Who is Afraid of Political Risk? Multinational Firms and their Choice of Capital Structure

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Abstract

This paper investigates both theoretically and empirically how multinational firms choose their capital structure in response to political risk. We focus on two variables, the optimal level of leverage and the ownership structure of the foreign affiliate. Our model predicts that these variables interact in a non-trivial way and that debt reacts more strongly than the ownership share as political risk increases. We use the Microdatabase Direct Investment of the Deutsche Bundesbank for our empirical analysis, with instrumental variables estimation to account for the fact that ownership and leverage are interdependent choices. Our predictions are supported by the empirical evidence.

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1 Introduction

Multinational enterprises (MNE) have to adapt their optimal investment strategy to local conditions worldwide. What distinguishes multinational enterprises from purely national ones most notably is that they have to adapt to different political environments that may give rise to different political risks at different locations even if the idiosyncratic risks may be the same.

In this paper we investigate both theoretically and empirically how MNE choose their capital structure in response to political risk. Political risk increases the uncertainty of expected returns and may therefore cause MNE to adapt their capital structure. We focus in particular on two choice variables, the level of leverage and the ownership structure of the foreign affiliate.

The literature on the capital structure choice of multinational enterprises has so far mainly focused on taxes as the driving factor behind these decisions. It has been shown both empirically and theoretically that tax incentives lead to national differences in the level of leverage of affiliates of MNE (see for example Desai, Foley, and Hines Jr. (2004), Huizinga, Laeven, and Nicodeme (2006) and Buettner, Overesch, Schreiber, and Wamser (2006)). However, there is much less evidence on how differing levels of political risk may affect the capital structure of affiliates that are located in different countries. Desai, Foley, and Hines Jr. show that political risk increases the volatility of investment returns of the affiliates of the same MNE and that mothers react to this volatility by reducing domestic leverage.

In our theoretical model, a foreign investor chooses his ownership share in order to maximize his expected returns from the foreign investment, taking into account that a larger ownership share means both more cash flow rights and a

larger amount of equity to be invested in the project. Less equity is needed if the firm is more highly leveraged. The more leveraged the project, however, the larger the expected bankruptcy cost in case the project fails. The investor optimally balances these two kinds of cost, arising from equity and debt financing. The optimal capital structure has both ownership share and leverage move together, i.e. larger ownership share goes hand in hand with higher leverage.

On the basis of this model we investigate how the leverage and ownership react to political risk. We find that if we vary only one of these two variables, holding fixed the other variable, then (for a given level of leverage) the optimal ownership ratio decreases and (for a given ownership ratio) the optimal leverage level increases with political risk. Political risk reduces the expected returns and hence the incentive to hold a large ownership share, for any given equity cost. At the same time, the larger the political risk the smaller the weight of the idiosyncratic risk of the project and hence the smaller the expected bankruptcy cost arising from leverage. Thus, we have a negative direct effect on the ownership share and a positive direct effect on leverage.

But if the investor can choose both variables, the two variables interact in a non-trivial way, with direct and indirect effects, and the relationships established above are no longer as clear cut due to this interaction. For example, the optimal ownership share may increase if political risk is larger, due to indirect effects through the increase in the optimal leverage. We investigate when the direct effects can be expected to dominate the indirect effects. In particular we analyze which of the two variables is preferably used to deal with the negative implications of political risk. One of the results we find in our model is that as political risk increases, debt tends to react more strongly than the ownership share.

In our empirical analysis we use the Microdatabase Direct Investment (MiDi)

of the Deutsche Bundesbank to investigate the impact of political risk on both the choice of ownership shares and leverage of foreign affiliates of German multinationals. The dataset contains balance sheet information on the foreign affiliates. German mothers are by law required to report this information when the balance sheet total of the affiliate and the ownership share are larger than a certain threshold. As a measure for political risk we use the time-varying, country specific index that is provided by the International Country Risk Guide (ICRG).

In a first step, we estimate the impact of political risk on our two choice variables separately. In our leverage regression we use the same set of controls that Desai, Foley, and Hines Jr. (2006) use in their recent paper *Capital Structure with Risky Foreign Investment*. In this paper, the authors empirically investigate how US American multinationals adapt their level of leverage to different levels of political risk. Our findings confirm that affiliates of MNE use a higher level of debt in countries with a higher level of political risk. Our ownership regression indicates that MNEs hold a smaller share of the equity of the foreign affiliate when political risk is high. Both results confirm our theoretical predictions.

