INVESTING IN CONFLICT ZONES: A FIRM-LEVEL ANALYSIS

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ABSTRACT

The purpose of this paper is to examine the determinants of a firm's strategy to invest in a conflict location. To the best of our knowledge, this has not been done before. We start with the population of multinationals who have chosen to invest in low income countries with weak institutions. We then split this sample in order to distinguish between firms that have invested in conflict regions compared to those that haven't. Our analysis then proceeds to explain the decision of those firms to invest in conflict locations by using a simple Probit model. We find that countries with weaker institutions and less concern about corporate social responsibility (CSR) are more likely to invest in conflict regions. Finally, firms with more concentrated ownership are more likely to invest in such locations.

Keywords: Conflict, corporate social responsibility, FDI, institutions.

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1. INTRODUCTION

There is a long history of western companies being willing to invest in politically unstable locations, and in some cases, such as possibly Shell in Nigeria, it is claimed that the inward investment has contributed to the instability. However, these investments receive little comment. One recent exception is White Nile ltd, which has received a good deal of hostile press in both Europe and the US for announcing that it intended to explore the gas and oil reserves in Sudan. The press reacted as though this was a unique and somewhat disturbing development in the international business environment. In fact however, what was unusual about the White Nile case was not that a firm from the West was willing to invest in a war torn region, but simply that a relatively small company had been set up for the specific purpose of doing so, rather than this being undertaken by one of the world's largest firms.

On July 22nd 2009, four years after the UN set up a Peace-building Commission, the UN Security Council outlined the issues facing a post-conflict country. "The first is the need for a strong leader to stop 'international agencies' turf wars. The second is for money to be released in good time. Humanitarian funds come out of emergency budgets; peace-building usually comes out of development budgets. The UN cannot stop war unless it is also able to win the peace." The role of Inward FDI in stimulating development, building capacity and generating growth has been well investigated, however little is known about FDI in the context of corruption, conflict and post conflict.

Given the importance of this issue, and the comment in the popular press, the academic literature has had little to say about investments by MNEs in conflict zones.

In general, one reason perhaps why so little has been written about FDI in conflict zones, is that the assumption is that this is simply resource seeking FDI, where natural resources can only be obtained from a limited set of locations. However, this is rather simplistic now. Security concerns for staff has increased, and potentially the risks to investing overseas in conflict locations are not only felt abroad, but may also lead to attacks on their business in other parts of the world, either through protest groups or terrorism.

While the literature on corruption contends that corrupt locations, or those with weak institutions are less likely to attract FDI, it nevertheless remains true that locations with weak institutions still attract large quantities of FDI, and that the subject of the relationship between FDI and the host country was a matter of some dispute at a recent G8 summit[1].

In more general terms, links between local or national governance structures and FDI have been explored, see for example Bhaumik et al (2009) or Frynas et al (2006) and the references therein. Theory suggests that better governance is associated with development, following la Porta et al (1998a, b), and that in turn firms are more likely to invest in locations with good governance and institutions. However, a lot of empirical evidence refutes this; see for example Driffield et al (2009). Murshed (2002) for example highlights the role that control and access to natural resources plays in local conflicts,

particularly in developing countries. As such, it is likely that MNEs will get drawn into this, either by accident or design. At the same time, within the context of corporate social responsibility, how firms respond to these challenges, and how they are perceived by home country stakeholders is becoming more important.

This paper proceeds as follows: in section 2 we discuss the very limited literature available for this area of research. In section 3 we outline our 4 key hypotheses and their theoretical basis. In section 4 we describe our empirical specification. In section 5 we discuss the empirical results. Finally, section 6 concludes our analysis.

2. LITERATURE REVIEW

Given the importance of this question, there is amazingly little on the links between conflict, post conflict and FDI. There is a large economics literature on the impact of institutional quality on FDI inflow, and the general conclusion is that weak institutions adversely affect FDI. At the same time, there a more limited international business literature on the impact of institutions on MNE strategies, see for example Meyer et al (2009). These literatures however seldom inform each other, the former content to note that FDI is deterred by weak institutions (with the underlying inference that the Washington Consensus should be adopted to alleviate this problem), and the latter content to focus on the actions of firms after the investment decision is taken.

There is, however, a paucity of literature about how FDI or, more specifically, MNEs, the agents that fund these investments, influence or shape institutional quality in the host countries. Indeed, much (if not all) of the discussion about the influence of MNEs and their home countries on institutions in the developing world view the process through the

prism of Marxian views about imperialism (for the seminal work in this area see Griffin et al., 1985). The institutional literature that IB theory draws on to a significant extent is largely mute about this issue. Yet, we know that institutions are not static, and that they evolve over time.

The literature on FDI in developing countries views political capital within the context of the resource based view of the firm. Frynas et al (2006) for example highlight the importance of first mover advantage in the context of generating political capital. Equally, there is a relatively large literature seeking to link FDI to corruption (see for example Cuervo-Cazurra, 2006). Javorcik and Wei (2008) argue that increased risk (in the form of increased corruption) reduces the likelihood of FDI. However, very little has been done on analysing the types of firms who invest in systematically risky environments. Addison and Murshed (2001) highlight the fiscal dimension to conflict resolution, highlighting the role that inequality can play in stimulating local conflicts. Multinationals investing in unstable locations run the risk of being seen as more than innocent bystanders, where their investments serve to increase inequality, or increase the returns to certain resources. However, analysis of investments in conflict areas presents a subtle distinction from this literature. The key questions concern the motivation of firms to engage in FDI in such locations, and the types of firms so motivated. We therefore seek to extend the existing literature by seeking to explain this FDI decision.

