Financial Constraints, Institutions, and Foreign Ownership

Online Appendix

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1 Technical Appendix

The setup of the model, which builds on Alquist et al. (2016), is provided in the main body of the paper. We embed in their framework a shared input provision decision as in Eswaran and Kotwal (1985) and Asiedu and Esfahani (2001) to determine the optimal ownership structure chosen by a foreign firm when acquiring a domestic firm. This appendix proceeds in a few steps. First, we prove the properties of a few key value functions that are associated with the maximization problems of the domestic and foreign firms. These are $V_{ic}^{D,0}$ and $V_{ic}^{D,\alpha_{ic}}$ for the domestic firm, and $V_{ic}^{F,1}$ and $V_{ic}^{F,\alpha_{ic}}$ for the foreign firm. We then derive the necessary conditions for there to be a foreign acquisition of a representative domestic firm in industry i, i.e., the conditions under which either a full acquisition ($S_{ic}^{F,1} \geq 0$), or a partial acquisition ($S_{ic}^{F,\alpha_{ic}} \geq 0$, $S_{ic}^{D,\alpha_{ic}} \geq 0$) can take place. We then perform some comparative statics regarding when these necessary conditions are more or less likely to hold. Second, we derive the conditions under which $S_{ic}^{F,1} \geq S_{ic}^{F,\alpha_{ic}}$, so that full ownership is chosen over partial (or vice versa if the inequality reverses), and perform similar comparative statics.

The function $V_{ic}^{D,0}$: The value $V_{ic}^{D,0}$ solves:

$$V_{ic}^{D,0} \equiv \max_{L_{ic}} \{\pi_{i,1} + A_{ic,2} l_{ic}^{\beta_I} L_{ic}^{\beta_L} - l_{ic} - pL_{ic}\}$$

where investment in capital, I_{ic}, is constrained to be $l_{ic} = \frac{\pi_{i,1}}{(1-\tau_c)}$. The maximization problem with respect to L_{ic} gives:

$$L_{ic} = \left(\frac{A_{ic,2}\beta_L l_{ic}^{\beta_I}}{p} \right)^{\frac{1}{1-\beta_L}}$$

Inserting this back into the expression for $V_{ic}^{D,0}$ we have:

$$V_{ic}^{D,0} = \pi_{i,1} - l_{ic} + \left(\beta_L^{\frac{\beta_L}{1-\beta_L}} - \beta_L^{\frac{1}{1-\beta_L}} \right) \left[\frac{A_{ic,2}}{p^{\beta_L}} l_{ic}^{\beta_I} \right]^{\frac{1}{1-\beta_L}}.$$

Taking the partial derivative with respect to l_{ic} gives:

$$\frac{\partial V_{ic}^{D,0}}{\partial l_{ic}} = -1 + \frac{\beta_I}{1-\beta_L} \left(\beta_L^{\frac{\beta_L}{1-\beta_L}} - \beta_L^{\frac{1}{1-\beta_L}} \right) \left[\frac{A_{ic,2}}{p^{\beta_L}} \right]^{\frac{1}{1-\beta_L}} l_{ic}^{-\frac{1-\beta_I-\beta_L}{1-\beta_L}}.$$

A sufficient condition for this expression to be positive is that

$$l_{ic} < \left[A_{ic,2} \beta_I^{1-\beta_L} \beta_L^{\beta_L} p^{-\beta_L} \right]^{\frac{1}{1-\beta_I-\beta_L}} = I_{ic}^*.$$

Here $I_{ic}^* = \left[A_{ic,2} \beta_I^{1-\beta_L} \beta_L^{\beta_L} p^{-\beta_L} \right]^{\frac{1}{1-\beta_I-\beta_L}}$, is the first-best investment level. Therefore, $V_{ic}^{D,0}$ is increasing in l_{ic} as long as the liquidity constraint is binding. The total derivative of $V_{ic}^{D,0}$ with respect to $\pi_{i,1}$ is:

$$\frac{dV_{ic}^{D,0}}{d\pi_{i,1}} = \frac{\partial V_{ic}^{D,0}}{\partial \pi_{i,1}} + \frac{\partial V_{ic}^{D,0}}{\partial l_{ic}} \frac{dl_{ic}}{d\pi_{i,1}} = 1 + \frac{\partial V_{ic}^{D,0}}{\partial l_{ic}} \frac{1}{1-\tau_c} > 0,$$

because the partial derivative is positive (as shown above). The total derivative of $V_{ic}^{D,0}$ with respect to τ_c is:

$$\frac{dV_{ic}^{D,0}}{d\tau_c} = \frac{\partial V_{ic}^{D,0}}{\partial \tau_c} + \frac{\partial V_{ic}^{D,0}}{\partial l_{ic}} \frac{dl_{ic}}{d\tau_c} = \frac{\partial V_{ic}^{D,0}}{\partial l_{ic}} \frac{\pi_{i,1}}{(1-\tau_c)^2} > 0.$$

Taking the total derivative of $V_{ic}^{D,0}$ with respect to l_{ic} gives:

$$\frac{dV_{ic}^{D,0}}{dl_{ic}} = \frac{\partial V_{ic}^{D,0}}{\partial l_{ic}} + \frac{\partial V_{ic}^{D,0}}{\pi_{i,1}} \frac{d\pi_{i,1}}{dl_{ic}} = \frac{\partial V_{ic}^{D,0}}{\partial l_{ic}} + 1 - \tau_c > 0.$$

$V_{ic}^{D,0}$ can be simplified as

$$V_{ic}^{D,0} = \pi_{i,1} - l_{ic} + (1-\beta_L)\left(A_{ic,2}{\beta_L}^{\beta_L} p^{-\beta_L} l_{ic}^{\beta_I}\right)^{\frac{1}{1-\beta_L}},$$

which gives the partial derivative of $V_{ic}^{D,0}$ with respect to $A_{ic,2}$:

$$\frac{\partial V_{ic}^{D,0}}{\partial A_{ic,2}} = {A_{ic,2}}^{\frac{\beta_L}{1-\beta_L}} \left({\beta_L}^{\beta_L} p^{-\beta_L} l_{ic}^{\beta_I}\right)^{\frac{1}{1-\beta_L}} > 0.$$

The function $V_{ic}^{F,1}$: The value $V_{ic}^{F,1}$ solves:

$$V_{ic}^{F,1} \equiv \max_{I_{ic},\, L_{ic}} \{\phi A_{ic,2} I_{ij}^{\beta_I} L_{ij}^{\beta_L} - I_{ic} - \omega_c p L_{ic} - \Gamma\}.$$

Maximization of this function yields:

$$V_{ic}^{F,1} = (1-\beta_I-\beta_L)\big(\phi A_{ic,2}(\omega_c p)^{-\beta_L} \beta_I^{\beta_I} \beta_L^{\beta_L}\big)^{\frac{1}{1-\beta_I-\beta_L}} - \Gamma.$$

Taking partial derivatives with respect to $A_{ic,2}$ and ω_c we get:

$$\frac{\partial V_{ic}^{F,1}}{\partial A_{ic,2}} = A_{ic,2}^{\frac{\beta_I+\beta_L}{1-\beta_I-\beta_L}} \big(\phi(\omega_c p)^{-\beta_L} \beta_I^{\beta_I} \beta_L^{\beta_L}\big)^{\frac{1}{1-\beta_I-\beta_L}} > 0,$$

and

$$\frac{\partial V_{ic}^{F,1}}{\partial \omega_c} = -\beta_L \big(\phi A_{ic,2} p^{-\beta_L} \beta_I^{\beta_I} \beta_L^{\beta_L} \omega_c^{-(1-\beta_I)}\big)^{\frac{1}{1-\beta_I-\beta_L}} < 0.$$

The function $S_{ic}^{F,1}$: The function $S_{ic}^{F,1}$ is defined as $S_{ic}^{F,1} \equiv V_{ic}^{F,1} - P_1 = V_{ic}^{F,1} + \pi_{i,1} - V_{ic}^{D,0}$. Using the expressions derived before, after some algebra, $S_{ic}^{F,1}$ can be expressed as:

$$S_{ic}^{F,1} = \mu_0 A_{ic,2}^{\frac{1}{\mu_1}} {\omega_c}^{-\frac{\beta_L}{\mu_1}} - \mu_0^{'} A_{ic,2}^{\frac{1}{\mu_2}} {l_{ic}}^{\frac{1}{\mu_2}} + l_{ic} - \Gamma,$$

where $\mu_1 = 1-\beta_I-\beta_L$, $\mu_2 = 1-\beta_L$, $\mu_0 = \mu_1 \phi^{\frac{1}{\mu_1}} p^{-\frac{\beta_L}{\mu_1}} \beta_I^{\frac{\beta_I}{\mu_1}} \beta_L^{\frac{\beta_L}{\mu_1}}$, and $\mu_0^{'} = \mu_2 p^{-\frac{\beta_L}{\mu_2}} \beta_L^{\frac{\beta_L}{\mu_2}}$. Taking the derivatives with respect to $A_{ic,2}$ and l_{ic}, we have

$$\frac{\partial S_{ic}^{F,1}}{\partial A_{ic,2}} = \frac{\mu_0}{\mu_1} A_{ic,2}^{\frac{1-\mu_1}{\mu_1}} \omega_c^{-\frac{\beta_L}{\mu_1}} - \frac{\mu_0'}{\mu_2} A_{ic,2}^{\frac{1-\mu_2}{\mu_2}} l_{ic}^{\frac{1}{\mu_2}},$$

and

$$\frac{\partial S_{ic}^{F,1}}{\partial l_{ic}} = 1 - \frac{\mu_0'}{\mu_2} A_{ic,2}^{\frac{1}{\mu_2}} l_{ic}^{\frac{1-\mu_2}{\mu_2}}.$$

