The Presence of Foreign Firms in Ghana:
The Role of Financial, Infrastructural and Institutional Constraints

Abstract

Using logit regression on firm-level survey data, this study examines the effects of various aspects of the business environment on foreign firm participation in Ghana. An analysis of the main constraints on non-mining foreign investment is important in terms of prioritising reforms of the overall business environment. In addition, assessing the variation of effects according to different firm characteristics matters for government policy formulation aimed at incentivising sub-categories of foreign firms. The findings suggest that financial factors (access to finance) and institutional factors (the judicial system and land access) are most important in constraining the probability of foreign investment. Distinct effects are obtained depending on firm characteristics relating to the degree of foreign ownership, the size of the firm and the industry in which the firm operates. The effects of the business environment also vary according to the firm's regional location.

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Keywords: Business environment, Constraints on foreign investment, Firm-level data, Ghana

I. Introduction

In recognition of the benefits of foreign investment – an important channel through which resources, human capital and technological progress are transferred between countries – understanding the determining factors of direct investment is an important issue from a developing country perspective. Although Africa has undertaken a programme of liberalisation, inward investment remains subdued, partly reflecting increased competition for foreign investment and partly reflecting a lingering objection to foreign capital. Moss et al. (2005) refer to a deeply rooted scepticism within Africa towards foreign investment owing to historical, political and ideological reasons manifested through a range of barriers, including legal restrictions and the nationalisation of foreign firms.

While economic policy reforms have largely removed direct barriers to foreign investment, many indirect barriers remain in place, implying a need to prioritise reforms of the business environment. At its core, business environment reforms involve removing entry barriers and stimulating levels of efficiency and innovation. Central elements also include lowering the transaction costs of doing business, reducing risk and providing greater certainty in terms of laws, regulations and government policies (DCED 2008).

Ghana represents an interesting case study to examine the effects of the business environment on foreign firm participation. First, it was an early pioneer among the sub-Saharan African countries to carry out market-friendly economic reforms while the multi-party democratic system introduced in 1992 helped create political stability. Second, Ghana has pursued a development strategy with the private sector placed at the heart of government policies and initiatives (see Table A1 in the Appendix for an overview of Ghana's foreign investment strategy).

Consequently, the Ghanaian business environment for foreign (and domestic) investment has greatly improved (UNCTAD 2003).

Given its record of implementing economic and political reforms, Barthel et al. (2011) combine Enterprise Survey data (first conducted for Ghana in 2007) and survey information on multinational enterprises to analyse the determinants of foreign direct investment (FDI) in Ghana. Tsikata et al. (2000) use survey data and time series analysis to examine the effects of Ghana's investment policies and institutional framework on foreign investment. Debrah (2002) has provided an overview of the Ghanaian economy, including its government and legal system, the financial sector, the state of infrastructure and the incentives on offer to attract foreign investment. Abdulai (2005) has analysed the regional distribution, sectoral breakdown and historical trends of FDI in Ghana. In evaluating its post-independence economic reform policy, Mmieh and Owusu-Frimpong (2004) have highlighted key obstacles to FDI.

Taking a broader perspective, Bigsten and Söderbom (2006) review the major findings on the African business environment, focusing on access to credit, risk, labour and infrastructure. Previously, Pigato (2001) discussed the legal, business and economic environment for FDI in sub-Saharan Africa. More recently, Adams et al. (2014) study the post-reform business environment and the role of institutional factors as drivers of financial FDI into sub-Saharan Africa. Along these lines, Asiedu (2013) examines the interaction between FDI, natural resources and institutions.

Although much foreign investment in Ghana is directed at large mining projects that provide jobs, royalties and taxes as well as foreign exchange, technology spillovers are less likely to be generated (Barthel et al. 2011). Moreover, firms operating in the extractive sectors can avoid many barriers to investment including security and infrastructural weaknesses while their large size and negotiating ability insulate them from bureaucracy and regulations (Moss et al. 2005).

Therefore, an analysis of non-mining foreign investment is important because these firms encounter a very different business environment.

Using the 2013 wave of firm-level survey data from the World Bank's Enterprise Surveys (the latest year for which data are available), this study examines the effects of different aspects of the business environment on the probability of foreign firm participation in Ghana. The contributions of this study are two-fold. First, the effects of multiple dimensions of the business environment – financial, infrastructural and institutional factors – are analysed as potential binding constraints on non-mining foreign investment. Second, the effects of the business environment on foreign firm participation are assessed according to different firm characteristics, namely the degree of foreign ownership (minority, majority or fully foreign-owned), the size of the firm (small, medium or large) and the industry in which the firm operates (manufacturing or services). The results for different geographic regions covering the major urban areas is also provided.

Understanding the influence of the various aspects of the business environment on foreign firm participation is important in terms of prioritising reforms of the overall business environment. In addition, assessing the variation of effects according to different firm characteristics matters for government policy formulation aimed at incentivising sub-categories of foreign firms.

This paper is structured as follows. The next section reviews the literature on the linkages between the various business environment constraints and firm performance (in general) and foreign investment (in particular). Accordingly, several hypotheses are set out. The third section describes the data and outlines the method used. In the fourth section, the effects of the business environment on foreign firm participation are discussed in relation to the full sample of firms as well as different firm characteristics and different geographic regions. Next, the policy implications of the results are discussed. The last section concludes.

2. Literature review and hypotheses

2.1 Motives for foreign investment

The traditional motives for overseas investment have been classified according to four main types (Dunning 1993; 1998). Historically important are natural resource-seeking enterprises, motivated primarily by high returns on investment in mineral and oil extraction activities. Usually requiring a good physical infrastructure to transport raw materials to their final destinations, this type of foreign investment remains important for resource-rich countries where capital or technical skills are limited.

Efficiency-seeking multinational firms usually split their production activities across different countries to avail of lower cost inputs. Although arbitrage and labour mobility should equalise factor prices, imperfect capital markets and restraints on the free movement of labour provide profit opportunities for international firms. Costs unrelated to production inputs, such as low transport costs, can also stimulate efficiency-seeking foreign investment.

Alternatively, market-seeking multinational firms invest abroad to increase market share. Access to large foreign markets provides opportunities for economies of scale and scope in the production of tradable goods, implying similar production activities are organised across borders. High tariffs create an additional incentive for multi-plant production. Known as the 'tariff-jumping' motive, multinational firms can circumvent protectionist measures by producing goods locally rather than by exporting into that market (Carr et al. 2001).