As has recently been noted in the UN, conflict and post-conflict countries are beset by a large range of problems, including corruption, lack of governance structures and protection of property rights. Existing literature reflects the obvious, that such conditions deter FDI, at a time, it may be argued, that new capital investment is crucial for both

infrastructure and private sector development, just as civil society is required for the rebuilding of the state. This point is also made by Rose-Ackerman (2008) in an analysis of post conflict countries, highlighting the role that corruption plays in facilitating development in the short term in post conflict countries. However, as Rose-Ackerman (2008) points out, institutions must replace this informal process, and alleviate its cause.

However, this literature does not focus on the nature of the firms investing or what their motivation is. There are two theoretical frameworks that offer some useful insight here. The first is that offered by Peng et al (2008) which focuses on the institution-based view of strategy, and stresses the role that institutions can have in making markets work, and facilitating strategic decisions through information flows. This however leaves open the question of governance at the firm level, and the decision making process that leads a firm to invest in a location beset by corruption. Standard analysis of governance tends to refer to principal – agent relationships. This offers an extension of Doukas and Lang (2003) who, for example, highlight the importance of ownership structures in explaining FDI, though this in terms of the risks associated with FDI, and the returns to "external" shareholders. One could argue therefore, following the link made by Peng (2006) that FDI into corrupt regions must be very much a core activity, driven by market considerations.

3. THEORETICAL ANALYSIS AND HYPOTHESES

The stylised literature on foreign direct investment (FDI) by multinational enterprises (MNEs) has at its basis the ownership-location-internalisation (OLI) framework (Buckley and Casson, 1976; Dunning, 1979, 1988). The basic proposition of the OLI model

continues to be valid, in the sense that MNEs expand into other countries and continents to take advantage of local resources and by leveraging their unique capabilities (Luo and Tung, 2007). Much of the literature on FDI and institutional quality is discussed in Bhaumik et al (2009) who argue that institutions provide location advantages, facilitating transactions and reducing risk. Similar arguments are made by Javorcik and Wei (2008) or Daude et al (2004) – who argue that increased corruption increases the transactions costs of the investor, and the level of risk. Frynas et al (2006) take a different perspective, pointing out that engaging successfully with corrupt officials, or malleable institutions may be a source of first mover advantage. It is clear that the analysis of institutions with respect to risk, and possibly transaction costs are directly applicable to the analysis of FDI in conflict zones, but the extent to which such locations also offer greater rewards, perhaps through first mover advantage or market power more generally are seldom discussed.

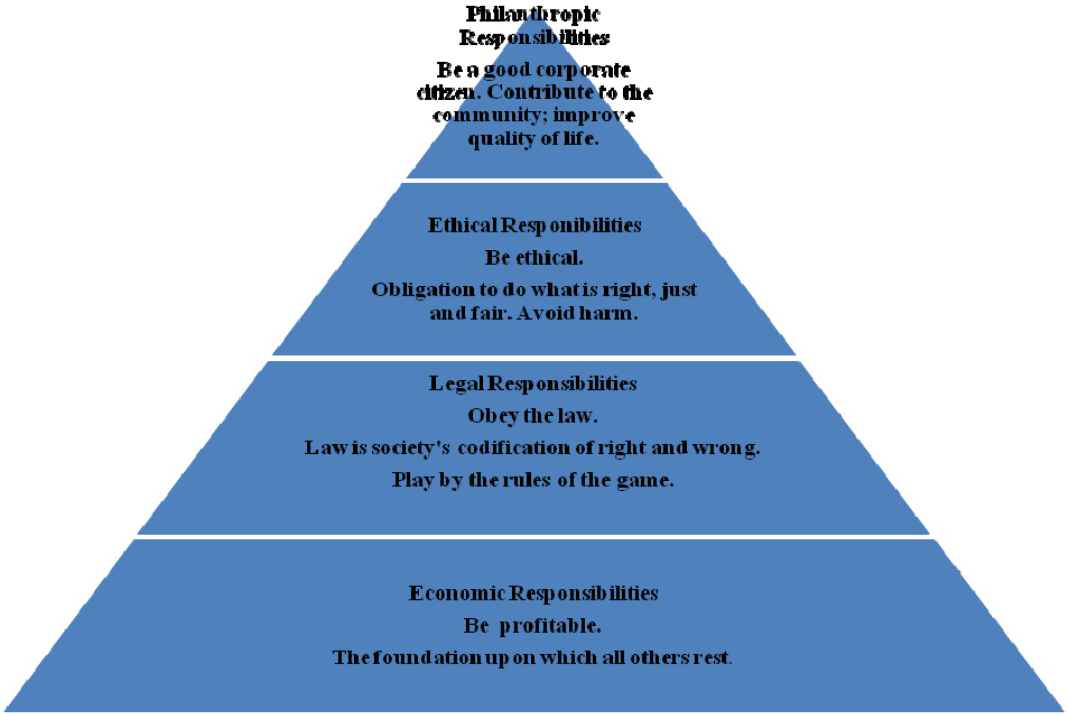
Despite the lack of literature in this area, there are two frameworks that offer some useful insight here. The first is that offered by Peng et al (2008) which focuses on the institution-based view of strategy. This builds on earlier work by North (1990) which stresses the role that institutions can have in making markets work, and facilitating strategic decisions through information flows. What this therefore suggests is that in conflict zones, the other parts of the Peng (2006) tripod of industry based competition and firm specific resources dominate. This however leaves open the question of governance at the firm level, and the decision making process that leads a firm to invest in a location beset by conflict.