Using the implicit function theorem, the slope of the $S_{ic}^{F,1} = 0$ line on the $(l_{ic}, A_{ic,2})$ plane is

$$\frac{dA_{ic,2}}{dl_{ic}}|_{S_{ic}^{F,1}=0} = -\frac{\frac{\partial S_{ic}^{F,1}}{\partial l_{ic}}}{\frac{\partial S_{ic}^{F,1}}{\partial A_{ic,2}}} = -\frac{1 - \frac{\mu_0'}{\mu_2} A_{ic,2}^{\frac{1}{\mu_2}} l_{ic}^{\frac{1-\mu_2}{\mu_2}}}{\frac{\mu_0}{\mu_1} A_{ic,2}^{\frac{1-\mu_1}{\mu_1}} \omega_c^{-\frac{\beta_L}{\mu_1}} - \frac{\mu_0'}{\mu_2} A_{ic,2}^{\frac{1-\mu_2}{\mu_2}} l_{ic}^{\frac{1}{\mu_2}}}.$$

A sufficient condition for $\frac{dA_{ic,2}}{dl_{ic}}|_{S_{ic}^{F,1}=0} > 0$ is that the profit from a full acquisition declines in the liquidity of the representative target firm ($\frac{\partial S_{ic}^{F,1}}{\partial l_{ic}} < 0$) and increases in the productivity of the representative target firm ($\frac{\partial S_{ic}^{F,1}}{\partial A_{ic,2}} > 0$). Note as well that in $S_{ic}^{F,1} = V_{ic}^{F,1} + \pi_{i,1} - V_{ic}^{D,0}$, only $V_{ic}^{F,1}$ involves ω_c. Thus,

$$\frac{\partial S_{ic}^{F,1}}{\partial \omega_c} = \frac{\partial V_{ic}^{F,1}}{\partial \omega_c} = -\beta_L \left(\phi A_{ic,2} p^{-\beta_L} \beta_I^{\beta_I} \beta_L^{\beta_L} \omega_c^{-(1-\beta_I)}\right)^{\frac{1}{1-\beta_I-\beta_L}} < 0.$$

The function $S_{ic}^{F,\alpha_{ic}}$: We briefly remind the reader about the timing of the stages in the case of a partial acquisitions. In the first stage, the foreign acquirer offers to buy a share α of the firm for the price $P_{\alpha_{ic}}$. If the domestic target accepts this offer, we move to the second stage in which investment and local input procurement decisions are made by the foreign and domestic owners respectively. The characterization of $S_{ic}^{F,\alpha_{ic}}$ proceeds in three steps. We work backwards from the second stage involving the input decisions. We first assume a non-cooperative input provision game between the foreign acquirer and domestic co-owner and solve for the Nash-equilibrium levels of inputs provided in the second stage game. We then use these optimal input supplies as given and solve the first stage maximization problem of the foreign acquirer. In the last step we show how the value of the foreign and domestic agents move when the participation constraint binds, which gives our main result.

`Second stage Nash-equilibrium level of inputs:` As before we assume decreasing returns in the inputs provided by the private foreign and domestic agents to be able to solve for an optimal pair of inputs (I_{ic}, L_{ic}). Under partial foreign ownership, the payoffs for the foreign entity and the domestic owner are then given by

$$V_{ic}^{F,\alpha_{ic}} = -P_{\alpha_{ic}} + \alpha_{ic}\phi_{ic}A_{ic,2}I_{ic}^{\beta_I}L_{ic}^{\beta_L} - I_{ic} - \Gamma$$

and

$$V_{ic}^{D,\alpha_{ic}} = P_{\alpha_{ic}} + (1-\alpha_{ic})\phi_{ic}A_{ic,2}I_{ic}^{\beta_I}L_{ic}^{\beta_L} - pL_{ic},$$

Using the assumed form of the transfer, the payoffs can be written as

$$V_{ic}^{F,\alpha_{ic}} = (1-\zeta)\phi_{ic}A_{ic,2}I_{ic}^{\beta_I}L_{ic}^{\beta_L} - I_{ic} - \Gamma$$

and

$$V_{ic}^{D,\alpha_{ic}} = \zeta\phi_{ic}A_{ic,2}I_{ic}^{\beta_I}L_{ic}^{\beta_L} - pL_{ic}.$$

where $\zeta = 1 - \alpha_{ic}(1-\kappa)$ is the effective share of the domestic agent in the acquired firm's revenues (the industry subscript is suppressed for ζ). Maximizing with respect to I_{ic} and L_{ic} gives the reactions functions:

$$I_{ic} = L_{ic}^{\frac{\beta_L}{1-\beta_I}}[\beta_I(1-\zeta)\phi_{ic}A_{ic,2}]^{\frac{1}{1-\beta_I}}$$

and

$$L_{ic} = I_{ic}^{\frac{\beta_I}{1-\beta_L}}[\frac{\beta_L\zeta\phi_{ic}A_{ic,2}}{p}]^{\frac{1}{1-\beta_L}}.$$

The Nash-equilibrium levels of inputs supplied are:

$$I_{ic}(\alpha_{ic}) = \psi_I\zeta^{\frac{\beta_L}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{1-\beta_L}{1-\beta_I-\beta_L}}$$

and

$$L_{ic}(\alpha_{ic}) = \psi_L\zeta^{\frac{1-\beta_I}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{\beta_I}{1-\beta_I-\beta_L}}.$$

where

$$\psi_I = \beta_L^{\frac{\beta_L}{1-\beta_I-\beta_L}}\beta_I^{\frac{1-\beta_L}{1-\beta_I-\beta_L}}(\phi_{ic}A_{ic,2})^{\frac{1}{1-\beta_I-\beta_L}}p^{-\frac{\beta_L}{1-\beta_I-\beta_L}}$$

and

$$\psi_L = \beta_L^{\frac{1-\beta_I}{1-\beta_I-\beta_L}}\beta_I^{\frac{\beta_I}{1-\beta_I-\beta_L}}(\phi_{ic}A_{ic,2})^{\frac{1}{1-\beta_I-\beta_L}}p^{-\frac{1-\beta_I}{1-\beta_I-\beta_L}}.$$

`First stage problem of the foreign acquirer:` From the analysis above it can be seen that the optimal I_{ic} and L_{ic} depend on α_{ic}. The optimization problem of α_{ic} for the foreign acquirer can thus be written as:

$$S_{ic}^{F,\alpha_{ic}} \equiv \max_{\alpha_{ic}}\Big\{\alpha_{ic}(1-\kappa)\big(\phi A_{ic,2}I_{ic}(\alpha_{ic})^{\beta_I}L_{ic}(\alpha_{ic})^{\beta_L}\big) - I_{ic}(\alpha_{ic}) - \Gamma\Big\}.$$

subject to the domestic agent's participation constraint **(PC)**,

$$\begin{aligned} V_{ic}^{D,\alpha_{ic}} &\equiv (1-\alpha_{ic}(1-\kappa))\big(\phi A_{ic,2}I_{ic}(\alpha_{ic})^{\beta_I}L_{ic}(\alpha_{ic})^{\beta_L}\big) - pL_{ic}(\alpha_{ic}) \geq V_{ic}^{D,0} - \pi_{i,1}, \\ \text{or, } S_{ic}^{D,\alpha_{ic}} &\equiv V_{ic}^{D,\alpha_{ic}} + \pi_{i,1} - V_{ic}^{D,0} \geq 0. \end{aligned}$$

Plugging in the optimal values of investment and local input from the Stage 2 problem into the Stage 1 problem in terms of the effective share of the domestic agent, $\zeta = 1 - \alpha_{ic}(1-\kappa)$, we write the above problem as:

$$S_{ic}^{F,\alpha_{ic}} \equiv \max_{\zeta}\left\{(\psi-\psi_I)(\zeta^{\frac{\beta_L}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{1-\beta_L}{1-\beta_I-\beta_L}})-\Gamma\right\}$$

subject to

$$S_{ic}^{D,\alpha_{ic}} \equiv (\psi-p\psi_L)(\zeta^{\frac{1-\beta_I}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{\beta_I}{1-\beta_I-\beta_L}})+\pi_{i,1}-V_{ic}^{D,0}\geq 0,$$

where $\psi=\phi_{ic}A_{ic,2}{\psi_I}^{\beta_I}{\psi_L}^{\beta_L}$. Note that for $0<\kappa<1$ the Karush-Kuhn-Tucker conditions for maximizing with respect to ζ or α_{ic} are the same as long as we assume that there is an interior solution for α_{ic}.

The Lagrangian for this problem is:

$$\mathbb{L}=\mathbb{F}(\zeta)+\lambda\mathbb{G}(\zeta),$$

where

$$\mathbb{F}(\zeta)=(\psi-\psi_I)(\zeta^{\frac{\beta_L}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{1-\beta_L}{1-\beta_I-\beta_L}})-\Gamma$$

and

$$\mathbb{G}(\zeta)=(\psi-p\psi_L)(\zeta^{\frac{1-\beta_I}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{\beta_I}{1-\beta_I-\beta_L}})+\pi_{i,1}-V_{ic}^{D,0}.$$

Assuming an interior solution for α_{ic}, and hence $\zeta=1-\alpha_{ic}(1-\kappa)$, the first order necessary conditions for a maximum are:

$$\begin{aligned}\mathbb{F}_\zeta &= -\lambda\mathbb{G}_\zeta\\ \mathbb{G}(\zeta) &\geq 0,\quad \lambda\geq 0,\quad \lambda.\mathbb{G}(\zeta)=0,\end{aligned}$$

where

$$\mathbb{F}_\zeta=\frac{\zeta^{\frac{\beta_L}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{1-\beta_L}{1-\beta_I-\beta_L}}(\psi-\psi_I)(\frac{\beta_L}{\zeta}-\frac{1-\beta_L}{1-\zeta})}{1-\beta_I-\beta_L},$$

and

$$\mathbb{G}_\zeta=\frac{\zeta^{\frac{1-\beta_I}{1-\beta_I-\beta_L}}(1-\zeta)^{\frac{\beta_I}{1-\beta_I-\beta_L}}(\psi-P\psi_L)(\frac{1-\beta_I}{\zeta}-\frac{\beta_I}{1-\zeta})}{1-\beta_I-\beta_L}.$$

`Case 1 (non-binding constraint):` When the constraint is slack, so that $S_{ic}^{D,\alpha_{ic}}>0$ and $\lambda=0$, the optimal ζ solves $\mathbb{F}_\zeta=0$. The solution to $\mathbb{F}_\zeta=0$ is simply $\zeta=\beta_L$, which is analogous to Asiedu and Esfahani (2001). Intuitively, the effective share of the domestic agent is given by her relative importance in terms of input provision, since all the surplus from the acquisition accrues from production in period 2. Thus in the non-binding participation constraint case, the share of the foreign owner, α_{ic}, is insensitive to financial factors and is $\alpha_{ic}=\frac{1-\beta_L}{1-\kappa}$.

