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Pao Li CHANG

Singapore Management University, plchang@smu.edu.sg

Chia-Hui Lu

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Political Risk and Institutional Quality Difference across Countries: Impacts on FDI by Multinational Firms

Pao-Li Chang*

Chia-Hui Lu†

School of Economics

Department of Economics and Finance

Singapore Management University

City University of Hong Kong

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1 Introduction

Political risk is often one of the greatest constraints on cross-border investments in developing countries. For example, political risk has consistently topped the list among other constraints (such as access to qualified staff, macroeconomic instability, access to financing, and corruption) in the annual surveys by MIGA-EIU of worldwide multinational enterprises (MNEs) in their longer-term investment planning (see MIGA, 2011, and other annual reports). In addition to multilateral surveys, some ad hoc incidents also continue to remind us of the perils of doing business in unstable parts of the world. For example, in January 2013, the Japanese engineering firm JGC was caught in a terrorist attack at gas plants in Algeria, with 10 Japanese killed among many other hostages (Straits Times, 2013).

It is often suggested that MNEs based in the “North” have a *universal* advantage in FDI due to their superior R&D and technological capacity or management know-how. See, for example, Helpman (2006) for a survey of FDI theories, where MNEs are often assumed to be exclusively based in the North. However, it is arguable that a MNE based in the South may be in a more

*School of Economics, Singapore Management University, 90 Stamford Road, Singapore 178903. Email: plchang@smu.edu.sg. Tel: +65-68280830. Fax: +65-68280833.

†Department of Economics and Finance, City University of Hong Kong, 83 Tat Chee Road, Hong Kong. Email: lu.chiahui@cityu.edu.hk. Tel: +852-2194-2164. Fax: +852-2788-8806.

favorable position to invest in the peer South with similarly poor institutional qualities than a North-based MNE. For example, it is possible that South-based MNEs are more familiar with poor governance environments from their experience at home, and thus are better able to operate in environments of weak rule of law and heavy red tape. They may also find it easier to operate in environments characterized by unreliable infrastructure, being accustomed to similar conditions at home. As well, South-based MNEs may be more accustomed to political instability or civil disturbances, and hence be better prepared for managing such scenarios.

The hypothesis that similarly poor governance endowments may be a source of comparative advantage for South-based MNEs when investing in developing countries has been speculated in the literature (Dixit, 2012), but has not been formally modeled or tested. In this paper, we develop a theoretical model to shed light on this proposition. In particular, we focus on how institutional quality affects the likelihood of political-risk events, by which we mean events that prevent the firm from capturing/realizing its profit. For example, the event could be an adverse regulatory change where the state confiscates, overtly or covertly, the firm's profits via various means such as breach of contract, non-honoring of sovereign obligations, or expropriation. Alternatively, it could be political violence such as war or civil disturbance that disrupts the business operation. The better the institutional quality of a country, the lower the likelihood that such political-risk events occur. Firms can choose to develop firm-specific informal institutions (for example, human capital to engage with the government, political figures, local communities, or nongovernmental organizations), which can be deployed to mitigate the political risk when it strikes the firm.

It is shown that firms 'born' in the South with lower institutional qualities tend to invest more in informal institution and thus are more relationship-based. This enables them to reduce the objective political risk more effectively than firms from the North when investing in the same FDI destination, all else being equal. This marginal advantage is bigger when the objective political risk is higher; thus, South MNEs tend more likely than North MNEs to invest in the South.

An estimation framework is proposed to test the theory's predictions, using the MIGA-EIU 2011 survey of MNE's political risk perception and experiences. We find empirical support that a larger institutional difference between the FDI home and host countries leads to a greater political-risk perception and incidence, conditional on the home country institutional quality; while conditional on the institutional difference, a North-North (home and host) country pair faces a lower political

risk than a South-South country pair. Together, the results suggest that the North MNE does not necessarily have a universal advantage against a peer South MNE; the South MNE could actually have a comparative advantage against the North MNE when investing in the South.

More to be said about the paper's contribution to the literature.

The paper is organized as follows. In Section 2, we develop the theoretical model on firms' informal institutional choice, and how it affects the political risk perception and the locational choice of FDI; the model predicts an interesting map of FDI flows across countries, both North-South and South-North FDI flows, as well as bi-directional FDI (where a country receives FDI inflows and also sends FDI outflows) and uni-directional FDI (where a country only sends FDI outflows but receives no FDI inflows). In Section 3, we present the estimation strategy, the data set, and the estimation results. Section 4 discusses potential extensions and concludes.

2 Model

Political risk as noted above is an important consideration when MNEs evaluates the profitability of FDI among many potential destination countries. We develop a model in this section illustrating how the institutional quality difference between home and host countries affects the political risk perception of MNEs and hence their FDI decisions. This model is rich enough to incorporate not only North-South FDI, but also South-South and South-North FDI.

We consider a monopolistic competition model, in which each firm produces an unique variety and supplies the product to markets all over the world. We assume away any kind of trade frictions such that the same price prevails in all markets. Under the assumption of identical CES preferences, the world demand function faced by each firm is the aggregation of demand in each market. Let X denote demand of the world market :

$$X = AP^{-\varepsilon}, \tag{1}$$

where A denotes the size of the world market, P the world price, and $\varepsilon > 1$ the price elasticity of demand.