CSR

With regard to business-state relations, the concept of CSR has been utilized to explain how large corporations not only have an economic duty towards their shareholders but also have wider legal and societal responsibilities. For example, in 'stakeholder' theory, attention is placed on the fact that firms necessarily have a 'normative' and 'moral' obligation to all stakeholders, including not just its immediate shareholders, but the wider citizenry (Donaldson and Preston, 1995; Gibson 2000). Wood and Logsdon (2001) on the other hand see the corporation as having certain rights and responsibilities to various actors precipitating the need for firms to act as good corporate citizens. However few of these papers present a concrete framework for assessing the strengths, limits and scale of CSR activity being undertaken by the firm. Thus in this paper we return to the routes of CSR theory and operationalise Carroll's original 1979 CSR framework and its subsequent refinements (Carroll 1991, 1998; 1999) as it offers the researcher a simple, yet not simplistic way of conceptualising CSR activity and measuring the type and scale of CSR activity undertaken.

Carroll's framework

Carroll presents four CSR categories, which "are not mutually exclusive, nor are they intended to portray a continuum with economic concerns on one end and social concerns on the other. They are neither cumulative nor additive. Rather they are ordered in the figure only to suggest what might be termed their fundamental role in the evolution of importance," (Carroll, 1979, p500), as presented in his 1991 iteration below.



Carroll's CSR Pyramid

Carroll (1991, p 42), The Pyramid of Corporate Social Responsibility: Towards the Moral Management of Organizational Stakeholders

Economic Responsibilities

Economic responsibilities are seen by Carroll as the first responsibility of business. Carroll describes the business institution as the basic economic unit in the society. As such it has a responsibility to produce goods and services that society wants and to sell them at a profit. All other business roles are predicated on this fundamental assumption. Economic responsibilities are viewed as the most basic and important of all business roles and businesses should strive to maximize profits as this is the reason for their existence. Thus, natural resource extraction for profit in a conflict zone could be interpreted as responding to a market demand and generating profit – the first responsibility of business (Carroll, 1979; 1991).

This suggests that the analysis of FDI in conflict locations needs to include a sectoral analysis. The company's CSR image is potentially more important where external stakeholders are final consumers (i.e. the general public) than other businesses. Also, one can imagine that certain sectors are more resigned to investing in conflict regions than others. Extraction of minerals has historically been relatively sanguine about investing in trouble spots, driven by the location of the resources.

H1: That FDI linked to natural resources is more likely to enter conflict regions.

Legal Responsibilities

"Just as society has sanctioned the economic system by permitting business to assume the productive role, as a partial fulfillment of the "social contract," it has also laid down the ground rules, the laws and regulations under which business is expected to operate" (Carroll, 1979 p. 500). In other words, society expects businesses to fulfill their economic responsibilities within the law. In his 1991 refinement of this model, Carroll also asserts that the rules and regulations of not just the firm's country of origin but also those of 'local governments of the host communities in which they operate' (Carroll, 1991, p 41) should be observed. Of course within conflict zones, 'the law' within such host communities maybe difficult to define, access or interpret. This places a greater emphasis on the mitigating effects of home country institutions, and also the firms own corporate social responsibility and governance structures.

In addition to highlighting firm level differences in the decision to invest in conflict locations, this also suggests a country level phenomenon, where firms from countries

with specific types of governance and culture are more likely to engage in FDI in conflict locations. It has been widely remarked that the strongest institutions are in the developed countries such as the US, Germany, the UK and Japan, so one may expect to see less investment from such locations. Within the set of developed country firms, one may expect to see higher levels of FDI into conflict zones from countries with higher levels of corruption and weaker institutions, for example Italy[2].

H2 – Firms from countries with weaker institutions are more likely to invest in conflict regions.

Ethical Responsibilities

Carroll describes these as "responsibilities (that) embody those standards, norms, or expectations that reflect a concern for what consumers, employees, shareholders and the community regard as fair, just, or in keeping with the respect or protection of stakeholders' moral rights," (Carroll, 1991 p. 41) i.e. responsibilities which go beyond the generation of profit for shareholders. He also states that "ethical responsibilities are ill defined and consequently are among the most difficult for business to deal with, but can be generalised as responsibilities that society *expects* of businesses over and above legal requirements," (Carroll, 1979 p. 500). What society 'expects' requires the firm to make assumptions to consult stakeholders widely. In conflict zones and countries with weak institutional or governance arrangements, expectations maybe difficult to judge and different to those of stakeholders in developed countries; as a result the degree of 'ethical' or CSR behavior will be determined by all, or a combination of (a) the view the

firm has of itself vis-à-vis ethical responsibilities; (b) pressure from stakeholders outside the host country on its activities; and (c) assumptions made by the firm of expectations from the host country.

There has been a relatively wide literature in recent years on CSR within the context of international business, see for example Luo (2006), Rodriguez et al (2006), Husted and Allen (2006) and Strike et al (2006). Luo (2006) bases his analysis on political conduct of the firm generating a more socially desirable outcome. This analysis is then couched in terms of the relationship between the MNE and governments. The essential assertion of Luo (2006) is that corruption reduces engagement with governments by the firm. One can of course extend this argument beyond corruption, to more extreme examples of institutional breakdown, such as conflict. This adds to the explanation of why institutional failure (of whatever type) may deter FDI, but that does not explain why some firms still choose to invest in conflict areas. Rodriguez et al (2006) extend this rather to look at the interaction between business and government in a wider context. As Rodriguez et al (2006) point out, of the three lenses of corruption, politics and CSR, CSR is by far the least investigated. In general however, this literature stresses CSR from the perspective of external stakeholders, for example the firm wanting to stress to customers the ethical sourcing or testing of products. Avoiding contentious locations is therefore an obvious extension of this, but it is therefore trivial to infer that firms who care little for their external stakeholders views of CSR are most likely to invest in conflict regions. Husted and Allen (2006) offer an interesting viewpoint on this, which is to distinguish between local and global CSR. Husted and Allen (2006) rely on Gnywali (1996) and

Spicer et al (2004) to distinguish between local and global CSR, based on whether the stakeholders are in the home or host country. This is particularly important in the context of conflict regions, where local (host country) CSR may not be an issue, but adverse commentary locally can hurt the company in its home country or elsewhere. This suggests that there will be country level differences in the propensity to invest in conflict regions.