The strategic-asset motive can arise from the desire to improve a firm's international competitiveness or to increase its market power (Adams et al. 2014). This type of foreign investment typically takes place through mergers and acquisitions (M&As) with the aim of

acquiring a firm that has a strong market position and advanced technology, implying less relevance for developing countries (Barthel et al. 2011).

2.2 Foreign firms and the business environment

Spurred on by the globalisation of production since the 1980s, the strategies of multinational firms and the ways in which developing countries compete for foreign investment are changing (Pigato 2001). While the traditional determinants of foreign investment remain important, a favourable environment has become essential. The new paradigm for foreign investment emphasises the role of a transparent and non-discriminatory regulatory environment, effective competition policies and an efficient judicial system (Pigato 2001). Adaptable labour skills, sophisticated supplier networks and flexible institutions are also necessary to attract foreign investment.

One of the leading constraints to foreign investment cited by enterprise managers in Africa is finance (Bigsten and Söderbom 2006). Limited access to finance can increase risk and reduce profit opportunities for foreign investors (Kinda 2010). For example, restrictions on loans and overdraft facilities squeeze borrowing for investment projects, restrain credit decisions on commercial feasibility and limit business opportunities. Even when internal financing is available, a weak financial system can hamper the transfer of funds from the parent company to its subsidiary.

Poor infrastructure, fragile institutions and shortages of skilled labour also characterise developing countries (Kinda 2010). A well-developed physical infrastructure and transport network is necessary to connect the stages of production from the initial stage of accessing raw materials through to the end stage of delivering final products to customers. For export-oriented firms, the movement of finished goods to final destinations typically involves multiple modes of transport, thereby magnifying the effects of infrastructural constraints. A fully-functioning and stable form of communications is also important for conducting a firm's operations smoothly. In

short, myriad infrastructural constraints can expose international firms to extra costs and delays in delivery.

The importance of institutions for firm performance and development has also been emphasised in the literature (Rodrik et al. 2004; Dollar et al. 2006; Aterido et al. 2011). Institutions create an environment conducive for the creation and operation of firms. Conversely, weak institutions incur low and uncertain returns on investment (Dollar et al. 2006) and create barriers to competition or raise the costs and risks associated with doing business (Aterido et al. 2011).

2.3 Foreign firm characteristics and the business environment

While the different dimensions of the business environment can constrain foreign firms, distinct effects are likely depending on specific firm characteristics such as the structure of ownership, the size of the firm and the industry in which the firm operates. The effects of the business environment can also vary according to the firm's regional location.

On the upside, foreign-owned firms have better access to external funds and therefore should be less credit-constrained when compared with domestic firms. Foreign firms usually have access to international financial markets (Wagner and Weche Gelübcke 2015). In addition, affiliation with an international network provides collateral for external debt (via internal funds of the parent firm) and risk-diversification (via sales across domestic and international markets). On the downside, foreign ownership can involve risks (economic and political) and an incomplete understanding of the local language, laws and business practices (Oviatt and McDougall 1994). Greater geographic diversification can also increase transaction costs (De Maeseneire and Claeys 2012).

Large firms tend to have better access to finance (Beck et al. 2006; Aterido et al. 2011). Conversely, small- and medium-sized enterprises (SMEs) do not typically have access to externally

raised equity such as initial public offerings or stock market flotations and instead tend to rely on expensive bank debt (Binks and Ennew 1996). Less ability to pledge collateral is an additional disadvantage for smaller firms (De Maeseneire and Claeys 2012). More generally, smaller firms have less resources when it comes to management skills, information and finance (Etemad 1999). On the flipside, the structural simplicity of small firms, the speed of decision-making, the flexibility of response and a lower degree of risk-aversion can encourage smaller firms to invest in riskier environments (Woo 1987). In contrast, larger firms with greater scale of operation are exposed to bigger potential losses (Rasciute and Downward 2017).

Variation of effects can also occur across industries and regions. For example, manufacturing firms are especially susceptible to Africa's poor infrastructure (Bigsten and Söderbom 2006). Indeed, the tendency of Africa's underdeveloped transport infrastructure to generate small-scale localised producers may help explain the prevalence of small manufacturing firms (Bigsten and Söderbom 2006). Infrastructure may also be a contributing factor for the concentration of foreign investment activity in some regions (Abdulai 2005).

2.4 Hypotheses

In summary, the literature suggests foreign investment is deterred by a weak financial system and a fragile business environment, but the effects can differ depending on specific firm characteristics. Insofar as domestic firms tend to be more credit-constrained than their foreign-owned counterparts, it follows that firms with only minority foreign ownership will have less access to finance compared with full or majority foreign-owned firms. More generally, firms with minority foreign ownership, firms of smaller size and manufacturing firms tend to be more susceptible to a weak financial system. In terms of the broader business environment, however, firms with full or majority foreign ownership, firms of larger size and services-based firms tend to be more exposed

to risky environmental conditions. Accordingly, the following hypotheses are formulated with the caveat that the predicted effects on industry are less clear cut:

H1a. Limited access to finance lowers the probability of foreign firm participation.

H1b. The negative effect of limited access to finance on the probability of foreign firm participation is likely to be greater for minority foreign-owned firms, smaller firms and manufacturing firms.

H2a. An underdeveloped infrastructure lowers the probability of foreign firm participation.

H2b. The negative effect of an underdeveloped infrastructure on the probability of foreign firm participation is likely to be greater for full or majority foreign-owned firms, larger firms and services-based firms.

H3a. A weak institutional environment lowers the probability of foreign firm participation.

H3b. The negative effect of a weak institutional environment on the probability of foreign firm participation is likely to be greater for full or majority foreign-owned firms, larger firms and services-based firms.

3. Data and method

3.1 Firm-level survey data: Potential business environment constraints

The World Bank's Enterprise Surveys provide information on the potential constraints that hinder the operation and profitability of both domestic and foreign firms alike. Subjective measures ranking a firm's perception of the business environment are available for three sets of structural constraints relating to (1) finance, (2) infrastructure and (3) governance-related factors derived from institutions. A firm's perception of finance, FIN, is measured by access to finance. Infrastructural factors, $INFRAS$, refer to a firm's perception of transport, electricity and telecommunications. The institutional factors, $INST$, refer to a firm's ability to register land and

buildings; the ease with which licences and permits can be acquired; the payment of taxes and tax administration; customs and trade regulations; whether corruption involves demands for informal payments, protection payments, gifts and bribes; and whether the court system is fair, impartial and uncorrupted.