Substituting the optimal value of $\zeta=\beta_L$, the maximized values of the foreign acquirer and domestic target can be expressed as:

$$S_{ic}^{F,\alpha_{ic}}=(\psi-\psi_I)(\beta_L^{\frac{\beta_L}{1-\beta_I-\beta_L}}(1-\beta_L)^{\frac{1-\beta_L}{1-\beta_I-\beta_L}})-\Gamma$$

and

$$S_{ic}^{D,\alpha_{ic}} = (\psi - p\psi_L)(\beta_L^{\frac{1-\beta_I}{1-\beta_I-\beta_L}}(1-\beta_L)^{\frac{\beta_I}{1-\beta_I-\beta_L}}) + l_{ic} - (1-\beta_L)\left(A_{ic,2}\beta_L{}^{\beta_L}p^{-\beta_L}l_{ic}^{\beta_I}\right)^{\frac{1}{1-\beta_L}},$$

where ψ, ψ_I, and ψ_L are as defined before. Simplifying $S_{ic}^{F,\alpha_{ic}}$, we get

$$S_{ic}^{F,\alpha_{ic}} = \mu_3 A_{ic,2}^{\frac{1}{\mu_1}} - \Gamma,$$

where $\mu_3 = \beta_L^{\frac{2\beta_L}{\mu_1}}(1-\beta_L)^{\frac{1-\beta_L}{\mu_1}}\beta_I^{\frac{\beta_I}{\mu_1}}(1-\beta_I)\phi^{\frac{1}{\mu_1}}p^{\frac{-\beta_L}{\mu_1}}$ and $\mu_1 = 1-\beta_I-\beta_L$. Note that in this case $S_{ic}^{F,\alpha_{ic}} = 0$ when $A_{ic,2} = \frac{\Gamma}{\mu_3}$. Taking the derivatives with respect to $A_{ic,2}$ and l_{ic}, we have

$$\frac{\partial S_{ic}^{F,\alpha_{ic}}}{\partial A_{ic,2}} = \frac{\mu_3}{\mu_1}A_{ic,2}^{\frac{1-\mu_1}{\mu_1}},$$

and

$$\frac{\partial S_{ic}^{F,\alpha_{ic}}}{\partial l_{ic}} = 0.$$

Lemma 1 *When $G(\zeta) > 0$, i.e., PC does not bind, the foreign ownership share in the case of partial acquisitions is determined by non-financial factors and $\alpha_{ic} = \frac{1-\beta_L}{1-\kappa}$. The differential payoff from a full versus partial acquisition, given by the function $S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}} = \mu_0 A_{ic,2}^{\frac{1}{\mu_1}}\omega_c{}^{-\frac{\beta_L}{\mu_1}} - \mu_0^{'} A_{ic,2}^{\frac{1}{\mu_2}} l_{ic}{}^{\frac{1}{\mu_2}} + l_{ic} - \mu_3 A_{ic,2}^{\frac{1}{\mu_1}} = 0$, is positively sloped and concave on the $(l_{ic}, A_{ic,2})$ plane as long as the profit from a full acquisition declines in the liquidity of the representative target firm ($\frac{\partial S_{ic}^{F,1}}{\partial l_{ic}} < 0$) and increases in the productivity of the representative target firm increases profits from a full acquisition faster than that from a partial acquisition ($\frac{\partial S_{ic}^{F,1}}{\partial A_{ic,2}} > \frac{\partial S_{ic}^{F,\alpha_{ic}}}{\partial A_{ic,2}}$).*

Proof: For the first part of the statement see prior discussion. Then using the implicit function theorem and our earlier results on the partial derivatives of $S_{ic}^{F,1}$ and $S_{ic}^{F,\alpha_{ic}}$, the slope of the $S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}} = 0$ line on the $(l_{ic}, A_{ic,2})$ plane is given by

$$\frac{dA_{ic,2}}{dl_{ic}}\Big|_{S_{ic}^{F,1}-S_{ic}^{F,\alpha_{ic}}=0} = -\frac{\frac{\partial S_{ic}^{F,1}}{\partial l_{ic}} - \frac{\partial S_{ic}^{F,\alpha_{ic}}}{\partial l_{ic}}}{\frac{\partial S_{ic}^{F,1}}{\partial A_{ic,2}} - \frac{\partial S_{ic}^{F,\alpha_{ic}}}{\partial A_{ic,2}}} = -\frac{1 - \frac{\mu_0^{'}}{\mu_2}A_{ic,2}^{\frac{1}{\mu_2}} l_{ic}{}^{\frac{1-\mu_2}{\mu_2}}}{\frac{A_{ic,2}^{\frac{1-\mu_1}{\mu_1}}}{\mu_1}(\mu_0\omega_c{}^{-\frac{\beta_L}{\mu_1}} - \mu_3) - \frac{\mu_0^{'}}{\mu_2}A_{ic,2}^{\frac{1-\mu_2}{\mu_2}} l_{ic}{}^{\frac{1}{\mu_2}}} > 0.$$

Differentiating w.r.t. l_{ic} we get

$$\frac{d^2 A_{ic,2}}{dl_{ic}^2}\Big|_{S_{ic}^{F,1}-S_{ic}^{F,\alpha_{ic}}=0} = \frac{\frac{\mu_0^{'}}{\mu_2^2}A_{ic,2}^{\frac{1}{\mu_2}} l_{ic}{}^{\frac{1-2\mu_2}{\mu_2}}(1-\mu_2 + \frac{dA_{ic,2}}{dl_{ic}}\frac{l_{ic}}{A_{ic,2}})}{\frac{A_{ic,2}^{\frac{1-\mu_1}{\mu_1}}}{\mu_1}(\mu_0\omega_c{}^{-\frac{\beta_L}{\mu_1}} - \mu_3) - \frac{\mu_0^{'}}{\mu_2}A_{ic,2}^{\frac{1-\mu_2}{\mu_2}} l_{ic}{}^{\frac{1}{\mu_2}}} < 0,$$

i.e., the function is concave. The sufficient conditions mentioned above hold for positive values of $A_{ic,2}$ and l_{ic} whenever $S_{ic}^{F,1} \geq 0$ and/or $S_{ic}^{F,\alpha_{ic}} \geq 0$. ■

`Case 2 (binding constraint):` When the constraint binds the optimal ζ solves $\mathbb{G}(\zeta) = 0$. Note that $\lambda = -\frac{\mathbb{F}_\zeta}{\mathbb{G}_\zeta} > 0$ as long as at the relevant ζ, $\mathbb{F}_\zeta < 0$ (which is true upon inspection of $\mathbb{F}_\zeta$ for $\zeta > \beta_L$) and $\mathbb{G}_\zeta > 0$ (which is true upon inspection of $\mathbb{G}_\zeta$ for $\zeta < 1 - \beta_I$).

Lemma 2 *When $G(\zeta) = 0$, i.e., PC binds, the foreign ownership share in the case of partial acquisitions is determined by financial factors. In particular, the optimal equity share of the foreign acquirer declines in both $\pi_{i,1}$ and τ_c, and is not affected by ω_c.*

Proof: $\mathbb{G}(\zeta) = 0 \Rightarrow \mathbb{G}_{\pi_{i,1}}\mathrm{d}\pi_{i,1} + \mathbb{G}_\zeta \mathrm{d}\zeta + \mathbb{G}_{V_{ic}^{D,0}}\mathrm{d}V_{ic}^{D,0} = 0 \Rightarrow \mathbb{G}_{\pi_{i,1}}\mathrm{d}\pi_{i,1} + \mathbb{G}_\zeta\mathrm{d}\zeta - \frac{dV_{ic}^{D,0}}{d\pi_{i,1}}\mathrm{d}\pi_{i,1} = 0 \Rightarrow$ $(\mathbb{G}_{\pi_{i,1}} - \frac{dV_{ic}^{D,0}}{d\pi_{i,1}})\mathrm{d}\pi_{i,1} + \mathbb{G}_\zeta\mathrm{d}\zeta = 0 \Rightarrow \frac{\mathrm{d}\zeta}{\mathrm{d}\pi_{i,1}} = -\frac{(\mathbb{G}_{\pi_{i,1}} - \frac{dV_{ic}^{D,0}}{d\pi_{i,1}})}{\mathbb{G}_\zeta} > 0$, since $\mathbb{G}_{\pi_{i,1}} = 1$ and $\frac{dV_{ic}^{D,0}}{d\pi_{i,1}} > 1$ (the latter was shown earlier when establishing the properties of $V_{ic}^{D,0}$). Thus, $\frac{\mathrm{d}\alpha}{d\pi_{i,1}} = \frac{\mathrm{d}\zeta}{d\pi_{i,1}}\frac{\mathrm{d}\alpha}{\mathrm{d}\zeta} < 0$, since $\frac{\mathrm{d}\alpha}{\mathrm{d}\zeta} = \frac{1}{\kappa-1} < 0$. In words, the optimal equity share of the foreign acquirer declines in first period profit $\pi_{i,1}$ of the domestic firm in the case that the participation constraint binds.