H3 Firms with less concern over CSR are more likely to invest in conflict countries.

Discretionary Responsibilities

Discretionary or philanthropic responsibilities are those that are not demanded of business and are left to management's discretion and individual judgment. Society might offer no clear or confusing signals as to what is 'expected' in this area. "These roles are purely voluntary, and the decision to assume them is guided only by a business's desire to engage in social roles not mandated, not required by law, and not even generally expected by businesses in an ethical sense." (Carroll, 1979 p.500). Due to the vagueness/ambiguity surrounding this category Carroll gave some examples of discretionary responsibilities which include making philanthropic contributions or training the hard-core unemployed. In conflict zones this may instead mean provision of health care, education, child welfare and so on. Firms may assume this activity even if it is not expected by domestic or local stakeholders, but as a way of justifying their activity to 'external' stakeholders – demonstrating that they are 'good Corporate Citizens'. Conversely if operating in a conflict zone leads the firm, as previously alluded to, to destabilises the status quo, then it

could be argued that the firm has behaved a ‘poor citizen’ or has failed to supply activities akin to citizenship rights.

There is however very little understanding as to how the level of ownership concentration of MNE’s can affect whether to invest abroad and also the size of fdi. One of the very few studies in this respect is by Blonigen, Ellis and Fansten (2000) who highlight the effects of business groupings on FDI via two channels. (1) Direct incentive effects generated via standard product and factor market interactions, whereby firms in a business group with cross ownership consider the congestion effects of further FDI into a market. (2) Indirect incentive effects generated by sharing of information across firms in a business group, which reduces entry costs for subsequent FDI. There may however be some disincentives (agency costs) if there are separation of control and cash flow rights, pyramid ownership and cross-holdings, thus weakening the positive incentive effects. In the latter cases, controlling shareholders earn rents through control of corporations at the expense of minority shareholders. So they have an incentive to bribe the state rulers and get away with the expropriation of minority shareholder, thus protecting their rents domestically, rather than venturing abroad. A more indirect link between these issues is provided by the rather limited literature on disclosures. If a firm becomes a MNE it opens itself up to scrutiny from a larger number of regulators and monitoring can be intense, given regulators' worries about transfer pricing, adherence to GAAP/IFRS if the investment is in US/Europe, etc. If a controlling owner wants to avoid such scrutiny and/or avoid the costs of compliance, it may prefer not to internationalise, and this effect would then counteract the desire to diversify assets across countries to mitigate country-

specific risk. Standard analysis of governance tends to refer to principal – agent relationships. This analysis is extended by Doukas and Travalos (1998), Doukas (1995) and Doukas and Lang (2003) who link the (foreign) investment decision to shareholder returns. Doukas and Lang (2003) for example highlight the importance of ownership structures in explaining FDI, though this is in terms of the risks associated with FDI, and the returns to "external" sharholders. The analysis of Doukas and Lang (2003) distinguishes between core and non core FDI, rather than identifying different risks, or required risk premia per se, though the analysis may be applied to risky investments more generally. As firms from more corrupt home countries become visible participants in the market for overseas investment, typically operating in countries with dubious corporate governance credentials, the relationship between ownership (and hence corporate governance) structures and the decision to invest overseas assumes importance. Yet, a literature on this subject is largely missing, important exceptions being Doukas and Lang (2003). Doukas and Lang (2003) essentially argue that non core FDI is a feature of decisions taken by entrenched managers, who may be looking for expansion, at the expense of shareholder value. One could argue therefore, following the link made by Peng (2006) that FDI into conflict zones must be very much a core activity, driven by market considerations. As such, while it is risky, it also presents the potential for higher returns. This is likely therefore to be associated with concentrated, rather than dispersed ownership, where large shareholders are actively involved in the running of the firm. However, in a western context one could extend this argument further. Firms with more concentrated ownership are less likely to face scrutiny from other shareholders (Bhaumik, Driffield and Pal 2010) and as such more likely to engage in activities that may otherwise

attract criticism. As such, the link between such investments and ownership structures may not be restricted to the apportioning of the profit stream, but in terms of the wider considerations of the decisions to invest in unstable locations.

At a lower level of concentration however, one can expect that incentive effects (both direct and indirect) may predominate this kind of rentseeking behaviour (3) and (4); at a higher level of concentration, however, rentseeking effects may dominate, giving rise to negative net effect. Whilst in developed economies, boards of directors are happy to engage in a control function, that within emerging economies, the control function performed by the directors or major shareholders is weakened as a result of a) large family or government stakes b) oligarchic relationship with regulators c) no perceived risk of sanction, usually because larger block holdings exist.

To a large extent, persistence of concentrated ownership reflects institutional weaknesses, especially absence of specialised intermediaries in capital markets. Strategic decisions for these companies are often taken by a closely knit group of controlling owners, without the involvement of other stakeholders. At the same time, it is often in the interest of this group to diversify its business interests outside the home country, largely to mitigate location specific risk (Rugman, 1975). Second, formal membership of corporate groups and informal networks facilitates access to internal capital markets, which makes it easier to raise the funding necessary for overseas expansion (Tasi, 2002; Child and Pleister, 2003; Liu, 2005; Erdener and Shapiro, 2005).