Figure 1 shows a summary of the constraints to doing business commonly cited by firms in Ghana. Accounting for almost half of all responses, access to finance is most frequently cited as a constraint to business operations. Second in the rankings is electricity supply. Comprising one fifth of all constraints cited, most firms have experienced power outages lasting eight days on average, representing over 12 per cent of losses as a ratio of annual sales. Transport is also cited as a constraint, but only in a minority of cases. The remaining constraints are derived mainly from institutions. Among firms' responses, customs and trade regulations and the ability to secure land feature most prominently. Other obstacles cited include tax rates and corruption.

[Insert Figure 1 here]

3.2 Firm-level survey data: Breakdown by firm characteristics

The Enterprise Survey data also provide information on different firm characteristics, namely the degree of foreign ownership, the size of the firm and the industry in which the firm operates. The degree of foreign ownership of a subsidiary's stock includes full outright ownership (100 per cent), majority ownership of a half or more (50-99 per cent) and minority ownership of less than a half (10-49 per cent). The classification of a firm's size is based on the number of employees. Small firms have between 5 and 19 employees, medium-sized firms have between 20 and 99 employees and large firms have 100 or more employees. Information by industry is available for both the manufacturing and services sectors. The regional data covers the major urban areas in Ghana.

Table 1 shows the breakdown of 720 firms operating in the manufacturing and services industries according to firm size (small, medium, large and unknown) and ownership (domestic or foreign) across Ghana's major urban areas (Accra, Tema, the Northern region and Takoradi).[1] Comparing the two industries, manufacturing has a higher representation of firms: 1.5 times the number of services firms in overall terms (445 versus 275 firms); double the amount for small firms (301 versus 161 firms), one third more for large-sized firms (42 versus 27 firms) and roughly equal in number for medium-sized firms (59 versus 64 firms).

[Insert Table 1 here]

In terms of ownership, most firms operating in Ghana are of domestic origin, outnumbering foreign firms by five to one. Of the 605 domestic firms, small firms are predominant in both sectors. Of the 115 foreign firms, almost two thirds operate in the manufacturing sector (73 firms) with about half of these classified as small-sized firms (38 firms). The sparsity of larger foreign-owned firms is illustrated by the absence of medium- and large-sized foreign firms in Takoradi and the Northern region.

Of the four regions, half the firms are located in the greater Accra region, not surprising because Ghana's capital has the best linkages to finance and resources. While domestic firms are spread across the different regions, most foreign-owned firms are located either in Accra or Tema, partly reflecting the pull factor of their respective ports. In contrast, Takoradi is host to the fewest number of firms. Located in the western region of Ghana, its chief industries comprise mainly of timber and mineral resources.

[1] The sample of 720 firms surveyed by the World Bank covers a representative sample of the private sector in the most active economic regions in Ghana.

In short, Ghana tends to follow the African pattern where small manufacturing firms of mainly domestic origin prevail. The limited presence of foreign-owned firms in the non-mining sector and the paucity of bigger firms (usually associated with large-scale employment) are also apparent from the data.

3.3 Logit estimation

Given the dichotomous nature of the dependent variable, estimation is carried out using the logit model. In its general form, the logit model can be expressed as follows:

$$Prob(Foreign = 1|x) = \frac{\exp(\beta_0 + \beta_1 x)}{1 + \exp(\beta_0 + \beta_1 x)} \quad (1)$$

where the left-hand side represents the probability of foreign investment ($Foreign$), which takes the value of one when at least 10 per cent of the firm's capital structure is foreign-owned and zero otherwise. On the right-hand side, the set of explanatory variables, x, includes a set of structural constraints, X_{fir}, a set of control variables comprising firm characteristics, Z_{fir}, and fixed effects in two dimensions, summarised as follows:

$$Prob_{fir} = \frac{\exp(\beta_1 FIN_{fir} + \beta_2 INFRAS_{fir} + \beta_3 INST_{fir} + \lambda_1 Z_{fir} + \gamma_f + \eta_i)}{1 + \exp(\beta_1 FIN_{fir} + \beta_2 INFRAS_{fir} + \beta_3 INST_{fir} + \lambda_1 Z_{fir} + \gamma_f + \eta_i)} \quad (2)$$

where the probability of foreign investment by firm f operating in industry i in region r, $prob_{fir}$, depends on different financial, infrastructural and institutional constraints (FIN_{fir}, $INFRAS_{fir}$ and $INST_{fir}$); a set of firm characteristics, Z_{fir}, which includes the quality of human capital and the age of the firm; and fixed effects to control for heterogeneity across firms and industries, γ_f and η_i. Maximum likelihood estimation is used to generate the parameter values.

4. Empirical results

The effects of the various aspects of the business environment on the probability of foreign investment in Ghana are first discussed in relation to the full sample of firms (section 4.1). A breakdown of the results according to different firm characteristics (the degree of foreign ownership, the size of the firm and the industry in which the firm operates) and the major geographic regions are presented in section 4.2.

4.1 Full sample results

Table 2 presents the logit regression results on the linkages between the subjective measures of the business environment and the probability of foreign investment. Columns (1) to (3) incrementally expand the set of structural constraints with indicators relating to finance, infrastructure and institutions.

[Insert Table 2 here]

The results suggest access to finance lowers the probability of foreign firm participation, in support of hypothesis H1a and consistent with the view that finance (availability and cost) constitutes one of the main constraints on investment activities in many Ghanaian sectors (Tsikata et al. 2000). Although Ghana's financial system includes foreign and local banks, the latter tend to provide limited access to foreign exchange and offer only basic lending and account services (Debrah 2002). Adams et al. (2014) have noted that a key structural impediment to the financial system is the extent of the informal economy. Nevertheless, the spread of mobile phones and mobile money services help mitigate the shortcomings of the formal banking system.

Ghana's infrastructure does not materially constrain the probability of foreign firm participation. The insignificant findings likely reflect investment towards expanding the modes of transport beyond the roads network (the dominant carrier of overland freight); a greater mix of

energy sources to generate electricity (hydropower, fossil fuels and renewable energies); and general improvements in telecommunications infrastructure. Carlin et al. (2006) have suggested that transport and telecommunications rarely feature among the major business constraints, partly reflecting the increased presence of privately-provided mobile telephony that has diminished reliance on its publicly-provided counterpart.