Similarly, $\mathbb{G}(\zeta) = 0 \Rightarrow \mathbb{G}_{\tau_c}\mathrm{d}\tau_c + \mathbb{G}_\zeta\mathrm{d}\zeta + \mathbb{G}_{V_{ic}^{D,0}}\mathrm{d}V_{ic}^{D,0} = 0 \mathbb{G}_{\tau_c}\mathrm{d}\tau_c + \mathbb{G}_\zeta\mathrm{d}\zeta - \frac{dV_{ic}^{D,0}}{d\tau_c}\mathrm{d}\tau_c = 0 \Rightarrow$ $\mathbb{G}_\zeta\mathrm{d}\zeta - \frac{dV_{ic}^{D,0}}{d\tau_c}\mathrm{d}\tau_c = 0 \Rightarrow \frac{\mathrm{d}\zeta}{\mathrm{d}\tau_c} = -\frac{-\frac{dV_{ic}^{D,0}}{d\tau_c}}{\mathbb{G}_\zeta} > 0$, since $\mathbb{G}_{\tau_c} = 0$ and $\frac{dV_{ic}^{D,0}}{d\tau_c} > 0$ (the latter was shown earlier). Thus, $\frac{\mathrm{d}\alpha}{d\tau_c} = \frac{\mathrm{d}\zeta}{d\tau_c}\frac{\mathrm{d}\alpha}{\mathrm{d}\zeta} < 0$. Thus the optimal equity share of the foreign acquirer declines in domestic financial development τ_c.

ω_c does not feature in the partial acquisition problem and hence does not influence the ownership structure. ■

Lemma 3 *The $S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}} = 0$ line shifts down in the $(l_{ic}, A_{ic,2})$ plane when ω_c increases with $\frac{d^2A_{ic,2}}{d\omega_c dl_{ic}}|_{S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}} = 0} > 0$.*

Proof: It is clear from the preceding analysis that $S_{ic}^{F,\alpha_{ic}}$ does not involve ω_c. Hence,

$$\frac{\partial(S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}})}{\partial\omega_c} = \frac{\partial S_{ic}^{F,1}}{\partial\omega_c} = \frac{\partial V_{ic}^{F,1}}{\partial\omega_c} = -\beta_L\big(\phi A_{ic,2}p^{-\beta_L}\beta_I^{\beta_I}\beta_L^{\beta_L}\omega_c^{-(1-\beta_I)}\big)^{\frac{1}{1-\beta_I-\beta_L}} < 0,$$

which together with either of the (jointly) sufficient conditions mentioned earlier ($\frac{\partial S_{ic}^{F,1}}{\partial l_{ic}} < 0$ and $\frac{\partial S_{ic}^{F,1}}{\partial A_{ic,2}} > \frac{\partial S_{ic}^{F,\alpha_{ic}}}{\partial A_{ic,2}}$) implies that the $S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}} = 0$ line shifts down in the $(l_{ic}, A_{ic,2})$ plane when ω_c increases. Taking the derivative of

$$\frac{dA_{ic,2}}{dl_{ic}}|_{S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}} = 0} = -\frac{1 - \frac{\mu_0'}{\mu_2}A_{ic,2}^{\frac{1}{\mu_2}}l_{ic}^{\frac{1-\mu_2}{\mu_2}}}{\frac{A_{ic,2}^{\frac{1-\mu_1}{\mu_1}}}{\mu_1}(\mu_0\omega_c^{-\frac{\beta_L}{\mu_1}} - \mu_3) - \frac{\mu_0'}{\mu_2}A_{ic,2}^{\frac{1-\mu_2}{\mu_2}}l_{ic}^{\frac{1}{\mu_2}}}$$

w.r.t. ω_c we have

$$\frac{d}{d\omega_c}\frac{dA_{ic,2}}{dl_{ic}}|_{S_{ic}^{F,1} - S_{ic}^{F,\alpha_{ic}} = 0} = -\frac{\Big(1 - \frac{\mu_0'}{\mu_2}A_{ic,2}^{\frac{1}{\mu_2}}l_{ic}^{\frac{1-\mu_2}{\mu_2}}\Big)A_{ic,2}^{\frac{1-\mu_1}{\mu_1}}\frac{\mu_0\beta_L}{\mu_1^2}\omega_c^{-(1+\frac{\beta_L}{\mu_1})}}{\Big(\frac{A_{ic,2}^{\frac{1-\mu_1}{\mu_1}}}{\mu_1}(\mu_0\omega_c^{-\frac{\beta_L}{\mu_1}} - \mu_3) - \frac{\mu_0'}{\mu_2}A_{ic,2}^{\frac{1-\mu_2}{\mu_2}}l_{ic}^{\frac{1}{\mu_2}}\Big)^2} > 0$$

since $\frac{\partial S_{ic}^{F,1}}{\partial l_{ic}} = 1 - \frac{\mu_0'}{\mu_2}A_{ic,2}^{\frac{1}{\mu_2}}l_{ic}^{\frac{1-\mu_2}{\mu_2}} < 0$ by assumption. ■

We now clarify some terms that we use in our comparative static exercises.

Definition 1 *(i) For any two sectors i and i' in the same country, sector i is more external finance dependent than i' if $\pi_{i,1} < \pi_{i',1}$.*
(ii) For any two sector-country pair ic and $i'c'$, sector-country ic is more productive than $i'c'$ if $A_{ic,2} > A_{i'c',2}$.
(iii) For any two countries c and c', country c is less financially developed than c' if $\tau_c < \tau_{c'}$.
(iv) For any two countries c and c', procuring the local input in country c' is more difficult than in c if $\omega_{c'} > \omega_c$.

Using Lemmas 1, 2, and 3 we will now prove the following proposition.

Proposition 1 ***Probability of Full Foreign Acquisition versus Partial Acquisition***
Let N^1_{ic} be the proportion of full foreign acquisitions in all foreign acquisitions in sector i of country c.
(i) ***External finance dependence increases probability****: For any two sectors i and i' in the same country, if $\pi_{i,1} < \pi_{i',1}$ then $N^1_{ic} > N^1_{i'c}$.*
(ii) ***Productivity increases probability****: For any two sector-country pairs ic and $i'c'$, if $A_{ic,2} > A_{i'c',2}$ then $N^1_{ic} > N^1_{i'c'}$.*
(iii) ***Financial development lowers probability****: For any sector in two countries c and c', if $\tau_c < \tau_{c'}$ then $N^1_{ic} > N^1_{ic'}$.*
(iv) ***Lower input price markup increases probability****: For any sector in two countries c and c', if $\omega_c < \omega_{c'}$ then $N^1_{ic} > N^1_{ic'}$.*
(v) ***Financial development lowers probability more in external finance dependent sectors****: For different sectors i and i' in two countries c and c', if $\tau_c < \tau_{c'}$ and $\pi_{i,1} < \pi_{i',1}$ then $N^1_{ic} - N^1_{ic'} > N^1_{i'c} - N^1_{i'c'}$.*
(vi) ***Lower local input price markup increases probability more in external finance dependent sectors****: For different sectors i and i' in two countries c and c', if $\omega_c < \omega_{c'}$ and $\pi_{i,1} < \pi_{i',1}$ then $N^1_{ic} - N^1_{ic'} > N^1_{i'c} - N^1_{i'c'}$.*

Proof: Let H_{ic} and G_i denote the c.d.f.s for productivity $A_{ic,2}$ and first period profit $\pi_{i,1}$ across sectors identified by subscript i and countries identified by subscript c. We assume that H_{ic} and G_i and independent, and suppress the sector and country subscripts whenever convenient.

(i) For two industries i and i', with $\pi_{i,1} < \pi_{i',1}$, we have $l_{ic} < l_{i'c}$. Let $\bar{A}_{ic,2}$ and $\bar{A}_{i'c,2}$ be corresponding $A_{ic,2}$ such that $S^{F,1}_{ic} - S^{F,\alpha_{ic}}_{ic} = 0$. From Lemma 1, $\bar{A}_{ic,2} < \bar{A}_{i'c,2}$. Then $N^1_{ic} - N^1_{i'c} = \int_{\underline{A}}^{\bar{A}_{ic,2}} dH - \int_{\underline{A}}^{\bar{A}_{i'c,2}} dH < 0$.

(ii) For two sector-country pairs ic and $i'c'$, with $A_{ic,2} > A_{i'c',2}$ we have $\bar{l}_{ic} > \bar{l}_{i'c'}$ from Lemma 1, where these are corresponding l_{ic} such that $S^{F,1}_{ic} - S^{F,\alpha_{ic}}_{ic} = 0$. Then $N^1_{ic} - N^1_{i'c'} = \int_{\underline{l}}^{\bar{l}_{ic}} dG - \int_{\underline{l}}^{\bar{l}_{i'c'}} dG > 0$.

(iii) For two countries c and c', with $\tau_c < \tau_{c'}$, we have $l_{ic} < l_{ic'}$. Let $\bar{A}_{ic,2}$ and $\bar{A}_{ic',2}$ be corresponding $A_{ic,2}$ such that $S^{F,1}_{ic} - S^{F,\alpha_{ic}}_{ic} = 0$. From Lemma 1, $\bar{A}_{ic,2} < \bar{A}_{ic',2}$. Then $N^1_{ic} - N^1_{ic'} = \int_{\underline{A}}^{\bar{A}_{ic,2}} dH - \int_{\underline{A}}^{\bar{A}_{ic',2}} dH < 0$.

(iv) For the same sector in two countries c and c' with $\omega_c < \omega_{c'}$ (c has a lower input price markup than c'), Lemma 3 shows that $\bar{l_{ic}}(A_{ic,2}, \omega_c) > \bar{l_{ic'}}(A_{ic,2}, \omega_{c'})\ \forall\ A_{ic,2}$. We then have:

$$\int_{\underline{l}}^{\bar{l}_{ic}} dG - \int_{\underline{l}}^{\bar{l}_{ic'}} dG = G(\bar{l_{ic}}) - G(\bar{l_{ic'}}) > 0\ \ \forall\ \ A_{ic,2}.$$

Since integrating over all values of $A_{ic,2}$ preserves the inequality, we have the mass of full foreign acquisitions in country c compared to country c' as $N^1_{ic} - N^1_{ic'} = \int G(\bar{l_{ic}})\, dH - \int G(\bar{l_{ic'}})\, dH \geq 0$, since $G(\bar{l_{ic}}) \geq G(\bar{l_{ic'}})\ \forall\ A_{ic,2}$.