However, as discussed above, the relationship between ownership concentration and outward FDI decisions is more complex than the treatments thus far offered in the

literature would suggest. It is now well established that firms with concentrated ownership may be opaque, with low levels of protection for minority shareholders. In many countries there is evidence of "tunnelling" in group-affiliated companies that typically have concentrated ownership (Bertrand, Mehta and Mullainathan, 2002), and a general unwillingness to subject themselves to scrutiny. There is for example a relatively well developed literature on ownership concentration and the relatively low levels of voluntary disclosures (Chau and Gray, 2002; Berglof and Pajuste, 2005; Luo, 2005). Engaging in FDI typically involves scrutiny by various stakeholders, including regulators, creditors, shareholders and (where appropriate) JV partners. Not all of whom may have close operational relationships with the MNE. The transactions costs of meeting the consequent disclosure standards (or the cost of bribery, in certain contexts) can be substantial. If these costs outweigh the benefits associated with (a) information sharing within a business group and (b) asset risk diversification, it may be rational for a firm with concentrated ownership to operate within the boundaries of its home country where institutional shortcomings allows (or even facilitates) opacity. This suggests therefore that firms of this type, or from countries with weak institutions and historically concentrated ownership may find FDI to countries with weak institutions appealing. Bhaumik et al (2010) for example, in one of the few papers to explicitly link fdi decisions to ownership structure, show how concentrated ownership in emerging economies makes firms less likely to seek the types of scrutiny associated with investing in western countries. However, in the context of making investments that may be open to criticism, either due to excessive risk, or ethical objections, concentrated ownership may make this more likely. Concentrated ownership facilitates more risky or controversial FDI, as

there are fewer constituents to get on board. Thus ownership concentration faciliates more FDI, but it is also likely to facilitate more FDI in more ethically dubious areas,

Equally, such firms may be less concerned about adverse comment on their actions due to the relative weakness of other stakeholders.

H4: firms with concentrated ownership are more likely to engage in FDI to conflict zones.

4. THE MODEL

The probability of a firm entering a location is determined by expectations of future profits (Π^e). In the expression below T is the expected life of the investment, and r is the discount rate:

$$\text{Prob(FDI)} = \phi_1 \left[\sum_{p=0}^{T} (1/1+r)^p \Pi^e_{t+p} \right] \quad (1)$$

This is clearly unobservable, but this model can be re-written as a function of a vector of firm and home country characteristics such that:

$$\sum_{p=0}^{T} (1/1+r)^p \Pi^e_{t+p} = \phi((\phi_{ij}, \theta_j)) \quad (2)$$

Where ϕ_{ij} is a vector of firm level effects and θ_j a vector a home country effects.

This then translates into equation (2a) - a panel probit model that explains variations in the propensity to engage in FDI to conflict regions at the firm level. The panel data methodology allows us to control for firm-level heterogeneity via our explanatory

variables which we discuss in detail below. A probit model is ideal for studying data with an independent variable which is binomially distributed. You can express probit models in terms of the event probability:

$$\Pr ob(FDI = 1) = \Phi(\sum_{i=1}^{i} \beta_i x_i) \qquad (2a)$$

where Φ is the standard normal cumulative distribution function. The probit model is essentially a linear regression of the Z score of the event probability on the dependent variable (FDI). To interpret the coefficient estimates therefore, researchers generally look at the estimated signs of the regression coefficients or calculate the marginal effects. We leave the latter for the appendix and the former are reported in the text. For more information on probit models see Liao (1994).

$$FDI_{it}^{j} = \beta_0 + \beta_1 SHARE_{it} + \boldsymbol{\delta}\mathbf{FDI}_{it} + \boldsymbol{\Lambda}\mathbf{SECTORS}_{it} + \boldsymbol{\Omega}\mathbf{LOCATION}_{it} + \alpha_i + \mu_t + \varepsilon_{it} \qquad (3)$$

In equation (3), the independent variable is FDI_{it}^{j} by firm *i* at time t, in conflict location j equals 1 if a multinational company has a subsidiary located in a conflict country; and equals zero otherwise. The *SHARE* variable measures each firm's largest shareholder, it is thus a measure of ownership concentration. The vector **FDI** includes a set of explanatory variables that are often included in an FDI model, these include: profit, sales, sales squared, cash flow, the ratio of fixed intangible assets to total assets, the number of subsidiaries, firms age and age squared. The first five of these variables are all measured in logarithms. The vector **SECTORS** contains seven sector-specific dummy variables

based on NACE 2-digit codes. These are: Mining (included to capture resource seeking FDI), Manufacturing, Agriculture, Transportation Services, Public Services, High-Technology Services and Low-Technology Services. Finally, the vector **LOCATION** includes region-specific dummy variables or country-specific dummy variables depending on the specification. The region-specific dummies are South America and the Caribbean, OECD, Asia and Africa; whilst the country-specific dummies include the UK, US, Spain, Portugal, Italy, Germany, France, Switzerland, Japan, Brazil, India and China. Finally, within the panel framework, the error term is composed of firm level effects and time effects (which are captured by time dummies). This allows for us to control for unobserved heterogeneity at the firm level.