The quality of institutions vary, hence their effects can vary. For the full model (column 3), foreign investment is negatively associated with the courts system and access to land, albeit only marginally significant for the latter. The judiciary is an essential institution in interpreting and enforcing the law, developing anti-corruption policies and overseeing commercial disputes. Without certainty in the application of a country's laws and the guarantee of a fair hearing, corrupt officials can claim the proceeds of future investment in the event of a dispute. Therefore, foreign investment can be discouraged by insufficient transparency and arbitrary outcomes – issues especially prevalent in French-speaking African countries (Tsikata et al. 2000). Although Ghana's constitution guarantees the independence and the separation of the judiciary from the legislative and the executive branches of government, its courts system is not free of corruption.[2]

Unlike the industrialised countries where property rights are secure and legal titles facilitate the purchase, sale and development of land, the Ghanaian system of managing land and property is cumbersome (Adams et al. 2014). Tsikata et al. (2000) have suggested that land litigation may be holding back Ghanaian industrial development, noting that delays in obtaining land titles to construct factory buildings is particularly problematic for start-up FDI activity.

[2] A courts scandal in 2015 threw Ghana's judiciary into crisis with the release of documentary evidence that judges and judicial officials accepted bribes in exchange for favourable judgements (Rahman 2018).

A neutral effect is obtained for firms' perceptions of getting a licence or a permit and similarly for tax rates, tax administration and corruption. Various indicators from the World Bank (2019) suggest Ghana is ahead of the sub-Saharan African average, but far behind the OECD average.[3] In explaining why foreign investment is not significantly constrained by tax rates, Kinda (2010) has proposed the effect of taxes is dwarfed by Africa's structural problems. More generally, relatively high corporation tax rates are on a downward trajectory, implying higher profits for firms. Potentially more important, foreign investors can gain from tax exemptions and tax avoidance, the latter commonly undertaken to shift profits from a high-taxation country to a low-taxation country via transfer pricing.

Counter to hypothesis H3a, the results suggest customs and trade regulations significantly increase the probability of foreign investment. Clearly, an efficient and smooth-running system of customs clearance and border procedures that minimise congestion and transit time is important for foreign investment. In this context, Debrah (2002) notes that the modernisation of harbours and port facilities is vital to increase capacity and to speed up the processing of trade.

In terms of the control variables, an educated and trained labour force is found to be important, not surprising as foreign investment requires technical skills to build knowledge-based industries. The size of the firm (medium and large) also matters for FDI.

4.2 Results by firm characteristics and geographic regions

Extending the analysis, the breakdown of the results according to different firm characteristics and the major geographic regions are shown in Table 3.

[3] It takes an average of 24.5 days to obtain an operating licence in Ghana and an average of 224 hours to prepare and pay taxes. Ghana is rated 3.5 on the country policy and institutional assessment (CPIA) index of transparency, accountability and corruption in the public sector (1 = low to 6 = high). Note: years vary.

[Insert Table 3 here]

4.2.1 Results by degree of foreign ownership

In terms of foreign ownership, similar results are obtained for firms that are fully or majority owned by the foreign firm. In particular, finance is an important constraint; multinational firms may be less susceptible to credit constraints, but are not insensitive to them. The judicial system and access to land are also associated with a lower probability of foreign investment while customs and trade regulations have a positive influence.

Minority foreign-owned firms tend to accrue opposite coefficient signs. Counter to hypothesis H1b, the positive and significant coefficient for access to finance likely reflects greater local knowledge and the ability to tap into informal sources of finance including family and friends. Inherent to Ghanaian (and African) culture is a high sense of collectivism around family members and kinship (Debrah 2002). Indeed, the benefits of minority ownership in some African countries include access to informal networks, informal contractual mechanisms and credit (Ramachandran and Shah 1999). Local knowledge and networks may also play a role in explaining the positive coefficient for the courts system as minority foreign-owned firms are less likely to be a target for bribes and unofficial payments. Customs and trade regulations, however, are found to deter foreign investors with a minority share, likely reflecting the general rise in non-tariff barriers (NTBs) in Africa, including increased transit time associated with customs clearance and border delays and stringent requirements attached to various product standards and rules of origin.

4.2.2 Results by firm size

Regarding the firm size classifications, finance is an issue for small firms only, consistent with hypothesis H1b and in line with the view that smaller firms tend to have fewer resources (Etemad

1999). In addition to the courts system, transport is introduced as a constraint for medium-sized foreign firms. Despite the ongoing expansion of transport modes, the transport network remains severely underdeveloped by international standards. For example, Ghana's limited coverage of domestic railways and poor international connections can impair the transport of bulky commodities – an important trade aspect for many medium-sized firms.

For large foreign firms, the financing and infrastructural indicators are relegated to insignificance. In terms of the institutional factors, the effects of land access and corruption are marginally significant. Larger firms can be disproportionately affected by issues relating to the availability of sufficiently large plots of land to build factories, warehouses and the like. Larger firms are also more likely to pay substantial bribes to win contracts or to bypass unwieldly bureaucracy. Insofar as larger firms can be more sensitive to riskier environments, these results are consistent with hypothesis H3b. At the same time, other institutional factors are beneficial for large foreign firms, including the ease with which a firm can obtain a licence or a permit as well as customs and trade regulations.

4.2.3 Results by industry

Differential effects are obtained across the manufacturing and services industries. Consistent with hypothesis H1b, financing (marginally) constrains manufacturing. Land and the judiciary comprise the main constraints to foreign investment in manufacturing. As the production of goods requires the physical units of land, buildings and machinery, any impediments to land access can delay or even halt the start-up phase of foreign investment. Foreign investors can also be put off by questions over judicial impartiality, unpredictability in the application of laws, uncertainty of a fair hearing or arbitrary outcomes (Tsikata et al. 2000).

For the services industry, transport represents an important structural constraint on foreign investment, consistent with hypothesis H2b. A well-functioning transport network is necessary to deliver services, especially if services provision involves high-frequency external services suppliers. Although less important in size and significance, corruption also restrains foreign investment in the services industry. Tied to a specific location, services can be vulnerable to corrupt officials seeking additional payments. Bribes can also be useful to avoid penalties of non-compliance with tax requirements, which is even more important if services are operating semi-informally.