Suppose that labor is the only input used in production. Production incurs no fixed cost but

only a constant marginal cost denoted by $MC \equiv \frac{w}{\phi}$, where ϕ is firm-specific productivity, and w is the wage rate, which varies cross countries. Therefore, marginal cost is decreasing in firm's productivity and increasing in the wage rate of the country where the production is carried out.

2.1 Choice of Informal Institution

We first look at the firm's response to political risk at home when FDI is not feasible. It is straightforward to see that given MC , to maximize profits, each monopolistically competitive firm will set a price equal to $P = \frac{\varepsilon}{\varepsilon-1}MC$. Substituting the price into the profit function denoted by Π , we have

$$\begin{aligned}\Pi(P) &= (P - MC)X \\ &= Bw^{1-\varepsilon},\end{aligned}\tag{2}$$

where $B \equiv \left(\frac{A}{\varepsilon}\right) \left[\left(\frac{\varepsilon}{\varepsilon-1}\right) \left(\frac{1}{\phi}\right)\right]^{1-\varepsilon}$.

Each firm faces a likelihood where a political event takes place that prevents the firm from capturing/realizing its profit. For example, the event could be an adverse regulatory change where the state confiscates, overtly or covertly, the firm's profits via various means such as breach of contract, non-honoring of sovereign obligations, or expropriation. Alternatively, it could be political violence such as war or civil disturbance that disrupts the business operation. We call the incidence a political-risk event. The probability of a political-risk event is hypothesized to be negatively correlated with the institutional quality of a country. For example, the more stable the political system, the more effective the government, or the better the rule of law in a country, the less likely a political-risk event is to take place. Let r denote the probability of a political-risk event. Countries differ in their institutional qualities. For convenience, we will also use r to index countries. Countries indexed with a higher r are those with a lower institutional quality.

Each firm can choose to invest in firm-specific informal institutions (for example, human capital to engage with the government, political figures, local communities, or nongovernmental organizations), which can be deployed to mitigate the political risk when it strikes the firm. Let I denote the informal institution developed by the firm, where $0 \leq I \leq 1$. When a political-risk event hits the firm, with probability I , the firm can overcome the shock, while with probability $(1 - I)$, the

bad shock remains unresolved. Thus, the expected probability of profit loss facing a firm with I is $r(1 - I)$, which is decreasing in I . Let $E\Pi(I)$ be the expected operational profit of the firm; we have $E\Pi(I) = (1 - r + rI)\Pi$. Informal institution is costly to maintain; let $C(I)$ denote the cost function and $C(I) = \frac{1}{\delta}I^\delta$, where $\delta > 1$. Thus, a firm maximizes its expected profit choosing I :

$$\max_{0 \leq I \leq 1} E\Pi(I) - C(I), \quad (3)$$

to satisfy the first-order condition: $r\Pi = I^{\delta-1}$, which implies that the optimal informal institution chosen by a firm will be:

$$I(r) = (r\Pi)^\kappa > 0, \quad (4)$$

where $\kappa = \frac{1}{\delta-1} > 0$.

Assumption 1 We assume (i) $w(r) = w_0 r^{-\eta}$ where $w_0, \eta > 0$, and (ii) $(Bw_0^{1-\varepsilon}) < 1$.

Assumption 1(i) captures the stylized fact that wage is in general increasing with the institutional quality of a country, that is, $\partial w(r)/\partial r < 0$. The particular functional form used implies that the elasticity of wage is constant; let it be denoted by $\varepsilon_w(r) \equiv \frac{\partial w(r)}{\partial r} \frac{r}{w(r)} = -\eta$.¹ Assumption 1(ii) ensures that $I(r) < 1$ for any $r \in [0, 1]$, which means that in equilibrium, informal institution invested by a firm can never completely eliminate the political risk.

Lemma 1 *Firms operating in countries with lower institutional qualities (alternatively, with higher political risks) will invest more in informal institution (and thus are more relationship-based): $\partial I(r)/\partial r > 0$.*

Proof. We first prove that $\partial I(r)/\partial r > 0$. We then show that under Assumption 1, $I(1) < 1$. Let $\alpha \equiv \eta(\varepsilon - 1) > 0$. Note that given Assumption 1(i), $I(r) = (Bw_0^{1-\varepsilon})^\kappa r^{(1+\alpha)\kappa}$. Taking partial derivative of $I(r)$ with respect to r , we have

$$\frac{\partial I(r)}{\partial r} = (1 + \alpha)\kappa \left(\frac{I(r)}{r} \right) > 0. \quad (5)$$

¹The assumption that $\varepsilon_w(r)$ is constant is made for expositional simplicity. The main results of the paper will still hold under more general functional forms for $w(r)$.

The above equation implies that $I(r) < I(1)$ for all $r \in [0, 1)$. Since $I(1) = (Bw_0^{1-\varepsilon})^\kappa$ and $\kappa > 0$, we have $I(1) < 1$ given Assumption 1(ii). This completes the proof. ■

2.2 Political Risk Perception under FDI

Suppose now that FDI liberalization comes as a shock. As with formal government institutions, informal institutions take time to build and internalize in a society/firm and its culture. Thus, we assume that even with the possibility of FDI, firms are accustomed to the level of informal institution they develop and possess at home.