(v) Consider different sectors i and i' in two countries c and c' with $\tau_c < \tau_{c'}$ and $\pi_{i,1} < \pi_{i',1}$. We have to show that $N^1_{ic} - N^1_{ic'} > N^1_{i'c} - N^1_{i'c'}$. Following the same notation as in (iii) $N^1_{ic} - N^1_{ic'} > N^1_{i'c} - N^1_{i'c'} \Leftrightarrow \int_{\underline{A}}^{\bar{A}_{ic,2}} dH - \int_{\underline{A}}^{\bar{A}_{ic',2}} dH > \int_{\underline{A}}^{\bar{A}_{i'c,2}} dH - \int_{\underline{A}}^{\bar{A}_{i'c',2}} dH \Leftrightarrow \bar{A}_{ic,2} - \bar{A}_{ic',2} > \bar{A}_{i'c,2} - \bar{A}_{i'c',2}$. It will suffice to show that $\frac{d\bar{A}_{ic,2}}{d\tau_c}|_{\pi_{i,1}} > \frac{d\bar{A}_{ic,2}}{d\tau_c}|_{\pi_{i',1}}$, or $\frac{d^2 A_{ic,2}}{dl^2_{ic}}|_{S^{F,1}_{ic} - S^{F,\alpha_{ic}}_{ic} = 0} < 0$. The last inequality was shown in Lemma 1.

(vi) Consider different sectors i and i' in two countries c and c' with $\omega_c < \omega_{c'}$ and $\pi_{i,1} < \pi_{i',1}$.We have to show that $N^1_{ic} - N^1_{ic'} > N^1_{i'c} - N^1_{i'c'}$. Following the same notation as before, $N^1_{ic} - N^1_{ic'} > N^1_{i'c} - N^1_{i'c'} \Leftrightarrow \int_{\underline{A}}^{\bar{A}_{ic,2}} dH - \int_{\underline{A}}^{\bar{A}_{ic',2}} dH > \int_{\underline{A}}^{\bar{A}_{i'c,2}} dH - \int_{\underline{A}}^{\bar{A}_{i'c',2}} dH \Leftrightarrow \bar{A}_{ic,2} - \bar{A}_{ic',2} > \bar{A}_{i'c,2} - \bar{A}_{i'c',2}$. It will suffice to show that $\frac{d\bar{A}_{ic,2}}{d\omega_c}|_{\pi_{i,1}} > \frac{d\bar{A}_{ic,2}}{d\omega_c}|_{\pi_{i',1}}$, or $\frac{d^2 A_{ic,2}}{d\omega_c dl_{ic}}|_{S^{F,1}_{ic} - S^{F,\alpha_{ic}}_{ic} = 0} > 0$. The last inequality was shown in Lemma 3. ■

Proposition 2 ***Ownership Structure in Partial Acquisition***

(i) ***External finance dependence weakly increases ownership stakes****: For any two sectors i and i' in the same country c, if $\pi_{i,1} < \pi_{i',1}$ then $\bar{\alpha}_{ic} \geq \bar{\alpha}_{i'c}$.*

(ii) ***Financial development weakly lowers ownership stakes****: For any sector in two countries c and c', if $\tau_c < \tau_{c'}$ then $\bar{\alpha}_c \geq \bar{\alpha}_{c'}$.*

(iii) ***Lower input price markup has no effect on ownership stakes****: For any sector in two countries c and c', if $\omega_c < \omega_{c'}$ then $\bar{\alpha}_c = \bar{\alpha}_{c'}$.*

Proof: All parts (i)-(iii) follow immediately from the fact that conditional on partial ownership being optimal, $\bar{\alpha}_{ic}$ is an average across sectors which fall under either Case 1 or Case 2 of the solution to the partial ownership problem. In Case 1, $\alpha_{ic} = \frac{1-\beta_L}{1-\kappa}$ does not depend on financial factors. Case 2 is governed by Lemma 2. Thus statements (i)-(iii) about $\bar{\alpha}_{ic}$ follow immediately. ■

Proposition 3 ***Probability of Foreign Acquisitions***

Let N_{ic} be the probability of foreign acquisitions in sector i of country c.

(i) ***External finance dependence increases probability****: For any two sectors i and i' in the same country c, if $\pi_{i,1} < \pi_{i',1}$ then $N_{ic} > N_{i'c}$.*

(ii) ***Financial development lowers probability****: For any sector i in two countries c and c', if $\tau_c < \tau_{c'}$ then $N_{ic} > N_{ic'}$.*

(iii) ***Productivity increases probability****: For any two sector-country pairs* ic *and* $i'c'$*, if* $A_{ic,2} > A_{i'c',2}$ *then* $N_{ic} > N_{i'c'}$*.*

(iv) ***Lower input price markup increases probability****: For any sector* i *in two countries* c *and* c'*, if* $\omega_c < \omega_{c'}$ *then* $N_{ic} > N_{ic'}$*.*

(v) ***Financial development lowers probability more in external finance dependent sectors****: For different sectors* i *and* i' *in two countries* c *and* c'*, if* $\tau_c < \tau_{c'}$ *and* $\pi_{i,1} < \pi_{i',1}$ *then* $N_{ic} - N_{ic'} > N_{i'c} - N_{i'c'}$*.*

(vi) ***Lower local input price markup increases probability more in external finance dependent sectors****: For different sectors* i *and* i' *in two countries* c *and* c'*, if* $\omega_c < \omega_{c'}$ *and* $\pi_{i,1} < \pi_{i',1}$ *then* $N_{ic} - N_{ic'} > N_{i'c} - N_{i'c'}$*.*

Proof: Note for all parts of the proof that the foreign acquisitions are either full or partial. Partial acquisitions are insensitive to target liquidity as shown before. Thus the probability of foreign acquisitions overall inherits all the properties of the probability of full acquisitions. Thus (i)-(vi) follow from steps very similar to the proof of Proposition 1. ■

2 Data and descriptive statistics

2.1 Additional data description

Mergers and acquisitions. Our M&A data come from the Securities Data Company (SDC) Thompson's International Mergers and Acquisitions database.[5] This dataset reports all public and private M&A transactions involving at least a 5% ownership stake in the target company. We focus on the acquisitions taking place between 1990 and 1997 in the manufacturing sector (SIC codes 2000-4000), in the following fifteen emerging-market economies: Argentina, Brazil, Chile, China, India, Indonesia, Malaysia, Mexico, Peru, Philippines, Singapore, South Africa, South Korea, Thailand, and Vietnam. The information about the transactions is obtained from a variety of news sources, regulatory agencies, trade publications, and surveys.

For each merger or acquisition transaction, we utilize only the following variables for our analysis: the share of a firm acquired in an acquisition, the share of a firm owned after an acquisition (different from the previous variable if a prior stake was owned by the same acquirer), the names of the acquirer and target firms involved, both their primary four-digit SIC industry classifications, the country of the acquirer and target firm, and the date on which the transaction was completed (thereby pre-selecting the sample to deals that were actually completed, eliminating those that were announced but never completed). We drop transactions that are missing any of these variables except for the share of a firm owned after an acquisition (which we use only to perform the cross-checks below but not in our baseline regressions). Of note, our baseline results use data aggregated up to the industry-country-year level and thus are not sensitive to issues regarding precise acquisition dates (an issue in event studies) and identities of target and acquiring firms (an issue in studies about divestitures). Our main concern is regarding duplication of transactions. Hence we clean the SDC data using the following steps:

(i) We drop observations that are exact duplicates, i.e. those with the same name for the target and acquirer, date, and fraction acquired and owned after being very close each other (+/-0.001).

(ii) If for transactions that are duplicates in terms of name for the target and acquirer, and date, the sum of duplicates' fraction acquired is equal to one of the duplicates' fraction owned after, then we use the sum as the unique fraction acquired and drop the duplicates. This could happen, for example, when an acquiring firm completes a 50% acquisition by buying 25% each from two prior minority owners.

(iii) If in the cases above, the sum of stake acquired exceeds 1 by a small amount (0.01), we replace the fraction acquired by 1. If it exceeds 1 by greater than 0.01 we drop the transaction.

(iv) On the remaining transactions we performed the following manual check. We sorted all transactions by the target's country and date. For transactions within +/- 15 days of each other we searched for the individual parts of the target firm name (e.g., for a target firm named Telefonica de Argentina SA, we searched for Telefonica and Argentina). In some cases, we found the same exact target firm with a separate transaction within +/- 15 days; in some other cases we discovered minor errors where the firm appeared again, but a small part of the name had been dropped, for example the SA. In both these cases we treated this transaction as a duplicate

[5] https://financial.thomsonreuters.com/en/products/data-analytics/market-data/sdc-platinum-financial-securities.html.

in terms of target name and date, and followed steps (iii) and (iv). If the acquirer was different in the duplicate transaction, this was treated as a distinct transaction.

Industry-specific variables. The data comes from Rajan and Zingales (1998), and is defined as the ratio of capital expenditures minus cash flow from operations to capital expenditures. This ratio is calculated for each industry using U.S. data from the 1980s. In section 5.3 we use the additional following industry-level controls: the capital-to-labor ratio and the research and development (R&D) expenditures as a fraction of sales, both Antràs (2003); the measure of upstreamness of industries computed by Chor et al. (2012).

Country-specific variables. Our baseline measure of financial development is the private credit-to-GDP ratio from the World Bank's Global Financial Development Database[6]. Our baseline measure of institutional quality is the the index of *control-of-corruption*, from the WGI ("Worldwide Governance Indicators") dataset (Kaufmann, Kraay, and Mastruzzi, 2013). In our robustness exercises of Table A.15 we use alternative indicators: the perception of corruption index from Transparency International; an indicator of the quality of government from the International Country Risk Guide (2013); and an indicator of Business Freedom from the World Bank's Doing Business database. All these series have been downloaded from the 2013 version of the Quality of Government Basic Database.[7] Finally, we use as control variables the change in the nominal exchange rate (quarterly), the use of IMF credit and loans as a percentage of a country's quota (quarterly), real GDP per capita (annual), and real GDP growth (annual). The data are from the Penn World Tables, the IMF's *International Financial Statistics*, Taiwan's National Statistical Office, and the Central Bank of the Republic of China.

