Informal firms that transition into formal

| Legal Status | 2007 | 2009 | 2011 |
|-------------------------------------|--------|--------|--------|
| Informal firms transition to formal | 58 | 24 | 28 |
| | (5.7) | (2.5) | (3.0) |
| Informal firms remain informal | 965 | 941 | 913 |
| | (94.3) | (97.5) | (97.0) |
| Total | 1023 | 965 | 941 |
| | (100) | (100) | (100) |
| (Percentage in parentheses) | | | |

Table 3: Descriptive analyses for transitioned and non-transitioned firms

| Variable | Transitioned panel | | Non-transitioned panel | | Balanced panel | |
|------------------------|--------------------|-----------|------------------------|-----------|----------------|-----------|
| | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| GOVERNMENT | 0.3909 | 0.4902 | 0.3012 | 0.4588 | 0.3045 | 0.44603 |
| CORRUPTION | 0.4636 | 0.5010 | 0.2086 | 0.4064 | 0.2182 | 0.4131 |
| INNOVATION | 0.6727 | 0.4714 | 0.4683 | 0.4991 | 0.4749 | 0.4995 |
| Firm Age | 14.6818 | 7.9331 | 16.8911 | 9.8929 | 16.8081 | 9.8343 |
| Location | 0.4636 | 0.5010 | 0.2462 | 0.4309 | 0.22544 | 0.4356 |
| Industry Low | 0.3091 | 0.4642 | 0.6513 | 0.4766 | 0.6453 | 0.4785 |
| Industry MedLow | 0.3455 | 0.4777 | 0.2394 | 0.4268 | 0.2434 | 0.4292 |
| Industry MedHigh | 0.1273 | 0.3348 | 0.1004 | 0.3006 | 0.1014 | 0.3019 |
| Number of observations | 110 | | 2,819 | | 2,929 | |

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Table 4: Correlation matrices

| | Forma- lization | GOVERN- MENT | CORRUP- TION | INNO- VATION | Firm Growth | Firm Age | Firm Location | Industry Low | Industry MedLow |
|------------------|--------------------|-----------------|-----------------|-----------------|----------------|------------|------------------|-----------------|--------------------|
| GOVERNMENT | 0.0371** | | | | | | | | |
| CORRUPTION | 0.1174*** | 0.0402** | | | | | | | |
| INNOVATION | 0.0778*** | 0.0319* | 0.2067*** | | | | | | |
| Firm Growth | 0.0429** | -0.0052 | -0.0601*** | -0.0286 | | | | | |
| Firm Age | -0.0453** | -0.0416** | -0.0362* | -0.0837*** | -0.0530** | | | | |
| Firm Location | 0.0949*** | -0.2315*** | 0.1888*** | 0.0431** | -0.0218 | 0.0041 | | | |
| Industry Low | -0.0637*** | -0.0009 | -0.0852*** | -0.1922*** | -0.0194 | 0.1485*** | -0.0323* | | |
| Industry MedLow | 0.0470** | -0.0348* | 0.0644*** | 0.1062*** | 0.0160 | -0.1190*** | 0.0596*** | -0.7650*** | |
| Industry MedHigh | 0.0169 | 0.0456** | 0.0416** | 0.1555*** | 0.0061 | -0.0766*** | -0.0585*** | -0.4531*** | -0.1903*** |

Note: Spearman correlation, (* $p < .1$, ** $p < .05$, *** $p < .01$)

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Table 5: Regression models (rare-event logistic regression)

| | Model 1 | Model 2 |
|--|----------------|----------------|
| Control variables | | |
| FirmGrowth | | 0.1535*** |
| | | (3.59) |
| Age | | -0.0170 |
| | | (-1.36) |
| Location | | 0.9763*** |
| | | (4.54) |
| Low Industry | | -1.4049** |
| | | (-2.26) |
| Med_Low Industry | | -0.9562 |
| | | (-1.52) |
| Med_High Industry | | -1.0791 |
| | | (-1.57) |
| Year2007 | | 0.3693 |
| | | (1.54) |
| Year2009 | | -0.1198 |
| | | (-0.40) |
| Explanatory variables | | |
| GOVERNMENT | 0.3414* | 0.5810*** |
| | (1.71) | (2.71) |
| CORRUPTION | 1.0288*** | 0.7782*** |
| | (4.94) | (3.57) |
| INNOVATION | 0.6199*** | 0.4577** |
| | (2.83) | (2.02) |
| Constant | -4.0349*** | -3.1025*** |
| | (-20.75) | (-4.41) |
| Number of observations | 2929 | 2929 |
| (* $p < .1$, ** $p < .05$, *** $p < .01$) | | |
| Z-value in parenthesis. | | |
| Base: High technology industries, Year 2011 | | |