Let $PR(r_d; I(r_h))$ denote the perceived political risk of a firm originating from country h and undertaking FDI in country d . It follows that $PR(r_d; I(r_h)) = r_d(1 - I(r_h))$. Let $r_d = r_h + \Delta$, where country h is of better institutional quality than country d if and only if $\Delta > 0$.

Lemma 2 *For given r_h , $\partial PR(r_h + \Delta; I(r_h))/\partial \Delta > 0$. In other words, suppose that firm i and firm i' originate from countries of the same institutional quality r_h . If firm i invests in country d , and firm i' invests in country d' such that $r_d < r'_d$, firm i will have a lower perceived political risk of FDI than firm i' .*

Proof.

$$\frac{\partial PR(r_h + \Delta; I(r_h))}{\partial \Delta} = \frac{\partial [(r_h + \Delta)(1 - I(r_h))]}{\partial \Delta} = 1 - I(r_h) > 0. \quad (6)$$

■

The intuition is straightforward. If two firms come from the same institutional setting, they will make the same level of investment in informal institution, all else being equal. Thus, they could mitigate political risk to the same extent if it occurs. Hence, a firm will be more concerned with the likelihood of political-risk events, the more backward the destination country is. For example, a firm originating from the US will be less concerned if investing in China than in Cambodia.

Lemma 3 *For given r_d , $\partial PR(r_d; I(r_d - \Delta))/\partial \Delta > 0$. In other words, suppose that firm i originates from country h and firm i' from country h' such that $r_h < r'_h$. If both firms i and i' invest in country d , firm i will have a higher perceived political risk of producing in country d than firm i' .*

Proof.

$$\frac{\partial PR(r_d; I(r_d - \Delta))}{\partial \Delta} = \frac{\partial [r_d(1 - I(r_d - \Delta))]}{\partial \Delta} = r_d \frac{\partial I(r_h)}{\partial r_h} > 0. \quad (7)$$

■

The above lemma highlights the important fact that a firm from a country with stronger institutions is less endowed with informal institutions and less equipped to deal with a bad political shock should it arise in the destination country, all else being equal. For example, a firm originating from the US will be more concerned than its counterpart from Taiwan if investing in China.

Assumption 2 *We further assume that $(1 + D)I(1) < 1 < D$, where $D \equiv \kappa(1 + \alpha) > 0$.*

Note that Assumption 2 implies Assumption 1(ii), and is thus a stronger condition. This assumption is sufficient for the following lemma to hold.

Lemma 4 *For given Δ , $\partial PR(r_h + \Delta; I(r_h))/\partial r_h > 0$. That is, suppose that firm i originating from country h invests in country d and firm i' originating from country h' invests in country d' such that $r_h < r'_h$ and $r_d - r_h = r'_d - r'_h$. Then, firm i (the “North-based MNE”) will have a lower perceived political risk of FDI in a “North” country than firm i' (the “South-based MNE”) in a “South” country.*

Proof. Given Assumption 2, we first show that $\partial \left(\frac{I(r_h)}{r_h} \right) / \partial r_h > 0$. The result is then used to prove that $\partial PR(r_h + \Delta; I(r_h))/\partial r_h > 0$.

$$\begin{aligned} \frac{\partial \left(\frac{I(r_h)}{r_h} \right)}{\partial r_h} &= \left[\frac{r_h}{I(r_h)} \frac{\partial I(r_h)}{\partial r_h} - 1 \right] \left(\frac{I(r_h)}{r_h^2} \right) \\ &= (D - 1) \left(\frac{I(r_h)}{r_h^2} \right) > 0 \quad (\text{by Assumption 2}). \end{aligned} \quad (8)$$

$$\begin{aligned}
\frac{\partial PR(r_h + \Delta; I(r_h))}{\partial r_h} &= 1 - I(r_h) - (r_h + \Delta) \left(\frac{\partial I(r_h)}{\partial r_h} \right) \\
&= 1 - I(r_h) - (r_h + \Delta) D \left(\frac{I(r_h)}{r_h} \right) \quad (\text{from (5)}) \\
&\geq 1 - I(r_h) - D \left(\frac{I(r_h)}{r_h} \right) \quad (\text{since } r_d \equiv r_h + \Delta \leq 1) \\
&> 1 - I(1) - D(I(1)/1) \quad (\text{implied by (8)}) \\
&= 1 - (1 + D)I(1) \\
&> 0 \quad (\text{by Assumption 2}).
\end{aligned} \tag{9}$$

■

The above lemma summarizes two competing considerations when evaluating perceived political risk. In the North-North country pair, although the political risk is lower in the North host country, the North-based MNE is less prepared to deal with political bad shocks should they arise compared to a South-based MNE. On the other hand, in the South-South pair, the South-based MNE has more firm-specific resources to overcome political-risk events, but it faces a higher political risk in the South host country to begin with compared to a North host country. The lemma indicates that under Assumption 2, the host country's institutional constraint will dominate the MNE's firm-specific informal institutional remedy such that the North-North country pair has an advantage, all else being equal.