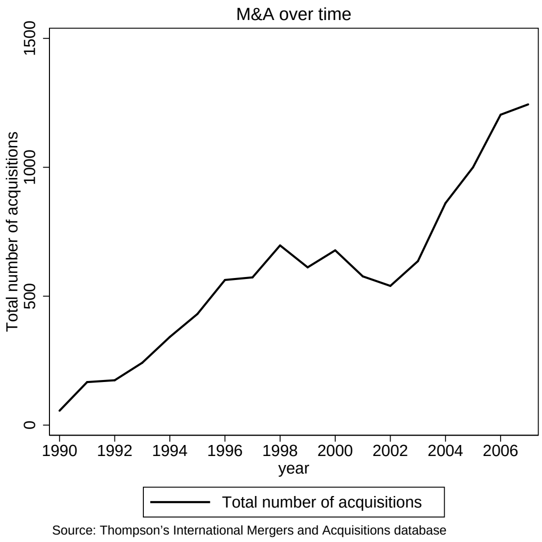
Sector-country data. In all estimations we control for the level of productivity of the target industry-country relative to that of the US. The data come from Levchenko and Zhang (2011). In section 5.3 we additionally control for measure of market potential, at the country and industry level, from Mayer (2008)[8], and for average applied tariffs at the target country and two-digit SIC industry level; these are obtained from the World Bank's *World Integrated Trade Solution* database.[9]

2.2 Additional descriptive evidence

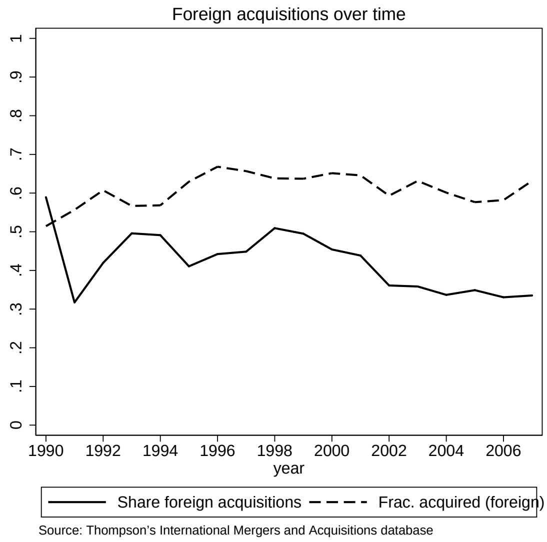
This section contains additional statistics about our M&A data. Figure A.1 the evolution of acquisitions — and of their size — over time. In Table A.1 we split the transaction by 5-year period and country of origin of the target firm. Table A.2 and A.3 split the transactions by region of origin and by sector of the acquirers. Finally, Table A.4 shows the distribution of the fraction acquired for both foreign and domestic acquisitions.

[6] http://data.worldbank.org/data-catalog/global-financial-development.
[7] http://qog.pol.gu.se/data/datadownloads/qogbasicdata.
[8] http://www.cepii.fr/cepii/fr/bdd_modele/presentation.asp?id=9.
[9] These data are available at the following web address: http://wits.worldbank.org/.

Figure A.1: Acquisitions by over time



(a) Total number of acquisitions



(b) Foreign acquisitions

Table A.1: Transactions by Country Origin of Target, over time

		No. of Transactions					Share of Foreign Acquirers			
		1990-94	1995-99	2000-04	2005-07	Total	1990-94	1995-99	2000-04	2005-07
Latin America										
	Argentina	67	256	154	57	534	0.70	0.63	0.52	0.63
	Brazil	107	415	318	90	930	0.42	0.59	0.49	0.43
	Chile	23	71	58	34	186	0.78	0.69	0.47	0.59
	Mexico	151	205	190	91	637	0.60	0.65	0.61	0.74
	Peru	12	47	21	14	94	0.33	0.60	0.24	0.57
	Total	360	994	741	286	2,381	0.57	0.62	0.52	0.59
Asia										
	China	86	346	1,021	990	2,443	0.69	0.52	0.40	0.42
	India	50	33	118	754	955	0.58	0.27	0.32	0.29
	Indonesia	35	84	100	51	270	0.49	0.62	0.60	0.49
	Malaysia	122	417	464	446	1,449	0.19	0.15	0.14	0.18
	Philippines	14	79	63	36	192	0.71	0.53	0.43	0.39
	Singapore	131	224	114	203	672	0.39	0.33	0.33	0.41
	South Korea	30	156	304	458	948	0.47	0.62	0.35	0.12
	Thailand	43	141	191	130	505	0.49	0.57	0.36	0.38
	Vietnam	6	14	26	21	67	0.33	0.79	0.77	0.62
	Total	517	1,494	2,401	3,089	7,501	0.44	0.41	0.34	0.31
South Africa		104	388	150	73	715	0.15	0.30	0.41	0.51
All Countries		981	2,876	3,292	3,448	10,597	0.46	0.46	0.39	0.34

Notes: The data are from SDC Thompson, as described in the text. The table reports the total number of domestic and foreign transactions and the share of foreign transactions by the country origin of the target.

Table A.2: Acquisitions by country of acquirer

Sample	# transactions	Share foreign	Share full	Share acquired	Share acquired
	All		Foreign acquisitions		Foreign partial acq.
United States	1163	1.00	0.53	0.70	0.36
Europe	1322	1.00	0.39	0.64	0.40
Asia	6178	0.21	0.24	0.52	0.37
Australia, Canada, New Zealand	213	1.00	0.47	0.71	0.45
Latin America	1155	0.13	0.45	0.68	0.42
Other	566	0.15	0.14	0.35	0.24
All countries	10597	0.40	0.39	0.62	0.38

Source: Authors' computation from Thompson's International Mergers and Acquisitions database. # transactions is the total number of transactions (domestic and foreign). Share foreign is the share of transactions with a foreign acquirer. Share full is the share of full acquisitions (100% stake) in total number of foreign acquisitions. Share acquired is the average share acquired among foreign acquisitions or foreign partial acquisitions (last column).

Table A.3: Acquisitions by sector of the acquirer

		# transactions	Share foreign	Share full	Share acquired	Share acquired
Sample		All		Foreign acquisitions		Foreign partial acq.
SIC	Industry					
0	Agriculture. Forestry. and Fishing	121	0.31	0.43	0.66	0.41
1	Mining and Construction	227	0.35	0.38	0.61	0.37
2	Manufacturing (food.textiles petroleum)	3211	0.44	0.45	0.69	0.43
3	Manufacturing (rubber. electronics)	3383	0.48	0.39	0.63	0.40
4	Transport and Communications	207	0.33	0.41	0.62	0.36
5	Wholesale and Retail	381	0.40	0.34	0.57	0.35
6	Finance. Insurance. and Real Estate	2692	0.27	0.23	0.45	0.28
7	Services (hotels. amusement)	234	0.34	0.49	0.73	0.47
8	Services (education. legal. other)	136	0.38	0.45	0.69	0.44
9	Public Administration	5	0.00	-	-	-
	All industries	10597	0.40	0.39	0.62	0.38

Source: Authors' computation from Thompson's International Mergers and Acquisitions database. # transactions is the total number of transactions (domestic and foreign). Share foreign is the share of transactions with a foreign acquirer. Share full is the share of full acquisitions (100% stake) in total number of foreign acquisitions. Share acquired is the average share acquired among foreign acquisitions or foreign partial acquisitions (last column).

Table A.4: Distribution of Fractions Acquired in Manufacturing Acquisitions

	Domestic		Foreign		
Share	Freq.	Percent	Freq.	Percent	Total
$\leq$ 10%	695	10.9%	336	7.9%	1,031
10 – 20%	696	10.9%	354	8.4%	1,050
20 – 30%	586	9.2%	369	8.7%	955
30 – 40%	394	6.2%	268	6.3%	662
40 – 50%	383	6.0%	293	6.9%	676
50 – 60%	533	8.4%	505	11.9%	1,038
60 – 70%	343	5.4%	220	5.2%	563
70 – 80%	138	2.2%	89	2.1%	227
80 – 90%	153	2.4%	105	2.5%	258
90 – 100%	111	1.7%	58	1.4%	169
100%	2,339	36.7%	1,629	38.6%	3,968
Total	6,371	100.0%	4,226	100.0%	10,597
Share $\geq$ 10%	5,676	89.1%	3,890	91.0%	9,566
Share $\geq$ 50%	3,617	56.8%	2,606	61.7%	6,223

Source: Authors' computation from Thompson's International Mergers and Acquisitions database.

3 Descriptive statistics – transaction-level

Table A.5 below contains descriptive statistics about our sample before we aggregate the data by target country and industry. The estimations that use this version of the data are reported in the next section.

Table A.5: Sample statistics (transaction level)

	Obs.	Mean	S.D.	Q1	Median	Q3
Foreign acquisition	10591	0.40	0.49	0.00	0.00	1.00
Full acquisition (all)	10591	0.37	0.48	0.00	0.00	1.00
Full acquisition (foreign)	4224	0.39	0.49	0.00	0.00	1.00
Full acquisition (domestic)	6367	0.37	0.48	0.00	0.00	1.00
Fraction acquired (all)	10591	0.60	0.36	0.25	0.55	1.00
Fraction acquired (foreign)	4224	0.62	0.36	0.30	0.58	1.00
Fraction acquired (foreign. partial acq.)	2595	0.38	0.24	0.18	0.37	0.51
Fraction acquired (domestic)	6367	0.59	0.37	0.23	0.55	1.00
Fraction acquired (domestic. partial acq.)	4030	0.35	0.25	0.13	0.30	0.51
External finance dependence	10591	0.27	0.19	0.15	0.21	0.45
Private credit / GDP (average)	10591	0.73	0.36	0.33	0.95	1.10
Anti-corruption index (average)	10591	0.06	0.71	-0.46	-0.20	0.36
GDP per capita	9643	9414	7732	4760	8255	11358
Real GDP growth	9643	6.96	6.88	2.99	7.79	11.03
Technology relative to US	8948	0.04	0.11	0.00	0.00	0.02

Source: Authors' computation from Thompson's International Mergers and Acquisitions database, World Bank, IMF and Rajan and Zingales (1998). Foreign acquisition is a dummy which equals 1 for foreign acquisitions. Full acquisition is a dummy which equals 1 for 100% acquisitions. Anti-corruption index comes from the World Bank Governance Indicators and is a measure of perceptions of corruption. Technology relative to the US is from Levchenko and Zhang (2011).