Our theoretical model predicts, however, that ownership and leverage are not independent of each other. When we include leverage in the ownership regression, we find that there is a positive relationship between the two variables, that is to say, a higher ownership share is associated with a higher leverage.

As the two variables are determined simultaneously, we use the technique of instrumental variables estimation to overcome potential biases that stem from this simultaneity. We use the share of retained profits over total assets to instrument the level of leverage in the ownership regression. The negative and significant influence of political risk on the ownership share can still be confirmed by the data, even when leverage is introduced as a second measure to react to political

risk. Our instrumental variable analysis also confirms that there is a positive relationship between the level of leverage and the ownership share.

The remainder of the paper is organized as follows. Section 2 introduces our theoretical model. In Section 3 we analyze the optimal financial structure and derive empirical predictions. Section 4 introduces the data set. In Section 5 we present our empirical results. Section 6 concludes.

2 Model

We consider a multinational investor who intends to invest a fixed amount I in a foreign location. The investment project is subject to political risk in the foreign location. We capture this by assuming that with probability π, the project is expropriated and hence does not generate any returns for the investor. With probability $1-\pi$, the project is not affected by the authorities of the host country. A larger π reflects a larger political risk in this country. If the investment is not expropriated, the project generates a fixed return R with probability q and zero return with probability $(1-q)$.

The multinational investor has to choose how to finance the investment and how much of the project to own himself. In particular, he chooses the level of debt D and equity E, such that $E+D=I$. Furthermore, he chooses a share α which specifies his share of equity to be invested and his share of cash flow rights.

For any level of equity the investor contributes to the project he incurs capital cost C that capture the opportunity cost of the investment project. The larger his share of equity, the more other projects the investor has to give up. We assume that C is convex in his share of equity.

The investor has two possibilities to limit the equity cost of his investment.

He can share ownership with other investors, i.e. reduce his share of the equity financing, or he can use debt financing. If the investor chooses a share α, he incurs equity cost $C(\alpha E)$, but at the same time he is entitled to only a share α of the cash returns of the project. Of course, the larger the share α, the larger the cash flow rights but the larger also the capital cost.

Furthermore, the investor can choose to use debt financing, D. We assume that the investor's liability is restricted to the investment project. So if the investor takes up debt D, he has to repay $(1+r)D$, but can do so only when the project is successful, i.e. generates positive returns. Banks are assumed to operate in a competitive market and to be risk neutral. So r is chosen such that in expected terms the banks break even.

A priori, both reducing the ownership share and increasing debt financing have the effect of reducing the expected returns for the investor but reducing the cost of equity as well. In case of debt financing, however, the investor incurs an additional cost that arises if the project is not expropriated but fails nevertheless. To fix ideas we think of these cost as some kind of reputation loss associated with the idiosyncratic risk of the project and call them bankruptcy cost. These costs are captured by a function $K(D)$ and are assumed to be convexly increasing in D. Importantly, these cost do not occur if the project fails due to political risk because in this case they are not associated with the idiosyncratic risk of the project.

The investor thus maximizes the following payoff function by simultaneously choosing α and D.

$$U_{MNE} = (1-\pi)\alpha[q(R-(1+r)D) + (1-q)(-K(D))] - C(\alpha E) \qquad (1)$$

The interest rate r is determined such that banks break even.