5. DATA

This paper uses ORBIS a firm-level dataset provided by Bureau van Dijk, which is a leading electronic publisher of annual accounts information for millions of firms across the whole globe. We only use a subset of this database. For a range of developing countries, which includes countries currently experiencing some form of conflict, we download a number of statistics that are frequently included in a standard FDI model for the parent multinational companies that have a majority stake in a subsidiary based in a developing country. No information about the subsidiaries is utilised as this data is often missing, we are therefore focusing on the parent. We create an unbalanced panel of firms consisting of 15360 observations over the period 1999-2006. In total there are 2858 firms that have invested in regions with a low level of human development[3]. Out of these, 290 have invested in a region currently engaged in some sort of conflict. This allows us to

construct our dependent variable FDI_{it}^{j} that distinguishes between the two and allows us to run a simple panel probit model.

Chris, I want some probit algebra here specified in panel terms

The key variables included in our analysis are profit, sales, cash-flow, a ratio of intangible fixed assets to total assets, the number of subsidiaries, firm age and the largest shareholders percentage of ownership. In addition to this we generate: (1) a set of sectoral dummies based on NACE 2-digit codes, these are mining, manufacturing, agriculture, transportation services, public services, high-technology services and low-technology services[4]; (2) a set of region specific dummies based on each multinational's home region, these are South America and the Caribbean, the OECD, Asia and Africa; and (3) a set of country specific dummies based on each multinational's home country, these are identified for the UK, US, Spain, Portugal, Italy, Germany, France, Switzerland, Japan, Brazil, China and India.

To determine which countries are categorised as experiencing some sort of conflict, in order to generate the CONFLICT dummy, we take advantage of the International Country Risk Guide (ICRG) constructed by countryrisk.com. The ICRG data is chosen because….They use 12 measures of political risk to assess a number of different countries. One of the measures is called Internal Conflict and is according to ICRG:

> "An assessment of political violence in the country and its actual or potential impact on governance. The highest rating is given to those countries where there is no armed or civil opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people. The lowest rating is given to a country embroiled in an on-going civil war. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk."

The three subcomponents ICRG distinguishes between are Civil War/Coup Threat, Terrorism/Political Violence and Civil Disorder. In order to categorise the 'conflict countries' we average each countries score from 2000 to 2007, if this score is less than 6.5 the country is classified as a conflict country and therefore all of the parent companies that have a subsidiary in that corresponding country are identified as a company that invests in a conflict region. The conflict countries identified are Bangladesh, Colombia, Congo DR, Haiti, Iraq, Nigeria, Somalia, Sri Lanka, Sudan, and Zimbabwe.

6 RESULTS & ANALYSIS

Before moving to the econometric analysis, it is important to discuss some features of the data. Firstly, Table 1 highlights the differences in intuitional quality between different regions/countries used in the subsequent analysis. The data is again taken from the International Country Risk Guide (ICRG) constructed by countryrisk.com. As well as their measure of conflict (discussed above) they also have statistics on corruption, bureaucratic quality and investment profile. The data in Table 1 contains an average taken from 2000-2007 for each of these variables. Corruption is an assessment of corruption within the political system it has maximum score of 6. Bureaucratic Quality measures the institutional strength and quality of the bureaucracy it has a maximum score of 4. Investment Profile is an assessment of factors affecting investment risk that are not covered by other political, economic and financial risk components within the ICRG, it has a maximum score of 12.

Table 1: Institutional Quality by Home country: ICRG Indicators

Country	Corruption Average	Bureaucratic Quality	Investment Profile
Brazil	2.65	2.05	7.10
China	1.73	2.00	7.34
France	3.42	3.37	10.81
Germany	4.56	4.00	10.77
India	2.45	2.13	7.53
Italy	2.87	3.00	10.58
Japan	3.20	2.73	9.78
Spain	4.10	3.97	11.38
Switzerland	4.61	4.00	11.20
United Kingdom	4.63	3.37	11.36
United States	4.17	4.00	11.04
Africa	1.98	1.22	7.44
South America & Caribbean	2.47	2.05	8.07
OECD	4.20	3.66	11.14
Asia	2.14	1.98	8.31

As can be seen across each country/region and each variable there is considerable heterogeneity. The data follows a consistent and familiar pattern, with the African and Asian regions scoring relatively poorly in terms of corruption compared with the OECD. This result is unsurprising. Perhaps the most interesting statistics are those associated with Italy. In general, Italy has the worst rating in terms of corruption, bureaucratic quality and investment profile compared with all of its European neighbours. Unsurprisingly, India, China and Brazil all have lower ratings of a very similar nature to one another.

Table 2 gives some simple descriptive statistics for each of the variables used in the following analysis. Included are the mean, standard deviation and the maximum and minimum values for each variable. In addition to this Table A1.1 in Appendix A contains the correlation matrix for the FDI variables.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ConflictFDI	15360	0.2458	0.4306	0	1
ln Profit	15360	10.2624	2.7433	-1.6714	17.4925
ln Sales	15360	12.8843	2.5032	1.5612	19.5117
ln Sales2	15360	172.2715	63.9820	2.4373	380.7079
ln Cash Flow	15360	10.4308	2.6873	-0.4222	17.3960
ln Fixed Intangible Assets /Total Assets	15360	-3.5075	2.1222	-16.3221	-0.1604
Age	15360	45.7067	42.5107	1	352
Age2	15360	3896.1460	7785.8530	1	123904
Number of Subsidiaries	15360	62.7839	112.1029	1	1738
largest Shareholder	15360	50.7283	34.4599	0.24	100
Mining	15360	0.0298	0.1699	0	1
Manufacturing	15360	0.5145	0.4998	0	1
Agriculture	15360	0.0094	0.0964	0	1
Transportation	15360	0.0458	0.2090	0	1
Public Services	15360	0.0068	0.0820	0	1
High Technology Services	15360	0.2156	0.4112	0	1
Low Technology Services	15360	0.1460	0.3531	0	1
UK	15360	0.0498	0.2175	0	1
SPAIN	15360	0.1803	0.3845	0	1
PORTUGAL	15360	0.0082	0.0902	0	1
JAPAN	15360	0.0316	0.1749	0	1
ITALY	15360	0.0742	0.2621	0	1
GERMANY	15360	0.0473	0.2122	0	1
FRANCE	15360	0.1667	0.3727	0	1
USA	15360	0.1694	0.3751	0	1
SWI	15360	0.0221	0.1471	0	1
BRAZIL	15360	0.0005859	0.0241998	0	1
CHINA	15360	0.0034505	0.0586416	0	1
INDIA	15360	0.0021484	0.0463029	0	1
SA and CAR	15360	0.0070	0.0836	0	1
OECD	15360	0.9264	0.2612	0	1
AFRICA	15360	0.0113	0.1055	0	1
ASIA	15360	0.0410	0.1983	0	1