4.2.4 Results by geographic region

The results suggest greater Accra – Ghana's richest region – is not significantly affected by the constraints impinging on the less privileged regions. The only exception is the marginal significance of land. New office space that can put upward pressure on rental rates is not easily accommodated in Ghana's capital city. The problem of accessing land and property is compounded by underinvestment in recreational facilities (Adams et al. 2014).

For the Northern region, the over-riding constraint on foreign investment is electricity. Clearly, power cuts have a greater effect in the rural regions where usage of own power generators is more limited. On the other hand, foreign firms tend to locate investment in areas where electricity is more reliable (Aterido et al. 2011). In addition, the effect of tax rates is negative and marginally significant despite tax incentives on offer to attract foreign investment away from the greater Accra region (Mmieh and Owusu-Frimpong 2004).

Of the three regions, foreign investment in Tema is significantly impaired by the greatest number of constraints, including issues relating to transport, land, tax rates and the judiciary. Founded on a small fishing village, Tema is host to Ghana's largest seaport. Although transport

linkages (railway and motorway) connect Tema with Ghana's capital city (Debrah 2002), Takoradi's smaller port is better connected by railway network linkages with Kumasi, Sunyani and Cape Coast. In contrast, the probability of locating foreign investment in Tema is significantly increased by tax administration and customs and trade regulations.[4]

5. Results summary and policy implications

In summary, the findings suggest financial factors (access to finance) and institutional factors (the judicial system and land access) are most important in constraining the probability of foreign investment. Disaggregating the results according to the different firm characteristics and geographic regions, the constraining effect of finance is significant for full and majority foreign-owned firms, for small firms and is marginally significant for manufacturing firms. Infrastructural factors are found to play a limited role in restraining foreign investment. The main exceptions are transport for medium-sized firms, services-based firms and Tema-based firms and electricity for firms located in the Northern region. Among the institutional factors, the judicial system and land access represent the most important constraints. The foreign firms worst affected by judicial corruption are full and majority foreign-owned firms, medium-sized firms, manufacturing firms and Tema-based firms. The foreign firms encountering land-related issues include manufacturing firms and firms located in the Tema region. In short, while much progress has been made to enhance Ghana as a location for foreign investment, more can be done to alleviate business environment constraints.

[4] As part of a joint venture, the Ghana Ports and Harbours Authority (GPHA) is introducing advanced automation of port operations and paperless transhipment at the Port of Tema. A port expansion to increase export capacity by accommodating large container ships is also underway.

Policy priorities for reforming the business environment include the financial environment. As part of its financial system liberalisation, Ghana has initiated the Financial Sector Adjustment Programme (FINSAP) and has taken measures to make credit more readily available to the private sector (Tsikata et al. 2000). Nevertheless, the findings that small firms and manufacturing firms are constrained by finance is of particular concern given the prevalence of small manufacturing firms in Ghana. Therefore, targeting the small firm industry is worthwhile. To facilitate the smooth operation of firms and to meet their short-term and long-term financial requirements, the provision of lines of credit, overdrafts, advance payments and banker's acceptance should be enhanced. Putting in place appropriate technology and automation of services would also improve the administration of firms' finances. Reducing the size of the informal economy by tackling its causes or consequences (high unemployment, high taxes and irregular rule of law) is also important.

Another priority area is the judicial system. Among other factors, the propensity for accepting bribes or gifts reflect low remuneration, poor supervision of officials and unclear guidelines on acceptable ethical behaviour (GII 2007). Limited administrative capacity has also led to unduly long legal procedures and questionable verdicts (Rahman 2018). Accordingly, internal measures to monitor corruption and a judicial code of ethics is necessary. More important, the processing of court cases could be automated (GII 2007). In this way, transparency is enhanced, individual indiscretion is minimised and proceedings are expedited, all of which provide greater certainty for foreign firms.

A long-standing policy priority involves extending land reform and reducing complications relating to land acquisition – a particularly important issue at the initial phase of foreign investment. For example, sufficiently large plots of land to build factories and warehouses are not always readily available. Moreover, the time it takes to obtain land titles for new factory buildings can

involve long delays (Tsikata et al. 2000). Consequently, the administration of procedures from the purchase of land through to legal ownership could be streamlined.

Among the constraining effects of a weak institutional environment, a notable exception is customs and trade regulations; its positive effect points to the importance of efficiency of administration and transit time. The principles of port technology and the process of automating services can be deployed elsewhere, for example, the courts system (and reduce the propensity for demanding bribes); the land acquisition problem (and shorten the delays in obtaining land titles); the administration of collecting taxes (and enhance the transparency and simplicity of the taxation system); and finance (and increase service availability through e-banking).

Attracting more investment from abroad requires focused attention on tackling the constraints that impinge on large firms (simplify land acquisition and root out corruption) and manufacturing firms (enhance access to land and finance and instil trust in the courts system). At the same time, the results for minority foreign-owned firms point to some advantages arising from local knowledge and networks. Therefore, rather than targeting foreign firms exclusively (as set out in the 1984 Investment Code), more can be done to foster partnerships between local and foreign firms or firms with only minority foreign holdings. Along these lines, Osabutey and Croucher (2018) advocate a role for intermediate institutions – a bridge between government initiatives and industry needs – as part of an integrated approach to industry-specific FDI, human capital development and technology-transfer policies. Meaningful collaboration between local and foreign firms would also alleviate Africa's over-reliance on foreign firms that undertake large-scale construction projects (Osabutey et al. 2014).

At a regional level, policy priorities include dealing with inadequate electricity and a deficient transport system. While a greater mix of energy sources will enhance electricity supply, more needs to be done in terms of its distribution. Ongoing investment to expand the modes of

transport (including rail, air and port facilities) are needed to complement the current (roads-based) transport network. Expansion of the Trans-African Highway network, currently linking Ghana with its neighbouring countries, will eventually tie it with more member countries of the Economic Community of West African States (ECOWAS). Rationalising the procedures involved in land acquisition and title ownership, especially in the greater Accra area which brings in most foreign investment, is also of paramount importance (Tsikata et al. 2000). Overall, putting in place appropriate policies will go some way towards enhancing the business environment and meeting the objectives of Ghana's foreign investment policy strategy (see Table A1 in the Appendix).