Thus

$$(1-\pi)(1+r)qD = D \quad (2)$$

$$1+r = \frac{1}{(1-\pi)q} \quad (3)$$

This yields the following payoff function to be maximized

$$U_{MNE} = (1-\pi)\alpha[qR-(1-q)K(D)] - \alpha D - C(\alpha E) \quad (4)$$

3 The optimal financial structure and political risk

In this section we characterize the solution to the investor's optimization problem and investigate the potential interaction between the two different choice variables to be determined by the investor. The solution to the investor's maximization problem is characterized by the following two first order conditions

$$\frac{dU}{d\alpha} = (1-\pi)[qR-(1-q)K(D)] - D - C'(I-D) = 0 \quad (5)$$

$$\frac{dU}{dD} = -(1-\pi)\alpha(1-q)K' - \alpha + C'\alpha = 0 \quad (6)$$

Using the results of the first order conditions, we find that the cross derivative is positive, indicating that a larger level of debt makes a larger ownership share less costly and a larger ownership share requires a larger debt level to limit equity cost. Thus, we expect the two variables to move together, when jointly determined.

$$\frac{d^2U}{d\alpha dD} = -(1-\pi)(1-q)K' - 1 + C' + C''(I-D)\alpha \quad (7)$$

$$= C''(I-D)\alpha > 0 \quad (8)$$

We now turn to the impact of political risk on the choice of ownership share and debt level. Before we do the full comparative statics analysis, we start by looking at the direct effects of political risk on ownership for an exogenously given debt level and vice versa.

Using the implicit function theorem and the fact that $[qR-(1-q)K] > 0$, as follows from the first order condition above, it is straightforward to show that

$$\frac{\partial \alpha}{\partial \pi} = -\frac{-[qR-(1-q)K]}{-C''(I-D)^2} < 0 \quad (9)$$

Thus, the direct effect of political risk on the preferred ownership is negative. This is due to the fact that political risk reduces the expected return and hence the attractiveness of a large ownership share.

Furthermore,

$$\frac{\partial D}{\partial \pi} = -\frac{\alpha(1-q)K'}{-\alpha(1-\pi)(1-q)K'' - \alpha^2 C''} > 0 \quad (10)$$

So the direct effect of political risk on leverage is positive. The more the political risk dominates, the smaller are the expected cost from a potential reputation loss associated with the idiosyncratic risk of the project and hence the more debt the investor is willing to take on.

However, as we have seen above, ownership share and leverage have a positive impact on each other. Thus, if both are determined endogenously, the comparative

statics effects are no longer as clear cut. This is shown in the following result.

Result 1

$$\begin{aligned}
\frac{d\alpha}{d\pi} &= \frac{|F_{\alpha\pi}|}{|F|} = -\frac{1}{|F|}[(qR-(1-q)K)\alpha(1-\pi)(1-q)K'' \\
&\quad +\alpha^2 c''[pR-(1-q)K-(1-q)(I-D)K']] > or < 0 \\
\frac{dD}{d\pi} &= \frac{|F_{D\pi}|}{|F|} = -\frac{1}{|F|}C''(I-D)\alpha[qR-(1-q)K-(1-q)(I-D)K'] > or < 0
\end{aligned}$$

Proof: See Appendix.

Interestingly we find that the optimal ownership share can both decrease and increase in the political risk. Recall that for exogenous debt level political risk unambiguously decreases the optimal α. But for endogenously chosen leverage it is possible that the level of ownership is increasing in the political risk. This is possible if leverage increases with political risk and the indirect effect of leverage on the ownership share dominates the direct effect of political risk. Similarly, the optimal debt level may decrease with political risk if the indirect effect via the ownership share dominates the direct effect. However, comparing the total effects in Result 1 we can easily establish the following relationship.

Result 2

$$\frac{d\alpha}{d\pi} < \frac{dD}{d\pi} \tag{11}$$

Hence, it is not possible that both

$$\frac{dD}{d\pi} < 0 \quad and \quad \frac{d\alpha}{d\pi} > 0 \tag{12}$$

at the same time.

Having established that both leverage and ownership share are used to mitigate the effect from political risk one important question to ask is which of the two reacts more strongly. This is captured in the following result.

Result 3 *The larger the political risk π, the more likely it is that the debt level reacts more strongly to political risk than the ownership share, i.e.* $|\frac{d\alpha}{d\pi}| < |\frac{dD}{d\pi}|$.

The larger the expected revenues R, the more likely it is that the ownership share reacts more strongly to political risk than the debt level, i.e. $|\frac{d\alpha}{d\pi}| > |\frac{dD}{d\pi}|$.

Proof: See Appendix.