2.3 Optimal FDI Destination

Among the whole array of potential FDI destination countries indexed by $r_d \in [0, 1]$, each firm faces the tradeoff between lower production cost and higher political risk, since $\partial w(r)/\partial r < 0$.

Each firm faces the following expected profit maximization problem and chooses the optimal country r_d for FDI:

$$\max_{r_d \in [0, 1]} E\Pi^F = (1 - r_d + r_d I(r_h))\Pi(r_d), \tag{10}$$

where $\Pi(r_d) = (Bw_0^{1-\varepsilon})r_d^\alpha$. The first order condition requires that:

$$\frac{\partial E\Pi^F(r_d)}{\partial r_d} = \frac{\Pi(r_d)}{r_d} [\alpha - (1 + \alpha)(1 - I(r_h))r_d] = 0, \tag{11}$$

which implies that the optimal FDI destination country is of index:²

$$r_d = \min\{H(I(r_h)), 1\}, \quad (12)$$

where $H(I(r_h)) \equiv \frac{\alpha}{(1+\alpha)(1-I(r_h))}$.

The equilibrium home-host country combinations are illustrated in Figures 1 and 2. We summarize some useful properties about the schedules $I(r_h)$ and $H(I)$ in the following lemma, before discussing the results.

Lemma 5 (i) $I(r_h)$ is strictly increasing and convex in r_h . (ii) $H(I)$ is strictly increasing and convex in I . (iii) Let $\underline{r} \equiv H(I(0))$, $\bar{r} \equiv H(I(1))$, and $\{\hat{r}\} = \{r | r = H(I(r)), \text{ where } 0 \leq r \leq 1\}$. If $\bar{r} > 1$, $\{\hat{r}\}$ is empty. Otherwise, $\{\hat{r}\}$ is a singleton, and $0 < \underline{r} < \hat{r} \leq \bar{r} \leq 1$, where the equality holds when $\hat{r} = \bar{r} = 1$.

Proof. We first prove Lemma 5(i). Recall that $I(r_h) = (r_h \Pi(r_h))^\kappa = (Bw_0^{1-\varepsilon})^\kappa r_h^D = I(1)r_h^D$. It is straightforward to verify that

$$\begin{aligned} \frac{\partial I(r_h)}{\partial r_h} &= DI(1)r_h^{D-1} > 0, \\ \frac{\partial^2 I(r_h)}{\partial r_h^2} &= D(D-1)I(1)r_h^{D-2} > 0. \end{aligned}$$

The above imply that $I(r_h)$ is strictly increasing and convex in r_h .

We then prove Lemma 5(ii). Recall that $H(I) = \frac{\alpha}{(1+\alpha)(1-I)}$. It is straightforward to verify that

$$\begin{aligned} \frac{\partial H(I)}{\partial I} &= \frac{H(I)}{(1-I)} > 0, \\ \frac{\partial^2 H(I)}{\partial I^2} &= \frac{2H(I)}{(1-I)^2} > 0, \end{aligned}$$

which implies that $H(I)$ is strictly increasing and convex in I .

Lastly, we prove Lemma 5(iii). By definition, $\underline{r} = \frac{\alpha}{1+\alpha}$, $\bar{r} = \frac{\alpha}{(1+\alpha)(1-I(1))}$, and \hat{r} satisfies

$$\hat{r}(1 - I(1)\hat{r}^D) = \frac{\alpha}{1 + \alpha}.$$

²It is straightforward to see that $E\Pi^F$ is strictly concave and has a single peak since $\partial^2(E\Pi^F(r_d))/\partial r_d^2 < 0$ for all $r_d \in [0, 1]$.

Let $LHS(r) \equiv r(1 - I(1)r^D)$, and $RHS(r) \equiv \frac{\alpha}{1+\alpha}$. It is straightforward to verify that $LHS(r)$ is strictly increasing in r for $r \in [0, 1]$ as

$$\frac{\partial LHS(r)}{\partial r} = 1 - (1 + D)I(1)r^D,$$

which is positive since $r \leq 1$ and $(1+D)I(1) < 1$ under Assumption 2. As $LHS(0) = 0$, and $LHS(r)$ is strictly increasing in r for $r \in [0, 1]$, we know that there exists a solution, which is unique if and only if $LHS(1) \geq RHS(1)$. The inequality is equivalent to $\bar{r} \leq 1$. If $\bar{r} = 1$, $LHS(1) = RHS(1)$ and $\hat{r} = 1$. This completes the proof of Lemma 5(iii). ■

As illustrated in Figures 1 and 2, the curves $I(r_h)$ and $H(I)$ slope upward and are convex in shape against their respective arguments, observing Lemma 5. The choice of FDI destination country by MNEs given r_h can be summarized as follows.

Lemma 6 (*North-South, South-North, or No FDI*) (i) If \hat{r} exists, for a given productivity level, firms from countries with $r_h < \hat{r}$ will undertake FDI in a country with lower institutional qualities, leading to North-South FDI. On the other hand, firms from countries with $r_h > \hat{r}$, will undertake FDI in a country with higher institutional qualities, leading to South-North FDI. Finally, firms from countries with $r_h = \hat{r}$ will not undertake FDI. (ii) If \hat{r} does not exist, for a given productivity level, firms from all countries undertake North-South FDI.