6. Conclusions

Ghana has recently overtaken Nigeria as the largest recipient of foreign investment in West Africa. It is well-placed to lure in more foreign investment: an abundance of natural resources; geographic attributes that include an Atlantic coastline (with access to global shipping routes) and proximity to major markets; as well as historical colonial linkages (Britain is one of Ghana's most important foreign investors) and cultural factors (Ghana's official language is English – the language of international business).

Myriad political and economic reforms and various policy factors complement Ghana's natural advantages. In particular, the 1992 constitution ushered in an era of peaceful elections, the smooth transfer of power and a more favourable government attitude towards private investment. Policy measures aimed at improving the business environment include a general liberalisation of the financial system, a review of the tax structure for private investment and a gradual removal of administrative hurdles (Tsikata et al. 2000). Still, there remains scope for further improvements of the business environment as part of a wider shift of foreign investment away from mining into other sectors. Ghana can also promote itself as a destination for foreign investment. Indeed, a recent

'brand Ghana' campaign by the Ghana Investment Promotion Centre (GIPC) has highlighted the country's political stability and business-friendly policy framework. No doubt, the selection of Ghana as the headquarters location for the secretariat of the new African Continental Free Trade Area (AfCFTA) – the world's largest free trade area covering 55 African Union member states with a combined market size of 1.2 billion people – should serve to increase foreign investment and enhance Ghana's international standing on the world stage.

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Data availability statement

The dataset is available in a public repository that issues DOIs. https://zenodo.org/record/4968758.

References

Abdulai, I. (2005). *Sectoral analysis of foreign direct investment in Ghana*. Bank of Ghana Working Paper No. 15.

Adams, K., Debrah, Y. A., Williams, K., & Mmieh, F. (2014). Causes of financial FDI inflows into sub-Saharan Africa (SSA): Evidence from Ghana. *Thunderbird International Business Review*, 56(5), 439–459.

Asiedu, E. (2013). *Foreign direct investment, natural resources and institutions*. International Growth Centre Working Paper, 1-38.

Aterido, R., Hallward-Driemeier, M., & Pagés, C. (2011). Big constraints to small firms' growth? Business environment and employment growth across firms. *Economic Development and Cultural Change*, 59(3), 609–647.

Barthel, F., Busse, M., & Osei, R. (2011). The characteristics and determinants of FDI in Ghana. *European Journal of Development Research*, 23(3), 389–408.

Beck, T., Demirgüç-Kunt, A., Laeven, L., & Maksimovic, V. (2006). Financial and legal constraints to growth: Does firm size matter?. *Journal of Finance*, 60(1), 137–177.

Bigsten, A., & Söderbom, M. (2006). What have we learned from a decade of manufacturing enterprise surveys in Africa. *World Bank Research Observer*, 21(2), 241–265.

Binks, M. R., & Ennew, C. T. (1996). Growing firms and the credit constraint. *Small Business Economics*, 8(1), 17–25.

Carlin, W., Schaffer, M. E., & Seabright, P. (2006). *Where are the real bottlenecks? A Lagrangian approach to identifying constraints on growth from subjective survey data.* Centre for Economic Reform and Transformation Discussion Paper No. 5719.

Carr, D. L., Markusen, J. R., & Maskus, K. E. (2001). Estimating the knowledge-capital model of the multinational enterprise. *American Economic Review*, 91(3), 693–708.

DCED (2008). Supporting business environment reforms: Practical guidance for development agencies. Paris: Donor Committee for Enterprise Development.

Debrah, Y. (2002). Doing business in Ghana. *Thunderbird International Business Review*, 44(4), 495–513.

De Maeseneire, W., & Claeys, T. (2012). SMEs, foreign direct investment and financial constraints: The case of Belgium. *International Business Review*, 21(3), 408–424.

Dollar, D., Hallward-Driemeier, M., & Mengistae, T. (2006). Investment climate and international integration. *World Development*, 34(9), 1498–1516.

Dunning, J. H. (1993). *Multinational Enterprises and the Global Economy*. Wokingham: Addison-Wesley.

Dunning, J. H. (1998). Location and the multinational enterprise: A neglected factor?. *Journal of International Business Studies*, 29(1), 45–66.

Etemad, H. (1999). Globalization and small and medium-sized enterprises: Search for potent strategies. *Journal of Global Focus*, 11(3), 85–105.

GII (2007). *Report on judicial corruption monitoring exercise in Ghana*. Accra: Ghana Integrity Initiative.

GIPC (2019). *Invest in Ghana*. Ghana Investment Promotion Centre. https://www.gipcghana.com/invest-in-ghana/why-ghana.html.

Kinda, T. (2010). Investment climate and FDI in developing countries: Firm-level evidence. *World Development*, 38(4), 498–513.

Mawejje, J., & Sebudde, R. K. (2019). Constraints or complaints? Business climate and firm performance perceptions in Uganda. *Journal of Development Studies*, 55(12), 2513–2525.

Mmieh, F., & Owusu-Frimpong, N. (2004). State policies and the challenges in attracting foreign direct investment: A review of the Ghana experience. *Thunderbird International Business Review*, 46(5), 575–599.

MOTI (2018). Why Ghana, Ministry of Trade and Industry. http://moti.gov.gh/whyGhana.php.

Moss, T. J, Ramachandran, V., & Shah, M. K. (2005). Is Africa's skepticism of foreign capital justified? Evidence from East African firm survey data. In T. H. Moran, E. M. Graham, & M. Blomström (Eds.), *Does foreign direct investment promote development*, (pp. 337–366). Washington DC: Institute for International Economics.

Osabutey, E. L. C., Williams, K., & Debrah, Y. A. (2014). The potential for technology and knowledge transfers between foreign and local firms: A study of the construction industry in Ghana. *Journal of World Business*, 49(4), 560–571.

Osabutey, E. L. C., & Croucher, R. (2018). Intermediate institutions and technology transfer in developing countries: The case of the construction industry in Ghana. *Technological Forecasting and Social Change*, 128(C), 154–163.

Oviatt, B. M., & McDougall, P. P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 25(1), 45–64.

Pigato, M. A. (2001). *The foreign direct investment environment in Africa*. Africa Region Working Paper Series No. 15.

Rahman, K. (2018). Overview of corruption and anti-corruption in Ghana. U4 Anti-Corruption Resource Centre. https://www.u4.no.