The first of the two results is related to the fact that an increase in debt not only decreases the share of returns to be appropriated by the investor, but also gives rise to some additional bankruptcy cost. Hence, if the political risk gets more pronounced, the relative disadvantage of using debt to mitigate equity cost is reduced and so debt is more likely to be used as opposed to sharing the equity cost with other investors.

If, however, the expected returns are increasing, the investor cares more about receiving a large share of the returns and hence prefers to increase the ownership share.

The following results describe how the optimal ownership ratio and leverage react to the other exogenous parameters.

Result 4 *Both the partial (direct) and the total (including the indirect) effect of return R on the ownership share α are positive, i.e.* $\frac{\partial \alpha}{\partial R} > 0$ *and* $\frac{d\alpha}{dR} > 0$.

Proof: See Appendix.

Naturally, a higher expected return increases the incentive to participate in the cash flow rights of the project and hence has a directly positive effect on the

ownership share. Since there is no direct effect a higher expected return would have on the optimal debt level, there is no indirect effect and hence the total effect must be positive as well.

Result 5 *The partial (direct) effect of the investment size on the ownership share* α *is negative,* $\frac{\partial \alpha}{\partial I} < 0$*, while the total (including the indirect) effect can be either negative or positive,* $\frac{d\alpha}{dI} < or > 0$*.*

Proof: See Appendix.

A higher investment size increases the equity cost and hence has a negative direct effect on the optimal ownership share. But it also has a positive direct effect on the optimal debt level and via the debt level a positive indirect effect on the ownership share. Depending on the relative size of these direct and indirect effects, the total effect can be either negative or positive.

We now turn to the predictions that can be derived from this theoretical analysis.

Hypothesis 1 *For exogenous level of debt, the ownership share decreases in political risk, for endogenous level of debt, the impact of political risk is less negative.*

Hypothesis 2 *For exogenous ownership share the debt level increases in political risk, for endogenous level of debt, the impact of political risk is less positive.*

The first two hypotheses reflect Result 1, including our previous observations on the direct effects of political risk on both ownership share and leverage. Of course, a priori we expect both ownership share and leverage to be endogenously determined. An interesting question then is whether we can empirically isolate the direct and indirect effects.

Hypothesis 3 *For both exogenous and endogenous level of debt, the ownership share increases in the return R.*

Hypothesis 4 *For exogenous level of debt, the ownership share decreases in the size of investment, for endogenous level of debt, the impact of investment size is less negative.*

The second two hypotheses follow immediately from Result 4 and 5.

Hypothesis 5 *The debt level reacts more strongly to political risk than ownership share, the larger the political risk and the smaller the expected revenues.*

This last hypothesis follows from Result 3.

4 Data

The empirical analysis presented in section 5 is based on the Microdatabase Direct Investment (MiDi) of the Deutsche Bundesbank. The database contains a panel dataset of firm-level information on German mothers and their foreign affiliates for the years 1996 - 2003. The mothers are by law required to report information on their investments and the financial characteristics of their foreign affiliates when the balance sheet total of the affiliate and the ownership share are larger than a certain threshold that varies over time (Lipponer 2006). We concentrate on directly held investment and use the strongest reporting requirements throughout our whole analysis.

We augment the MiDi dataset by country-level information. As a measure of political risk, we use the time-varying index that is provided by the International Country Risk Guide (ICRG). The index is made up from 12 weighted variables

covering both political and social attributes. We recode the index in such a way that an increasing index represents higher political risk. The source of information on GDP, GDP per capita and the rate of inflation is the Wold Economic Outlook Database of the IMF (http://www.imf.org). The Private Credit variable is based on Beck, Demirgc-Kunt, and Levine (1999). It measures the ratio of private credit lent by deposit money banks to GDP. Statutory tax rates are taken from the Institute for Fiscal Studies (http://www.ifs.org.uk), as well as from various issues of the Corporate Tax Guides of Ernst&Young, KPMG and PricewaterhouseCoopers.

Table 1 provides descriptive statistics of the variables we use in our analysis. The definitions of the variables are standard, and they are also presented in Table 1.

Table 1 here

5 Empirical Results

In our empirical analysis, we investigate how MNE react to variations in political risk. The two choice variables we consider are the ownership share and the level of leverage. The level of leverage is defined here as debt over total assets, the ownership share as the share of equity that the German mother holds in the foreign affiliate.