4 Additional results

4.1 Transaction level results

Table A.6: Determinants of the probability of full foreign acquisitions: transaction-level

	(1)	(2)	(3)	(4)	(5)
Dep. var.	Full foreign Acquisition dummy				
Test of	—– Hypothesis 1.a —–			– Hypothesis 1.b –	
External dependence	0.166^a				
	(0.063)				
Average fin. dev.		-0.104^a	-0.135^a		
		(0.038)	(0.038)		
Control of corruption index			0.075^c		
			(0.042)		
External dep. × average fin. dev.				-0.218	-0.331^b
				(0.137)	(0.131)
External dep. × control of corruption					0.377^a
					(0.096)
Tech. relative to US.	0.064	0.025	0.004	0.026	0.067
	(0.108)	(0.145)	(0.129)	(0.109)	(0.119)
Observations	3963	3963	3963	3963	3963
R^2	0.150	0.065	0.068	0.164	0.167
Macroeconomic controls	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	No	No
Target sector FE	No	Yes	Yes	Yes	Yes
Target country × Year FE	Yes	No	No	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. Standard errors clustered by target country × target industry. Estimations at the transaction × year level. These estimations are restricted to the sample of foreign acquisitions. External dependence target is the level of external finance dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

Table A.7: Determinants of the size of partial foreign stake: transaction-level

	(1)	(2)	(3)	(4)	(5)
Dep. var.	Size of foreign stake (only partial acquisitions)				
Test of	—— Hypothesis 2 ——				
External dependence	0.049^b				
	(0.024)				
Average fin. dev.		-0.017	-0.003		
		(0.019)	(0.022)		
Control of corruption index			-0.043^b		
			(0.020)		
External dep. × average fin. dev.				-0.015	-0.007
				(0.070)	(0.073)
External dep. × control of corruption					-0.035
					(0.062)
Tech. relative to US	-0.057	0.003	0.013	-0.060	-0.063
	(0.051)	(0.044)	(0.045)	(0.056)	(0.057)
Observations	2435	2435	2435	2435	2435
R^2	0.153	0.054	0.057	0.174	0.174
Macroeconomic controls	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	No	No
Target sector FE	No	Yes	Yes	Yes	Yes
Target country × Year FE	Yes	No	No	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. Standard errors clustered by target country × target industry. Estimations at the transaction × year level. These estimations are restricted to the sample of partial foreign acquisitions. External dependence target is the level of external finance dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

4.2 Full baseline results

This section reports specification akin to our baseline ones (sections 4.4 and 4.5 in the main text), with less restrictive combinations of fixed effects.

Table A.8: Determinants of full foreign acquisitions: extended baseline results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.	Full foreign Acquisition dummy							
Test of	Hypothesis 1.a				Hypothesis 1.b			
External dependence	0.188^a	0.197^a			0.192^a	0.283^a		
	(0.063)	(0.065)			(0.063)	(0.062)		
Average fin. dev.			-0.098^b	-0.143^a				
			(0.041)	(0.043)				
Control of corruption index				0.094^b				
				(0.044)				
External dep. × average fin. dev.					-0.180	-0.419^a	-0.192	-0.431^a
					(0.165)	(0.148)	(0.155)	(0.141)
External dep. × control of corruption						0.471^a		0.471^a
						(0.106)		(0.096)
Tech. relative to US	0.099	0.125	0.067	0.038	0.134	0.182^c	0.051	0.106
	(0.072)	(0.095)	(0.088)	(0.083)	(0.092)	(0.093)	(0.111)	(0.112)
						(0.053)		(0.052)
Observations	1529	1529	1529	1529	1529	1529	1529	1529
R^2	0.161	0.291	0.113	0.119	0.292	0.304	0.318	0.329
Macroeconomic controls	Yes	No	Yes	Yes	No	No	No	No
Target country FE	Yes	No	No	No	No	No	No	No
Year FE	Yes	No	Yes	Yes	No	No	No	No
Target sector FE	No	No	Yes	Yes	No	No	Yes	Yes
Target country × Year FE	No	Yes	No	No	Yes	Yes	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. These estimations are restricted to the sample of foreign acquisitions. Standard errors clustered by target country × target industry. Estimations at the target country × target industry × year. External dependence target is the level of external financial dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Country-level variables are demeaned in columns (5) to (8). Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

Table A.9: Determinants of the size of partial foreign stake: extended baseline results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.		Size of foreign stake (only partial acquisitions)						
Test of		——— Hypothesis 2 ———						
External dependence	0.073^a	0.049^c			0.049^c	0.043		
	(0.026)	(0.028)			(0.029)	(0.034)		
Average fin. dev.			-0.053^a	-0.039^c				
			(0.018)	(0.021)				
Control of corruption index				-0.033^c				
				(0.019)				
External dep. × average fin. dev.					-0.042	-0.032	0.014	0.030
					(0.078)	(0.078)	(0.076)	(0.077)
External dep. × control of corruption						-0.026		-0.038
						(0.072)		(0.065)
Tech. relative to US	-0.024	-0.054	0.022	0.036	-0.050	-0.053	-0.035	-0.039
	(0.063)	(0.078)	(0.053)	(0.054)	(0.078)	(0.079)	(0.085)	(0.086)
Observations	1163	1163	1163	1163	1163	1163	1163	1163
R^2	0.099	0.257	0.099	0.102	0.258	0.258	0.308	0.309
Macroeconomic controls	Yes	No	Yes	Yes	No	No	No	No
Target country FE	Yes	No	No	No	No	No	No	No
Year FE	Yes	No	Yes	Yes	No	No	No	No
Target sector FE	No	No	Yes	Yes	No	No	Yes	Yes
Target country × Year FE	No	Yes	No	No	Yes	Yes	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. These estimations are restricted to the sample of partial foreign acquisitions. Standard errors clustered by target country × target industry. Estimations at the target country × target industry × year. External dependence target is the level of external financial dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Country-level variables are demeaned in columns (5) to (8). Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

4.3 Robustness: alternative clustering strategies

Table A.10: Determinants of the probability of full foreign acquisitions: alternative clustering

	(1)	(2)	(3)	(4)	(5)
Dep. var.	Share full foreign Acquisition				
Test of	—– Hypothesis 1.a —–			– Hypothesis 1.b –	
External dependence	0.197				
	(0.065)				
	(0.063)				
	(0.057)				
Average fin. dev.		-0.098	-0.143		
		(0.041)	(0.043)		
		(0.032)	(0.042)		
		(0.037)	(0.040)		
Control of Corruption index			0.094		
			(0.044)		
			(0.048)		
			(0.037)		
External dep. × average fin. dev.				-0.192	-0.431
				(0.155)	(0.141)
				(0.132)	(0.129)
				(0.156)	(0.152)
External dep. × Control of corruption					0.471
					(0.096)
					(0.109)
					(0.090)
Tech. relative to US	0.125	0.067	0.038	0.051	0.106
	(0.095)	(0.088)	(0.083)	(0.111)	(0.112)
	(0.050)	(0.095)	(0.090)	(0.047)	(0.055)
	(0.105)	(0.081)	(0.081)	(0.119)	(0.119)
Observations	1529	1529	1529	1529	1529
R^2	0.291	0.113	0.119	0.318	0.329
Macroeconomic controls	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	No	No
Target sector FE	No	Yes	Yes	Yes	Yes
Target country × Year FE	Yes	No	No	Yes	Yes

Notes: OLS estimations. Below the coefficients are shown the standard errors, which are either clustered at the target country × target industry (baseline case, first number) or at the sector-level (second number) or at the country × year level (third number). Estimations at the target country × target industry × year. These estimations are restricted to the sample of foreign acquisitions. Compared to the baseline results, the sample has been aggregated by target country, target sector and year. External dependence target is the level of external finance dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

Table A.11: Determinants of the size of partial foreign stake: alternative clustering

	(1)	(2)	(3)	(4)	(5)
Dep. var.	Size of foreign stake (only partial acquisitions)				
Test of	——- Hypothesis 2 ——-				
External dependence	0.049				
	(0.028)				
	(0.036)				
	(0.037)				
Average fin. dev.		-0.053	-0.039		
		(0.018)	(0.021)		
		(0.018)	(0.021)		
		(0.019)	(0.022)		
Control of corruption index			-0.033		
			(0.019)		
			(0.019)		
			(0.019)		
External dep. × average fin. dev.				0.014	0.030
				(0.076)	(0.077)
				(0.102)	(0.105)
				(0.098)	(0.103)
External dep. × control of corruption					-0.038
					(0.065)
					(0.053)
					(0.085)
Tech. relative to US	-0.054	0.022	0.036	-0.035	-0.039
	(0.078)	(0.053)	(0.054)	(0.085)	(0.086)
	(0.054)	(0.042)	(0.043)	(0.048)	(0.050)
	(0.092)	(0.056)	(0.058)	(0.099)	(0.100)
Observations	1163	1163	1163	1163	1163
R^2	0.257	0.099	0.102	0.308	0.309
Macroeconomic controls	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	No	No
Target sector FE	No	Yes	Yes	Yes	Yes
Target country × Year FE	Yes	No	No	Yes	Yes

Notes: OLS estimations. Below the coefficients are shown the standard errors, which are either clustered at the target country × target industry (baseline case, first number) or at the sector-level (second number) or at the country × year level (third number). Estimations at the target country × target industry × year. These estimations are restricted to the sample of partial foreign acquisitions. Compared to the baseline results, the sample has been aggregated by target country, target sector and year. External dependence target is the level of external finance dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

4.4 Robustness: nonlinear estimators

Table A.12: Determinants of full foreign acquisitions: fractional logit estimation