APPENDICES

Appendix 1: Location of manufacturing firms (2011 data)

| | Household establishment | Private/sole proprietorship | Partnership/Collective/Cooperative | Limited liability company | Joint stock company |
|----------------|-------------------------|-----------------------------|------------------------------------|---------------------------|---------------------|
| Ha Noi | 16,588 | 1,194 | 217 | 1,793 | 397 |
| Phu Tho | 17,042 | 65 | 12 | 97 | 22 |
| Ha Tay | 23,890 | 100 | 18 | 150 | 33 |
| Hai Phong | 12,811 | 206 | 38 | 309 | 69 |
| Nghe An | 22,695 | 125 | 23 | 187 | 41 |
| Quang Nam | 10,509 | 51 | 9 | 76 | 17 |
| Khanh Hoa | 5,603 | 119 | 22 | 178 | 39 |
| Lam Dong | 5,268 | 75 | 14 | 112 | 25 |
| Hochiminh city | 34,241 | 2,052 | 374 | 3,080 | 683 |
| Long An | 8,050 | 83 | 15 | 124 | 27 |
| Sample total | 156,697 | 4,068 | 741 | 6,107 | 1,354 |

Source: CIEM (2012)

Appendix 2: Number of Enterprises Interviewed per survey and location (all enterprises were privately held manufacturing firms)

| | Interviewed in 2011 | Interviewed in 2009 | Interviewed in 2007 | Interviewed in 2005 |
|----------------|---------------------|---------------------|---------------------|---------------------|
| Ha Noi | 279 | 283 | 279 | 299 |
| Phu Tho | 257 | 258 | 242 | 276 |
| Ha Tay | 371 | 376 | 381 | 395 |
| Hai Phong | 208 | 210 | 194 | 204 |
| Nghe An | 352 | 353 | 349 | 385 |
| Quang Nam | 151 | 158 | 154 | 171 |
| Khanh Hoa | 93 | 94 | 86 | 100 |
| Lam Dong | 67 | 68 | 81 | 87 |
| Hochiminh city | 603 | 616 | 602 | 693 |
| Long An | 127 | 127 | 124 | 129 |
| Total | 2,508 | 2,543 | 2,492 | 2,739 |

Source: CIEM (2012)

Appendix 3: Independent variables

| Variables | Explanation of dependent variables |
|-------------------|---|
| Formalization | The dependent variable was represented a change in the legal status of informal firms in the database from one period to the next. If firms changed from informal to formal, the 'Formalization' variable was assigned a value of 1 and, if firms did not change from informal to formal, the value was zero. |
| GOVERNMENT | Dummy variable. Government support through finance. If informal firms receive this type of support, Government finance=1, otherwise Government finance=0, collected in the previous survey round (n-1). |
| CORRUPTION | Amount of bribes and informal payments that a firm paid in year 2004, year 2006, year 2008 and year 2010 in 2005, 2007, 2009, and 2011 surveys respectively, collected in the previous survey round (n-1). |
| INNOVATION | Dummy variable. Innovation is measured by the probability of introducing new product, new technology or major improving current products. If firms reported innovation, INNOVATION=1, otherwise INNOVATION=0, collected in the previous survey round (n-1). |
| FIRM GROWTH | The increase in number of total employee in firms in year 2006, year 2008 and year 2010 in 2005, 2007, 2009, and 2011 survey, respectively, based on current survey round. |
| FIRM AGE | Number of year in business at the end of year 2004, year 2006, year 2008 and year 2010 in 2005, 2007, 2009, and 2011 survey, respectively, based on current survey round. |
| LOCATION | Dummy variable. The location of firms. If firms locate in Hanoi, Hochiminh city and Haiphong city, which are urban areas, LOCATION=1, otherwise LOCATION=0, based on 2011 data. |
| LOW_INDUSTRY | Dummy variable. LOW_INDUSTRY=1 if firm operating in medium low technology sector, otherwise LOW_INDUSTRY=0, collected on 2011 data. |
| MED_LOW_INDUSTRY | Dummy variable. MED_LOW_INDUSTRY=1 if firm operating in medium high technology sector, otherwise MED_LOW_INDUSTRY=0, based on 2011 data. |
| MED_HIGH_INDUSTRY | Dummy variable. MED_HIGH_INDUSTRY=1 if firm operates in high technology sector, otherwise MED_HIGH_INDUSTRY=0, based on 2011 data. |
| YEAR2007 | Dummy variable. YEAR2007=1 if the firms transition into formal in 2007 data, otherwise YEAR2007=0 |
| YEAR2009 | Dummy variable. YEAR2009=1 if the firms transition into formal in 2009 data, otherwise YEAR2009=0 |

Appendix 4: VIF values

| Variable | VIF |
|-------------------|-------|
| GOVERNMENT | 1.09 |
| CORRUPTION | 1.11 |
| INNOVATION | 1.15 |
| FIRM GROWTH | 1.01 |
| FIRM AGE | 1.05 |
| FIRM PERFORMANCE | 1.01 |
| LOCATION | 1.12 |
| LOW_INDUSTRY | 23.65 |
| MED_LOW_INDUSTRY | 19.50 |
| MED_HIGH_INDUSTRY | 10.24 |
| YEAR2007 | 1.49 |
| YEAR2009 | 1.39 |

Appendix 5: Wald test

| |
|--------------------------|
| LR $\chi^2(12) = 88.25$ |
| Prob > $\chi^2 = 0.0000$ |