Ramachandran, V., & Shah, M. K. (1999). Minority entrepreneurs and firm performance in sub-Saharan Africa. *Journal of Development Studies*, 36(2), 71–87.

Rasciute, S., & Downward, P. (2017). Explaining variability in the investment location choices of MNEs: An exploration of country, industry and firm effects. *International Business Review*, 26(4), 605–613.

Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, 9(2), 131–165.

Tsikata, G. K., Asante, Y., & Gyasi, E. M. (2000). Determinants of foreign direct investment in Ghana. London: Overseas Development Institute.

United Nations Conference on Trade and Development (UNCTAD, 2003). *Investment Policy Review: Ghana.* Geneva: United Nations.

Wagner, J., & Weche Gelübcke, J. P. (2015). Access to finance, foreign ownership and foreign takeovers in Germany. *Applied Economics*, 47(29), 3092–3112.

Woo, C. Y. (1987). Path-analysis of the relationship between market share, business-level conduct and risk. *Strategic Management Journal*, 8(2), 149–168.

World Bank (2013). World Bank Enterprise Surveys. https://www.enterprisesurveys.org.

World Bank (2019). *World Development Indicators*, UK Data Service. https://beta.ukdataservice.ac.uk/datacatalogue/studies/study/?id=4814.

Table 1 Distribution of firms by industry, firm size, ownership and region

	Manufacturing					Services					
	Small	Medium	Large	Unknown	Total Manuf	Small	Medium	Large	Unknown	Total Services	Total firms
Domestic firms											
Accra	130	30	10	13	183	76	16	7	12	111	294
Tema	58	10	2	3	73	23	18	2	1	44	117
North	60	2	12	17	91	35	9	0	7	51	142
Takoradi	15	1	4	5	25	21	4	0	2	27	52
Total domestic firms	263	43	28	38	372	155	47	9	22	233	605
Foreign firms											
Accra	16	9	9	4	38	4	9	13	0	26	64
Tema	15	7	5	0	27	0	8	5	1	14	41
North	4	0	0	1	5	0	0	0	0	0	5
Takoradi	3	0	0	0	3	2	0	0	0	2	5
Total foreign firms	38	16	14	5	73	6	17	18	1	42	115
Total firms	301	59	42	43	445	161	64	27	23	275	720

Source: Author calculations using the World Bank's Enterprise Survey data.

Table 2 Constraints to foreign firm participation[a]

Regressors	(1) Finance	(2) Infrastructure	(3) Institutions
Structural constraints			
Access to finance	–0.13**	–0.12**	–0.12**
	(0.05)	(0.05)	(0.06)
Transport	–	–0.04	–0.11
		(0.06)	(0.09)
Electricity	–	–0.04	–0.07
		(0.10)	(0.11)
Telecommunications	–	0.10	0.03
		(0.10)	(0.10)
Access to land	–	–	–0.13*
			(0.07)
Licensing and permits	–	–	0.02
			(0.07)
Tax rates	–	–	–0.20
			(0.13)
Tax administration	–	–	0.05
			(0.10)
Customs and trade regulations	–	–	0.25**
			(0.12)
Corruption	–	–	–0.02
			(0.04)
Courts	–	–	–0.06***
			(0.02)
Firm characteristics			
Skilled workforce	0.29***	0.29***	0.26**
	(0.10)	(0.10)	(0.10)
Age	–0.01	–0.01	–0.01
	(0.01)	(0.01)	(0.01)
Firm size: Small	–0.02	–0.01	0.12
	(0.48)	(0.48)	(0.55)
Firm size: Medium	1.33***	1.30**	1.19**
	(0.49)	(0.49)	(0.54)
Firm size: Large	2.21***	2.20**	2.16***
	(0.51)	(0.51)	(0.56)
Manufacturing	0.23	0.26	0.36
	(0.22)	(0.23)	(0.23)
Constant	–2.26**	–2.26**	–2.31**
	(0.55)	(0.61)	(0.70)
No. of obs	710	710	710
Pseudo R^2	0.17	0.17	0.16

[a] Robust standard errors are shown in parentheses.

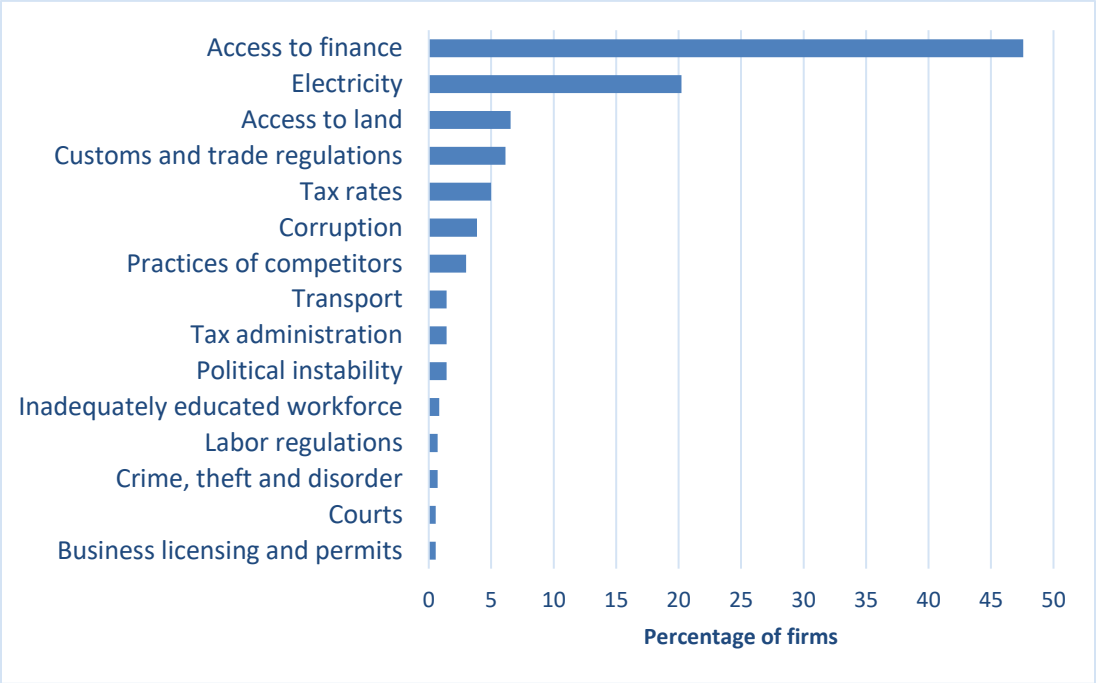
*** denotes significance at the 1% level; ** denotes significance at the 5% level; * denotes significance at the 10% level.