In all specifications we report below we include a set of controls that are standard in the literature on the capital structure choice of MNE and that we do not account for in our model. The controls we use closely resemble those used by Desai, Foley, and Hines Jr. (2006) to explain the influence of taxes and political risk on the level of leverage. Throughout our analysis, the level of leverage and the ownership share are linear functions of the covariates. All regressions presented in this paper are estimated by OLS and include mother-fixed-effects to control for

unobserved individual heterogeneity of the mothers. We therefore compare differences in the capital structure of affiliates of the same mother in different countries. We use robust standard errors and control for a possible clustering of standard errors within countries.

We begin our analysis by assuming that the level of leverage and the ownership share are independent of each other. In *Table 2* we present two separate regressions for the level of leverage and the ownership share. Should our assumption of independence not hold, then the coefficients the coefficients in *Table 2* capture the sum of the direct effect of the covariates on the dependent variable and the indirect effect via the left-out-variable.

Table 2 here

Our leverage regression presented in *Table 2* confirms the findings of Desai, Foley, and Hines Jr. (2004) that affiliates of MNE use a higher level of leverage in countries with a higher level of political risk. This is also consistent with our *Hypothesis 2*. Firms with a greater volume of sales seem to use a higher level of leverage. More profitable firms are financed by equity rather than debt. As predicted by the theory of optimal capital structure choice, affiliates in high tax countries are more highly leveraged than those in low tax countries. Affiliates in countries where GDP per capita is higher are financed with a higher level of debt. The private credit variable captures the development of the banking sector. This variable shows a negative impact on the level of leverage, maybe because it is a proxy for a well- developped capital market where it is also easier to issue shares.

In our ownership regression presented in *Table 2*, we find that in the presence of political risk, MNE tend to share ownership with other investors. They hold less of the equity of larger firms. MNE tend to be more engaged in countries with a

higher GDP per capita and less engaged in countries with higher statutory taxes. The negative and significant influence of profitability in the ownership regression seems to be caused by an omitted variable bias, since it disappears when we include leverage as an explanatory variable in a next step. The ownership regression with leverage included as a regressor is presented in *Table 3* in the Appendix.

However, as our theoretical model predicts that ownership and leverage are determined endogenously, the coefficients of this regression might be biased. To overcome this problem, we use the technique of two-step least squares. The share of retained profits over total assets acts as instrument for the level of leverage in the ownership regression. There are three conditions that a valid instrument has to fulfill. First, it has to be redundant in our original regression. An indication that this assumption is met is that the share of retained profit does not show any predictive power for the ownership share when it is regressed on all covariates including leverage. Second, the covariance between the instrument and the error term in a regression of ownership on all covariates has to be zero. This assumption is untestable. We are confident, however, that it is met, because to our best knowledge there are no unobservable or omitted variables in the ownership regression that influence the share of retained profits over total assets. Third, retained profits have to be partially correlated with the variable that has to be instrumented. This assumption can be tested and is fulfilled here. We present this test of partial correlation between leverage and retained profits in *Table 4* in the Appendix.

Table 5 presents the final version of our regression. The ownership share is the dependent variable. Leverage is included as a regressor, and it is instrumented by retained profits. As predicted by our theoretical model, a higher level of leverage is associated with a higher ownership share. The coefficients in this regression capture the effect of the covariates on the ownership share when leverage is held

constant. These effects represent the direct effects as predicted by our model. For political risk, the predicted negative effect on the ownership share is confirmed by the data.

Table 5 here

When we compare the coefficient of political risk in *Table 5* with the one in *Table 2*, we find that the latter is less negative. This is consistent with our *Hypothesis 1*, as the coefficients in *Table 2* capture the sum of the direct effect of the covariates on ownership and the indirect effect via the level of leverage.

Profitability of the affiliate now shows the expected positive effect on the ownership share. This is consistent with *Hypothesis 3*. Furthermore, the variable sales shows a negative coefficient. This variable seems suitable to capture the size of the investment and it shows the expected sign as suggested by *Hypothesis 4*. And again, we find that in Table 5, capturing the direct effects, the coefficient is more negative than in Table 2, which includes the indirect effects as well, as predicted by Hypothesis 4.