Proof. (i) Note that $I(r_h) : [0, 1] \rightarrow [I(0), I(1)]$ and $H(I) : [I(0), I(1)] \rightarrow [\underline{r}, \bar{r}]$ are continuous. By Lemma 5(iii), $r_d = H(I(r_h)) > r_h$ for $r_h < \hat{r}$, implying North-South FDI. On the other hand, $r_d = H(I(r_h)) < r_h$ for $r_h > \hat{r}$, implying South-North FDI. (ii) The results are apparent as in this scenario, the curve $H(I)$ lies everywhere above the curve $I(r_h)$, implying that $r_d = H(I(r_h)) > r_h$ for all $r_h < 1$. ■

Lemma 7 (*Uni- or Bi-directional FDI Flows*) Countries with $r \in [\underline{r}, \bar{r}] \setminus \{\hat{r}\}$ are characterized by bi-directional FDI flows by firms of a given productivity level. On the other hand, countries with $r < \underline{r}$ or $r > \bar{r}$ experience only FDI outflows but no FDI inflows by firms of a given productivity level.

Proof. The countries that will receive FDI are those with $r \in [\underline{r}, \bar{r}]$, the range of $H(I)$, while all

countries $r \in [0, 1]$ could potentially undertake FDI. Thus, only countries with $r \in [\underline{r}, \bar{r}]$ experience both FDI inflows and outflows, while the rest only FDI outflows. ■

As illustrated in Figures 1 and 2, there are two possible home-host matching configurations, depending on whether schedule $I(r_h)$ and schedule $H(I)$ intersect. *Configuration (a)* emerges when schedule $H(I)$ does not intersect with schedule $I(r_h)$, that is, when $\bar{r} > 1$. *Configuration (b)* emerges when $H(I)$ intersects $I(r_h)$ once from above at \hat{r} , that is, when $\bar{r} \leq 1$.

Under *Configuration (a)*, countries are partitioned into two disjoint subsets: $[0, 1] = R^{\emptyset S} \cup R^{NS}$, where $R^{\emptyset S} \equiv [0, \underline{r})$, and $R^{NS} \equiv [\underline{r}, 1]$, where the first superscript indicates the institutional ranking of the FDI home country *relative* to country r , while the second superscript represents the institutional ranking of the FDI host country *relative* to country r . In the first superscript, a notation S would indicate that FDI inflows are from a Southern country (with relatively low institutional qualities), N from a Northern country (with relatively higher institutional qualities), and \emptyset that country r receives no FDI inflows. Similarly in the second superscript, a notation S would indicate that FDI outflows go to a Southern country, N to a Northern country, and \emptyset indicates that country r does not invest abroad (no FDI outflows). For example, country $r \in R^{\emptyset S}$ sends only FDI outflows to South (countries with higher r) but receives no FDI inflows. Country $r \in R^{NS}$ receives FDI inflows from North (countries with lower r) and sends FDI outflows to South. See, for example, points $A \in R^{\emptyset S}$ and $B \in R^{NS}$ in Figure 1. Country A receives no FDI inflows but invests in a relatively backward country A' , while country $B = A'$ receives FDI from a relatively advanced country A and invests in a relatively backward country B' .

Under *Configuration (b)*, countries are partitioned into four disjoint subsets: $[0, 1] = R^{\emptyset S} \cup R^{NS} \cup R^{SN} \cup R^{\emptyset N}$, where $R^{\emptyset N} \equiv [0, \underline{r})$, $R^{NS} \equiv [\underline{r}, \hat{r})$, $R^{SN} \equiv [\hat{r}, \bar{r})$, and $R^{\emptyset N} \equiv [\bar{r}, 1]$. Country $r \in R^{\emptyset S}$ receives no FDI inflows but sends only FDI outflows to South. Country $r \in R^{NS}$ receives FDI inflows from North and sends FDI outflows to South. Country $r \in R^{SN}$ receives FDI inflows from South and sends FDI outflows to North. Country $r \in R^{\emptyset N}$ receives no FDI inflows but sends only FDI outflows to North. For example, see points $C \in R^{\emptyset N}$ and $D \in R^{SN}$ in Figure 2. Country C receives no FDI inflows but invest in a relatively advanced country C' , while country $D = C'$ receives FDI from a relatively backward country C and invests in a relatively advanced country D' .