Table 3 presents the results of our baseline probit specification (column 1). This illustrates the firm level determinants of a firm's decision to invest in a conflict location. More specifically they represent the decision of a firm that has already chosen to invest in low income countries with weak institutions, to also invest in a conflict location. Given this particularly restrictive question, the models work particularly well. The control

variables work as expected, profitability is associated with this type of FDI, while firm size is inversely associated with this behaviour, though with a turning point, suggesting that it is the smaller and largest firms that are most likely to invest in conflict locations. Equally, the effect of age is positive, but again with a turning point, suggesting that the most established firms shy away from this type of activity. The results concerning age and size can also be linked to the issue of CSR. Small firms are perhaps too small to attract criticism, or perhaps are set up for the specific purpose of investing in sensitive locations, while the largest firms are extremely diversified and may be able to hide certain activities. The other control variables, subsidiaries, cash flow and intangible assets work as expected. Of more interest is the ownership concentration variable. This is positive for the first model, such that concentrated firms are more likely to invest in conflict locations. This is consistent with the discussion of both CSR and the work of Peng (2008) and Doukas and Lang (2003) that is linked in H1. There is also strong support for hypotheses two and three. From even within the developed world there are large differences in the propensity to invest in conflict countries. Spain, Italy and France appear far more likely to invest in conflict countries than Germany, the USA or the UK. This provides support for the arguments around hypothesis two, in that there are significant differences in the propensity of different countries to invest in conflict regions, and that these are explained by differences in home country institutions. This is then extended further to include transition countries, with India and Brazil being significantly more likely to invest in conflict locations.

Table 3: Econometric Results

dependent Variable: FDI	**1**	Se	**2**	Se	**3**	Se
VARIABLES	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error
ln Profit	0.0418**	0.0167	0.0352**	0.0171	0.0350**	0.0171
ln Sales	-0.357***	0.0408	-0.351***	0.0434	-0.354***	0.0435
ln Sales2	0.0138***	0.00158	0.0146***	0.00166	0.0148***	0.00166
ln Cash Flow	0.0352**	0.0175	0.0663***	0.018	0.0657***	0.0179
ln Fixed Intangible Assets /Total Assets	0.0414***	0.00669	0.0427***	0.00696	0.0432***	0.00697
Age	0.00333***	0.000609	0.00532***	0.000631	0.00515***	0.00063
Age2	-1.03e-05***	2.99E-06	-1.69e-05***	3.10E-06	-1.61e-05***	3.09E-06
Number of Subsidiaries	0.00176***	0.000151	0.00163***	0.000148	0.00163***	0.000148
largest Shareholder	0.00215***	0.000372	0.000204	0.000429	0.000321	0.00043
Mining	0.498***	0.0755	0.597***	0.0802	0.594***	0.0798
Manufacturing	0.174***	0.0478	0.231***	0.0503	0.231***	0.0503
Agriculture	0.796***	0.117	0.999***	0.122	1.005***	0.123
Transportation	-0.0449	0.0641	-0.0932	0.0653	-0.103	0.0653
Public Services	0.0705	0.155	0.26	0.159	0.269*	0.159
High Technology Services	0.153***	0.0521	0.259***	0.0549	0.258***	0.0549
Low Technology Services	-0.0833	0.0587	0.022	0.0603	0.0156	0.0605
UK			-0.158***	0.0583	-0.126**	0.0586
SPAIN			0.292***	0.0416	0.321***	0.0421
PORTUGAL			-0.758***	0.177	-0.728***	0.177
JAPAN			-0.838***	0.0812	-0.805***	0.0816
ITALY			0.905***	0.0488	0.934***	0.0492
GERMANY			-0.329***	0.0624	-0.300***	0.0627
FRANCE			0.143***	0.0391	0.171***	0.0395
USA			-0.156***	0.0403	-0.123***	0.0408
SWI			0.181**	0.0707	0.211***	0.071
BRAZIL			0.591*	0.343	0.621*	0.343
CHINA			-0.224	0.251	-0.197	0.252
INDIA			1.063***	0.231	1.096***	0.231
SA and CAR	1.366***	0.207				
OECD	0.780***	0.161				
AFRICA	1.269***	0.188			0.556***	
ASIA	0.569***	0.174				
Constant	-0.397	0.303	-0.222	0.289	-0.233	
Observations	15360		15360		15360	
Pseudo R-squared	0.0952		0.1283		0.1299	

Notes: *** indicates significant at the 1 per cent level, ** significance at the 5 per cent level, and * at the 10 per cent level

Finally, we also find unqualified success for hypothesis four. Not surprisingly mining and agriculture are positive and significant, but our results show that the extent of this strategy goes well beyond what may have been thought of as the traditional sectors of this type of activity. High-technology industries, which include financial services, and manufacturing show a high probability of being attracted to such locations. Transportation, not surprisingly, is less likely to be attracted to conflict countries.