Table 3 Constraints to foreign firm participation by ownership, firm size, industry and region[a]

	Foreign ownership (%)			Firm size			Industry		Region[b]		
	100	50-99	10-49	Small	Medium	Large	Manuf	Services	Accra	Tema	North
Structural constraints											
Access to finance	–0.11**	–0.13**	0.13**	–0.16**	0.08	–0.13	–0.14*	–0.19	–0.09	–0.14	–0.63
	(0.06)	(0.06)	(0.06)	(0.08)	(0.15)	(0.36)	(0.08)	(0.18)	(0.08)	(0.23)	(0.42)
Transport	–0.14	–0.15	0.13	–0.13	–0.33**	–0.38	–0.06	–0.33**	–0.03	–0.97**	–0.48
	(0.10)	(0.10)	(0.10)	(0.19)	(0.15)	(0.46)	(0.11)	(0.17)	(0.11)	(0.40)	(0.51)
Electricity	–0.07	–0.07	0.05	–0.09	0.23	0.20	–0.16	–0.09	0.02	–0.09	–0.88**
	(0.13)	(0.12)	(0.13)	(0.13)	(0.30)	(0.30)	(0.14)	(0.16)	(0.13)	(0.28)	(0.39)
Telecommunications[b]	0.04	0.04	–0.04	0.03	–0.18	0.32	0.09	–0.06	0.07	–0.20	0.56*
	(0.12)	(0.11)	(0.11)	(0.19)	(0.22)	(0.44)	(0.13)	(0.23)	(0.12)	(0.29)	(0.31)
Access to land	–0.14*	–0.12*	–0.12*	–0.15	0.02	–0.61*	–0.26**	0.16	–0.21*	–0.84**	–0.09
	(0.07)	(0.07)	(0.07)	(0.11)	(0.14)	(0.32)	(0.11)	(0.13)	(0.11)	(0.41)	(0.55)
Licensing and Permits	0.05	0.04	–0.03	–0.18*	–0.12	1.45***	0.01	0.08	0.07	–0.01	0.45
	(0.08)	(0.08)	(0.08)	(0.11)	(0.16)	(0.47)	(0.09)	(0.16)	(0.10)	(0.16)	(0.29)
Tax rates	0.08	–0.05	0.02	–0.13	–0.23	–0.31	0.10	–0.24	–0.03	–1.47***	–2.95*
	(0.14)	(0.12)	(0.13)	(0.27)	(0.46)	(0.46)	(0.18)	(0.16)	(0.13)	(0.53)	(1.64)
Tax administration	–0.02	0.03	0.01	0.17	0.52	–0.13	–0.06	0.39	–0.09	1.61***	1.42
	(0.10)	(0.10)	(0.09)	(0.23)	(0.40)	(0.50)	(0.13)	(0.24)	(0.10)	(0.53)	(1.39)
Customs and trade regulations	0.31**	0.34**	–0.35**	0.47***	0.03	0.92**	0.18	0.56***	0.15	1.49***	–0.09
	(0.14)	(0.13)	(0.14)	(0.15)	(0.23)	(0.43)	(0.12)	(0.18)	(0.10)	(0.46)	(0.21)
Corruption	–0.04	–0.03	0.04	–0.01	–0.01	–0.50*	0.02	–0.10*	–0.02	0.11	0.13
	(0.04)	(0.04)	(0.04)	(0.07)	(0.06)	(0.30)	(0.05)	(0.06)	(0.05)	(0.10)	(0.31)
Courts	–0.07***	–0.06***	0.07***	–0.06	–0.11**	–0.05	–0.08***	–0.02	–0.04	–0.14**	0.05
	(0.02)	(0.02)	(0.02)	(0.063	(0.04)	(0.07)	(0.03)	(0.04)	(0.03)	(0.06)	(0.14)
Firm characteristics											
Skilled workforce	0.26**	0.24**	–0.21**	0.18	0.48	0.46	0.19	0.44*	0.23*	0.28	0.31
	(0.11)	(0.11)	(0.10)	(0.15)	(0.34)	(0.38)	(0.12)	(0.24)	(0.12)	(0.30)	(0.24)
Age	–0.03**	–0.02	0.02	–0.01	0.02	–0.02	–0.01	0.01	0.00	–0.02	–0.21*
	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)	(0.01)	(0.04)	(0.11)
Firm size: Small	–0.05	–0.07	0.11				0.12	–0.09		–2.47**	–2.41**
	(0.63)	(0.59)	(0.59)	–	–	–	(0.60)	(1.47)	–	(1.11)	(1.06)
Firm size: Medium	0.79	1.05*	–0.97*				0.99	1.72		–1.09	
	(0.62)	(0.56)	(0.57)	–	–	–	(0.61)	(1.40)	–	(1.07)	–
Firm size: Large	2.17***	2.03***	–2.03***				1.29**	4.12***			
	(0.63)	(0.59)	(0.59)	–	–	–	(0.64)	(1.48)	–	–	–
Manufacturing	0.62**	0.48*	–0.60**	1.38***	–0.19	–1.92**			0.05	1.32**	2.39*
	(0.27)	(0.25)	(0.25)	(0.49)	(0.53)	(0.76)	–	–	(0.31)	(0.65)	(1.27)
Constant	–2.57***	–2.18***	2.33**	–2.74***	–2.66***	0.61	–1.38*	–3.99**	–1.36***	0.35	3.39*
	(0.84)	(0.75)	(0.77)	(0.70)	(0.76)	(1.00)	(0.76)	(1.75)	(0.51)	(1.32)	(1.75)
No. of obs	710	710	710	454	123	67	442	268	349	144	125
Pseudo R^2	0.20	0.20	0.20	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45

[a] Robust standard errors are shown in parentheses.
[b] The results for Takoradi are dropped because of small sample size.
*** denotes significance at the 1% level; ** denotes significance at the 5% level; * denotes significance at the 10% level.

Figure 1 Constraints to doing business in Ghana



Source: Enterprise Survey, World Bank.