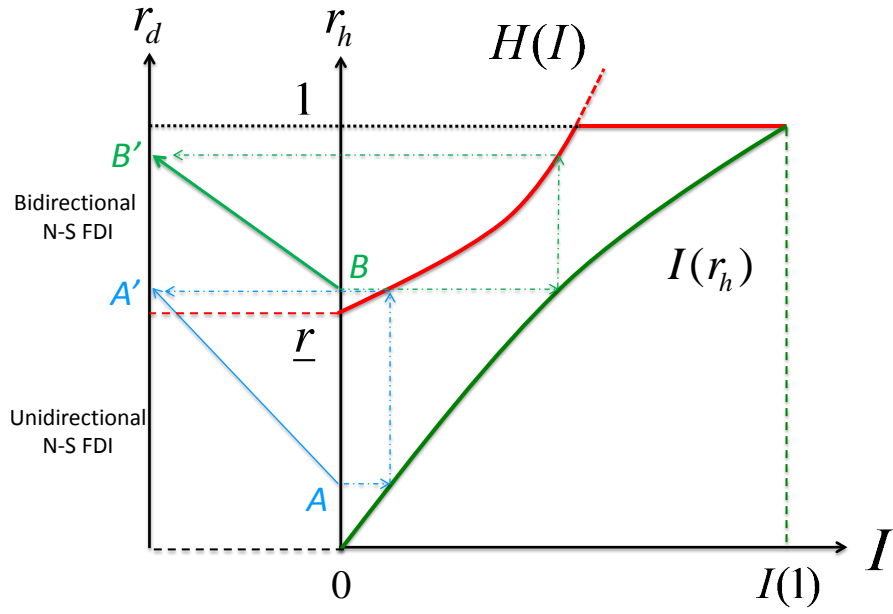


Figure 1: FDI Home-Host Country Configuration (a)

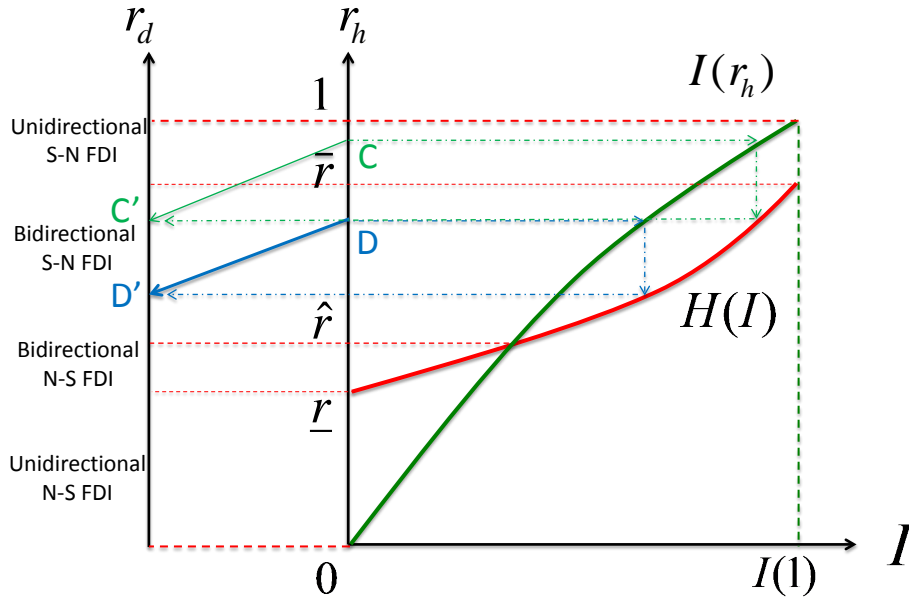


Figure 2: FDI Home-Host Country Configuration (b)

3 Empirical Evidence

An estimation framework is presented below to test the model's main predictions in Lemmas 2 and 4. In the equation below,

$$PR_{hd} = \beta_1(G_h - G_d) + \beta_2G_h + \alpha X + \epsilon,$$

the dependent variable PR_{hd} indicates the incidence of financial losses due to political risk for an MNE based in country h when investing in country d ; $G_h - G_d$ indicates the difference in the institutional qualities of the MNE's home country G_h and host country G_d ; and X is a set of dummy variables that control for the size and the sector of the MNE. Lemmas 2 and 4 imply that the signs of the coefficients should be: $\beta_1 > 0$ and $\beta_2 < 0$, respectively.

Given the data available, we will also use the same framework to estimate whether the institutional factors affect how MNEs respond to political risk.

3.1 Data

Our measure of political risk perception by multinational firms is based on the MIGA-EIU Political Risk Survey 2011.³ The survey was conducted in June/July 2011 and contains the responses of 316 senior executives from multinational enterprises investing in developing countries. Quota sampling was used to ensure that the survey sample approximates the composition of actual FDI outflows to developing countries in terms of industry and geographic composition (MIGA, 2011, Appendix 2). In particular, we use the following two sets of survey questions:

- (i) *In the past 3 years has your company experienced financial losses due to any of the following risks? Select all that apply.*
- (ii) *What tools/mechanisms does your company use to mitigate political risk when investing in developing countries? Select all that apply.*

The first question addresses eight potential types of political risk. These include transfer/convertibility restrictions (that interrupt an investor's ability to convert local currency into foreign exchange or to

³The survey raw data for 2011 are kindly made available by the Multilateral Investment Guarantee Agency (MIGA) of the World Bank. The survey was conducted annually since 2009 by the Economist Intelligence Unit (EIU) on behalf of MIGA.

transfer it out of the host country), the host government's breach of a contractual agreement with an investor, non-honoring of sovereign financial obligations/guarantees, expropriation/nationalization by a host government, and other adverse regulatory changes in the host country. Also included are violent political events of: war, terrorism, and civil disturbance, respectively, that cause business interruption or physical damages. We can consider the question as measuring the incidence of financial losses experienced by the MNE due to each of these political risk factors. The summary statistics are indicated by Figure 3: breach of contract, other adversary regulatory changes, and civil disturbance represent some of the greatest risk factors.