The subsequent columns in the results table seek to examine hypotheses two and three in more detail. These show that firms from Africa, South America and the Caribbean, and Asia, once they have engaged in FDI to developing countries, are then more likely to invest in conflict countries. That is not to say however that this phenomenon is limited to the developing or transition world, as the results also show that OECD membership is associated with investment in conflict countries.

6. CONCLUSION

To the best of our knowledge, this is the first attempt to explain the prevalence of firms to invest in conflict countries. Numerous authors have pointed out the extent to which political instability deters FDI, and rather fewer, typically from outside the IB or strategy area have commented on particular examples of western firms investing in politically unstable or ethically questionable locations. However, what we have shown here is that the relatively standard models that seek to explain variations in FDI propensity, including size, intangible assets, subsidiaries and age, still explain the marginal decision to invest in a conflict region, even taking into account the decision to invest in a low income country

with relatively weak institutions. Our analysis suggests that of some 2858 firms that have chosen to invest in such countries, over 290 have invested in conflict countries. Thus, while existing literature that points out the extent to which internal conflict deters FDI may well be correct, it by no means deters all firms.

Further, we have shown that ownership structures and institutions in the home country are important determinants of this decision. Firms from countries with relatively strong traditions of CSR are less likely to engage in conflict FDI, while firms from countries with a rather contrasting culture are not deterred. In terms of further work, this suggests a need for a better analysis of CSR at the country level, to better understand the motivations of certain countries to invest in such locations. Beyond this, it also suggests a link to possible case study or survey work to determine more about the activities of these investors on an individual basis.

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APPENDIX A

Table A.1.1 Correlation Matrix

	Variable	1	2	3	5	6	7	9	10
1	FDI	1							
2	ln Profit	0.2464	1						
3	ln Sales	0.2381	0.9278	1					
5	ln Cash Flow	0.249	0.9579	0.9263	1				
6	ln Fixed Intangible Assets /Total Assets	0.1409	0.4021	0.4061	0.3854	1			
7	Age	0.1457	0.3795	0.4076	0.3864	0.1461	1		
9	Number of Subsidiaries	0.2491	0.4571	0.4788	0.4611	0.2171	0.2188	1	
10	largest Shareholder	-0.0734	-0.3632	-0.3548	-0.3435	-0.288	-0.216	-0.1742	1

Table A.1.2 Marginal Effects

Variable	Model 1	Model 2	Model 3
ln Profit	0.0126	0.0104	0.0104
ln Sales	-0.1079	-0.1042	-0.1050
ln Sales2	0.0042	0.0043	0.0044
ln Cash Flow	0.0106	0.0197	0.0195
ln Fixed Intangible Assets /Total Assets	0.0125	0.0127	0.0128
Age	0.0010	0.0016	0.0015
Age2	0.0000	0.0000	0.0000
Number of Subsidiaries	0.0005	0.0005	0.0005
largest Shareholder	0.0006	0.0001	0.0001
Mining	0.1729	0.2090	0.2077
Manufacturing	0.0525	0.0683	0.0682
Agriculture	0.2913	0.3691	0.3713
Transportation	-0.0133	-0.0267	-0.0294
Public Services	0.0218	0.0844	0.0876
High Technology Services	0.0476	0.0811	0.0805
Low Technology Services	-0.0246	0.0066	0.0046
UK		-0.0443	-0.0358
SPAIN		0.0924	0.1021
PORTUGAL		-0.1587	-0.1545
JAPAN		-0.1719	-0.1675
ITALY		0.3259	0.3372
GERMANY		-0.0860	-0.0794
FRANCE		0.0439	0.0529
USA		-0.0443	-0.0353
SWI		0.0571	0.0672
BRAZIL		0.2084	0.2199
CHINA		-0.0607	-0.0538
INDIA		0.3944	0.4069
SA and CAR	0.5043		0.1939
OECD	0.1744		
AFRICA	0.4708		
ASIA	0.1997		

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[1] On 7th June 2007 the (then) UK Prime Minister made a speech at the G8 summit, attacking the lack of progress in Russia's institutional development, and suggested that if this was not rectified, Russia would lose out on a lot of inward FDI. This assertion was immediately rejected by Mr Putin, not because he claimed that Russia was strengthening its institutions, but because he saw no link between institutional quality and FDI.

[2] A Wall St Journal Article published on the 9th of Novemeber 2009 discusses a report published by the Heinrich Böll Foundation criticising Italian energy giant Eni SpA's plans to squeeze oil from the tar sands

of the Republic of Congo. “This is a particularly dirty form of oil production and it is being planned for an area that’s highly sensitive in ecological terms,” said Dr. Sarah Wykes, one of the authors of the report. In reply Eni said that the tar-sands project would involve “no destruction of primary forest; no occupation of existing farmland; no impact on areas of high biodiversity; and no…resettlement of people.” This is a classic example of the sort investment that this paper is interested in studying.

[3] We exclude companies where the parent is based in a tax haven.

[4] The NACE 2-digit codes for each of these sectors are as follows: Mining 10 to 14; Manufacturing 15 to 37; High-Tech Services 64 65, 66, 67, 70, 71 72 73 74; Agriculture 01, 02, 05; Transportation 60, 61, 62, 63; Low-Tech Services 50 51 52 55 60 63 90 91 93 95. This classification is consistent with Erostat.