	(1)	(2)	(3)	(4)	(5)
Dep. var.	Share full foreign acquisitions				
Test of	—— Hypothesis 1.a ——			– Hypothesis 1.b –	
External dependence	1.005^{a}			0.986^{a}	1.497^{a}
	(0.306)			(0.297)	(0.324)
Average fin. dev.		-0.426^{b}	-0.629^{a}		
		(0.186)	(0.200)		
Control of corruption index			0.417^{b}		
			(0.193)		
External dep. × average fin. dev.				-0.905	-2.290^{a}
				(0.769)	(0.739)
External dep. × control of corruption					2.827^{a}
					(0.661)
Tech. relative to US	0.610	0.301	0.170	0.653^{c}	0.909^{b}
	(0.402)	(0.414)	(0.376)	(0.391)	(0.415)
Observations	1529	1529	1529	1529	1529
Macroeconomic controls	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	No	No
Target sector FE	No	Yes	Yes	No	No
Target country × Year FE	Yes	No	No	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. Fractional logit estimations. Standard errors clustered by target country × target industry. Estimations at the target country × target industry × year. These estimations are restricted to the sample of foreign acquisitions. External dependence target is the level of external financial dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

Table A.13: Determinants of the size of partial foreign stake: fractional logit estimation

	(1)	(2)	(3)	(4)	(5)
Dep. var.	Size of foreign stake (only partial acquisitions)				
Test of	——- Hypothesis 2 ——-				
External dependence	0.214^c			0.215^c	0.186
	(0.112)			(0.113)	(0.132)
Average fin. dev.		-0.227^a	-0.165^c		
		(0.074)	(0.088)		
Control of corruption index			-0.142^c		
			(0.082)		
External dep. × average fin. dev.				-0.191	-0.145
				(0.310)	(0.307)
External dep. × control of corruption					-0.113
					(0.282)
Tech. relative to US	-0.240	0.101	0.158	-0.224	-0.235
	(0.319)	(0.222)	(0.222)	(0.321)	(0.324)
Observations	1163	1163	1163	1163	1163
Macroeconomic controls	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	No	No
Target sector FE	No	Yes	Yes	No	No
Target country × Year FE	Yes	No	No	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. Fractional logit estimations. Standard errors clustered by target country × target industry. Estimations at the target country × target industry × year. These estimations are restricted to the sample of partial foreign acquisitions. External dependence target is the level of external financial dependence of the target sector from Rajan and Zingales (1998). Financial development is the average ratio of private credit over GDP over the period of the target country from the World Bank GFDD. Control of corruption index is the average country-level score of control of corruption from the WGI dataset. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

4.5 Robustness: the role of financial development

In Table A.14 we show the robustness of the effect of financial development (and its interaction with external finance dependence) to the use of alternative measures of financial development: a time-varying measure (instead of the country average) in columns (1), (2), (5) and (6) or a time-invariant pre-period measure (the average private credit to GDP ratio over the 1985-1989 period, the five years before the start of our sample period) in columns (3), (4), (7) and (8).

Table A.14: Robustness: the role of financial development

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.	Share full acquisitions				Average fraction acquired (partial acq.)			
Financial development	Time-varying		Pre-period		Time-varying		Pre-period	
Financial development	-0.130^a		-0.222^a		-0.046^b		-0.054^b	
	(0.038)		(0.059)		(0.018)		(0.027)	
Control of corruption index	0.090^b		0.102^b		-0.030		-0.028	
	(0.042)		(0.045)		(0.019)		(0.019)	
External dep. × fin. dev.		-0.320^b		-0.538^a		0.023		-0.034
		(0.124)		(0.191)		(0.066)		(0.109)
External dep. × control of corruption		0.450^a		0.433^a		-0.037		-0.020
		(0.092)		(0.094)		(0.065)		(0.066)
Tech. relative to US	0.048	0.092	0.020	0.093	0.032	-0.038	0.025	-0.040
	(0.082)	(0.111)	(0.080)	(0.111)	(0.053)	(0.085)	(0.053)	(0.085)
Observations	1528	1528	1498	1498	1162	1162	1137	1137
R^2	0.119	0.328	0.122	0.327	0.105	0.308	0.105	0.306
Macroeconomic controls	Yes	No	Yes	No	Yes	No	Yes	No
Sector FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	No	Yes	No
Target country × Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. Standard errors clustered by target country × target industry. Estimations at the target country × target industry × year. The dependent variable is: in columns (1) and (2), the share of full acquisitions among foreign acquisitions; in columns (3) and (4), the average fraction acquired among foreign acquisitions; in columns (5) and (6), the average fraction acquired among partial foreign acquisitions. Financial development is the level of private credit of GDP of the target country (averaged over the period in odd numbered columns, and time-varying in even numbered columns). Anti-corruption index is the average country-level score of control of corruption from the World Bank. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

4.6 Robustness: The role of institutions

In this section, we use alternative indicators of institutions / corruption to assess the robustness of our results on full acquisitions. We first use an alternative anti-corruption measure from Transparency International. The results (cols. 3 and 4) are quality similar to our baseline estimates (cols 1 and 2), both for the non-interacted variables and for the interaction with external finance dependence. We next use an indicator of the quality of government from the International Country Risk Guide (2013). The coefficient on the non-interacted variable becomes negative and significant (col. 5), a result due to an outlier country, South Africa, which has relatively low corruption level yet low government quality. In column 6 however we do find that full foreign acquisitions are more likely in countries with good government quality, in more financially dependent sectors. Finally, in columns (6) and (7) we use an indicator of Business Freedom from the World Bank's Doing Business database. Again the results are in line with our baseline.

Table A.15: Robustness: corruption indicators

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.	Share full foreign acquisitions							
Indicator	Anti-corruption (WB)		Anti-corruption (TI)		Quality of government (ICRG)		Business Freedom (WB Doing Business)	
Average fin. dev.	-0.143^a		-0.153^a		-0.040		-0.134^a	
	(0.043)		(0.045)		(0.046)		(0.042)	
Control of corruption index target	0.094^b		0.005^b		-0.724^a		0.006^c	
	(0.044)		(0.002)		(0.248)		(0.003)	
External dep. × average fin. dev.		-0.431^a		-0.466^a		-0.363^b		-0.296^c
		(0.141)		(0.143)		(0.182)		(0.151)
External dep. × control of corruption		0.471^a		0.021^a		2.247^b		0.017^a
		(0.096)		(0.005)		(0.935)		(0.005)
Tech. rel. to US	0.038	0.106	0.053	0.094	0.096	0.084	0.032	0.103
	(0.083)	(0.112)	(0.083)	(0.111)	(0.087)	(0.117)	(0.086)	(0.111)
Observations	1529	1529	1529	1529	1529	1529	1529	1529
R^2	0.119	0.329	0.121	0.329	0.121	0.322	0.117	0.325
Macroeconomic controls	Yes	No	Yes	No	Yes	No	Yes	No
Sector FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country × Year FE	No	Yes	No	Yes	No	Yes	No	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. Standard errors clustered by target country × target industry. The dependent variable is the share of full foreign acquisition. Estimations at the target country × target industry × year. The sample considered is the sample of foreign acquisitions. Anti-corruption (WB) is the index of anti-corruption from the World Bank; Anti-corruption (TI) is the index of anti-corruption from the Transparency International; Quality of government is indicator of quality of government from ICRG; Business Freedom is an index of Business Freedom computed from the World Bank Doing Business study, as provided in the QoG dataset. Macroeconomic controls include the lagged real GDP and GDP per capita, both in logs. Technology relative to the US is from Levchenko and Zhang (2011).

4.7 Robustness: external finance dependance and financial development

Here we show that the robustness of the cross-effect of external finance dependence and financial development is obtained using alternative functional forms in our estimations. In Table A.16, we find that external financial dependence only matters when the origin country of the acquiring firm is more financially developed than that of the target. In Table A.17, we show that the effect of external finance dependence is significantly stronger in the least financially developed countries of our sample, using the sample median or first quartile as a sample split rule.

Table A.16: Robustness: external finance dependence and financial development (1/2)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.	Full acq.		Fraction acquired		Frac. acq. (partial)	
fin. dev. target/fin. dev. orig.	≤ 1	≥ 1	≤ 1	≥ 1	≤ 1	≥ 1
External dependence target	0.159^b	0.025	0.131^a	0.025	0.046^c	0.015
	(0.064)	(0.142)	(0.039)	(0.105)	(0.025)	(0.099)
Observations	2463	482	2463	482	1649	306
R^2	0.201	0.294	0.220	0.326	0.189	0.343
Target country × Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. Standard errors clustered by target country × target industry. Estimations at the source country × target country × target industry × year. The dependent variable is: in column (1) and (2), the share of full acquisition among foreign acquisitions; in columns (3) and (4), the average fraction acquired among foreign acquisitions; in columns (5) and (6), the average fraction acquired among partial foreign acquisitions. Financial development is the level of private credit of GDP of the target country. In even numbered (respectively odd numbered) columns, we consider only observations for which the level of financial development of the target is lower or equal (resp. larger or equal) to the level of financial development of the origin country. Technology relative to the US included as a control variable, but coefficient not reported.

Table A.17: Robustness: external finance dependence and financial development (2/2)

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.	Full acq.		Fraction acquired		Frac. acq. (partial)	
Low fin. dev. target	Below median	First quartile	Below median	First quartile	Below median	First quartile
External dep. × average fin. dev.	0.199^b	0.226^c	0.124^c	0.169^b	0.012	-0.002
	(0.100)	(0.122)	(0.065)	(0.075)	(0.052)	(0.052)
Observations	2945	2945	2945	2945	1955	1955
R^2	0.196	0.196	0.221	0.221	0.196	0.196
Target country × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector	Yes	Yes	Yes	Yes	Yes	Yes

Notes: ^{c} significant at 10%; ^{b} significant at 5%; ^{a} significant at 1%. OLS estimations. Standard errors clustered by target country × target industry. Estimations at the source country × target country × target industry × year. The dependent variable is: in columns (1) and (2), the share of full acquisition among foreign acquisitions; in columns (3) and (4), the average fraction acquired among foreign acquisitions; in columns (5) and (6), the average fraction acquired among partial foreign acquisitions. Financial development is the level of private credit of GDP of the target country. In odd numbered (respectively even numbered) columns, we interact external financial dependence with a dummy which equals 1 if the target country's level of financial development is below the sample median (resp. below the first quartile). Technology relative to the US included as a control variable, but coefficient not reported.