The second question provides us some information on whether and how MNEs respond to political risk. Although a political risk insurance market exists (MIGA, 2011, with insurance provided by national and multilateral agencies, or private insurers), it is apparent from Figure 4 that the insurance market is far from incomplete, and as a result, MNEs resort to various other measures to protect themselves against possible losses due to political risks. Building firm-specific institutions and relationship assets appear to be a typical response to political risk, as is emphasized by the current paper.

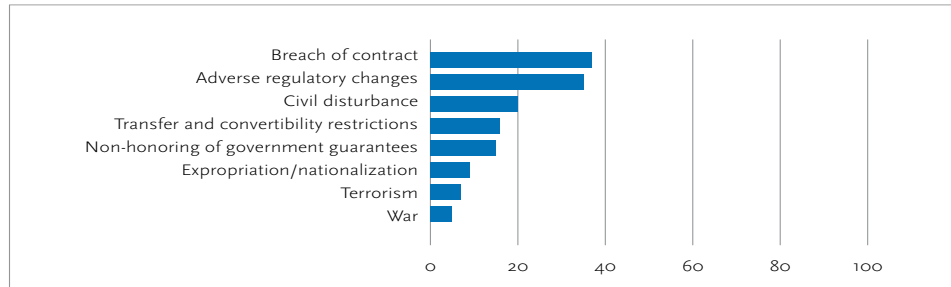
To measure the institutional quality of a country, we use the Worldwide Governance Indicators (WGI) and the Ease of Doing Business (EDB) indicators for 2011 compiled by the World Bank (Kaufmann et al., 2010; Doing Business, 2013).⁴ The WGI provides quality indicators of a country's overall governance in six dimensions: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. In constructing the indicators, it relies on a diverse array of perceptions-based data sources, such as surveys or subjective assessments provided by commercial business information providers, non-governmental organizations, or multilateral organizations. In contrast, the EDB focuses more specifically on the regulation affecting the life cycle of a firm, and ranks countries according to the readings of laws and regulations by local experts involved in administering or advising on the regulatory requirements. Provided are indicators on the overall ease of doing business and ten phases of business regulation: e.g., from starting a business, to registering property and enforcing contracts, and to resolving insolvency.

⁴The WGI indicators are retrieved from <http://info.worldbank.org/governance/wgi/index.asp> (The Worldwide Governance Indicators, 2012 Update) and the EDB indicators from <http://www.doingbusiness.org/data> (The Doing Business 2013 update). Irrespective of the publication years, the data used are measures of the country's performance in 2011.

The original EDB indicators are converted to percentile rankings among all countries (0 to 100) in the current paper so that a higher percentile indicates a better institutional quality as with the WGI.

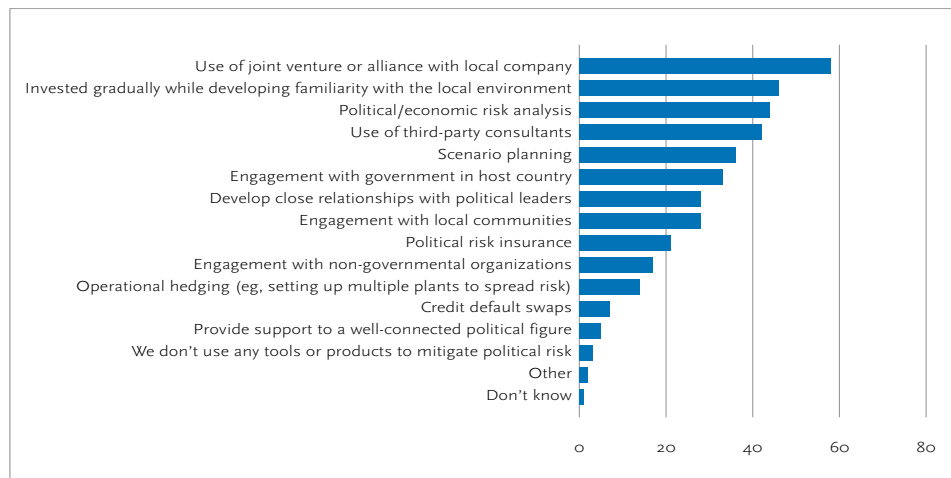
For each political risk factor or response (as the dependent variable), the regression was run separately for each of the above alternative measures of institutional qualities. In the MIGA-EIU Survey, each unit of observation corresponds to an MNE, who can potentially invest in multiple destinations. We choose to measure the distance ($G_h - G_d$) by the maximum distance across all specified investment destinations, in view of the theory that the destination of the lowest G_d poses the greatest constraint and risk.

Figure 3: Financial Losses Caused by Types of Political Risk



Source: MIGA (2011) (Percent of Respondents)

Figure 4: Tools or Mechanisms Used to Mitigate Political Risk



Source: MIGA (2011) (Percent of Respondents)

3.2 Results

The results on the incidence of financial loss due to political risk are reported in Table 1. Not all types of financial loss due to political risk depend on the relative institutional qualities, or the home-country institutional quality (e.g., expropriation) and not all measures of institutional quality matter always (e.g., getting electricity). However, whenever the institutional quality matters, a very robust pattern appears. On the one hand, conditional on the same home-country institutional quality, an MNE investing in a country that is more different in terms of institutional quality faces a greater incidence of financial loss due to political risk. On the other hand, conditional on the same institutional differences, the MNE in a pair of home and host countries with absolutely better institutions often fares better than the MNE in a pair of countries with absolutely worse institutions. The signs are consistent with the theory's predictions.

This suggests that a South-based MNE can potentially compensate for its absolute disadvantage by investing in a developing country of similarly poor governance quality. In other words, the South-based MNEs have a comparative advantage in investing in the South (relative to the North-based MNEs), a finding that supports the proposed hypothesis and the motivating arguments given in the introduction.

It is also interesting to see that the responses of MNEs to political risk depend on the institutional quality in very much the same way as realized losses (Table 2). If an institutional attribute matters, the larger the distance in institutional qualities, the more likely it is that the MNE will adopt a risk mitigation tool/mechanism (e.g., political risk insurance, or engagement with host country governments). On the other hand, the better endowed the MNE's home country is in terms of institutional quality, the less likely it is that the MNE will adopt political risk mitigation tools.

Some interesting patterns also emerge in how realized political risk and responses vary across sectors and firm sizes. The primary sector appears to be more sensitive to political risk in several cases than the benchmark finance sector, while bigger MNEs tend to be more risk averse and apt to adopt risk-mitigating instruments.

4 Conclusion

References

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Table 1: Likelihood of financial losses due to each type of political risk

	<u>Transfer and convertibility restriction</u>		<u>Breach of contract</u>		<u>Non-honoring of sovereign financial obligations</u>		<u>Expropriation</u>		<u>Other adverse regulatory changes</u>		<u>War</u>		<u>Terrorism</u>		<u>Civil disturbance</u>	
	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level
Worldwide Governance Indicators																
voice and accountability			+		+	-					+	-			+	-
political stability	+				+	-					+	-	+	-		
government effectiveness	+		+		+	-					+				+	
regulatory quality	+		+		+	-					+	-			+	
rule of law	+		+		+	-					+	-	+		+	-
control of corruption			+	-	+	-					+	-	+			
Ease of Doing Business																
starting business	+	-	+	-	+	-	-				+			+		
dealing with construction permits	+	-	+	-		-										+
getting electricity			+		+	-										
registering property	+	-	+			-			-				+		+	
getting credit	+		+		+	-					+		+		+	
protecting investors	+	-	+	-		-					+				+	
paying taxes	+	-	+	-	+	-										
trading across borders	+		+		+	-					+	-				
enforcing contracts	+	-			+				-		+				+	
resolving insolvency	+		+		+	-					+	-			+	
Sector																
1. finance (base category)																
2. manufacturing																+
3. primary								+								+
4. services											+					
5. utilities and other services	+															+
Firm Sales																
1. <=\$500m (base category)																
2. \$500m - \$1bn	-		+					-						-		
3. \$1bn - \$5bn																+
4. \$5bn - \$10bn										+						
5. >=\$10bn										+		+				

NOTE: Signs indicated are significant at 10% level. Signs indicated for Sector and Firm Sales are those significant across most institutional indicators.

Table 2: Likelihood of using each tool/mechanism to mitigate political risk

	<u>Political risk</u>		<u>Credit default</u>		<u>Use of third-</u>		<u>Develop close</u>		<u>Use of joint</u>		<u>Invested</u>		<u>Provide support</u>		<u>Engagement</u>		<u>Engagement</u>			
	<u>insurance</u>	<u>swaps</u>	<u>party</u>	<u>relationships</u>	<u>with political</u>	<u>alliance with</u>	<u>venture or</u>	<u>gradually while</u>	<u>Political/econo</u>	<u>mic risk analysis</u>	<u>connected</u>	<u>Scenario</u>	<u>government in</u>	<u>with local</u>	<u>Engagement</u>	<u>with non-</u>	<u>Operational</u>			
	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level	distance	level
Worldwide Governance Indicators																				
voice and accountability							-								+	-				
political stability								+	-	-										
government effectiveness	+	-										-							+	
regulatory quality	+	-			+		+	-						+	+					
rule of law	+	-																		
control of corruption																				
Ease of Doing Business																				
starting business	+																			
dealing with construction permits										+	-									
getting electricity									+	-	-									
registering property	+																		+	+
getting credit	+														+				+	
protecting investors							+													
paying taxes																			+	-
trading across borders	+	-			+	-														+
enforcing contracts								+	-	+	-				+	-				
resolving insolvency	+	-																	+	+
Sector																				
1. finance (base category)																				
2. manufacturing																				
3. primary																			+	+
4. services							+													
5. utilities and other services															+					
Firm Sales																				
1. <=\$500m (base category)																				
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3. \$1bn - \$5bn																				
4. \$5bn - \$10bn																				
5. >=\$10bn			+		-		+													+

NOTE: Signs indicated are significant at 10% level. Signs indicated for Sector and Firm Sales are those significant across most institutional indicators.