Finally, to test Hypothesis 5, we interact political risk with profitability, to represent expected revenues, and we also split the sample in two at the median of political risk. We then test if reactions to poltitical risk show any differences between low-risk and high-risk countries. To be completed.

6 Conclusion

In this paper, we have investigated both theoretically and empirically how MNE adapt their capital structure choices in the presence of political risk. Our focus has been on two choice variables, the level of leverage and the ownership share.

In our theoretical model, we have shown how both variables react to political risk, explicitly taking into account possible interactions between the variables. When these interactions are not considered, we can make clear predictions on the direction of influence of political risk. However, with the interaction, the direction of the influence depends on the strength of direct and indirect effects.

In our empirical analysis, we have tested the predictions of the theoretical model. We use the method of instrumental variable analysis to account for the fact that ownership and leverage are interdependent choices. In accordance with our theoretical model, we find that there is a positive relationship between ownership and leverage. A higher level of political risk increases the level of leverage and decreases the ownership share.

Mathematical Appendix

Proof of Proposition 1

From the first order conditions we get the following matrixes:

$$F = \begin{vmatrix} -C''(I-D)^2 & C''(I-D)\alpha \\ C''(I-D)\alpha & -\alpha(1-\pi)(1-q)K'' - C''\alpha^2 \end{vmatrix}$$

It is straightforward to show that $|F| > 0$, so that we have a maximum.

Furthermore, we can derive

$$F_{\alpha\pi} = \begin{vmatrix} qR-(1-q)K & C''(I-D)\alpha \\ -\alpha(1-q)K' & -\alpha(1-\pi)(1-q)K'' - C''\alpha^2 \end{vmatrix}$$

and

$$F_{D\pi} = \begin{vmatrix} -C''(I-D)^2 & qR-(1-q)K \\ C''(I-D)\alpha & -\alpha(1-\pi)K' \end{vmatrix}$$

which lead to the results presented in Result 1.

Proof of Result 4

The direct effect follows immediately from the first order condition for the optimal ownership structure using the implicit function theorem.

For the total effect we need to look at the sign of the determinant of the following matrix:

$$F_{\alpha R} = \begin{vmatrix} -(1-\pi)q & C''(I-D)\alpha \\ 0 & -\alpha(1-\pi)(1-q)K'' - C''\alpha^2 \end{vmatrix}$$

¿ 0

Given that we know from Result 1 that $|F| > 0$, it follows immediately that the total effect is positive, since it is given as

$$\frac{d\alpha}{dR} = \frac{|F_{\alpha R}|}{|F|} \tag{13}$$

Proof of Result 5

The direct effect follows immediately from the first order condition for the optimal ownership structure using the implicit function theorem.

For the total effect we need to look at the sign of the determinant of the following matrix:

$$F_{\alpha I} = \begin{vmatrix} C' + C''\alpha & C''(I-D)\alpha \\ -\alpha C'' & -\alpha(1-\pi)(1-q)K'' - C''\alpha^2 \end{vmatrix}$$

This can be either positive of negative. Given that we know from Result 1 that $|F| > 0$, it follows immediately that the total effect can be either positive or negative, since it is given as

$$\frac{d\alpha}{dI} = \frac{|F_{\alpha I}|}{|F|} \tag{14}$$

To be completed!

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Table 1
Descriptive Statistics

	Definition	Mean	Std.deviation
Dependent Variables			
Leverage	Debt/ Total Capital	0.6182	0.3079
Ownership Share	Share of affiliate's equity held by German mother	0.5494	0.3601
Independent Variables (firm-level)			
Fixed/ Total Assets		0.2382	0.2704
Log(Sales)		9.1442	1.5031
Profit/ Total Assets		0.1670	
Retained Profits/ Total Assets		0.0553	0.1763
Independent Variables (country-level)			
Inflation		4.163699	15.1492
Log(GDP)		6.1555	1.6210
Log(GDP per Capita)		9.6471	1.0243
Political Risk	Index between zero and one with a higher index reflecting higher political risk.	0.1843	0.0853
Private Credit	Ration of private credit lent by deposit money banks to total GDP	0.8085	0.4057
Statutory Tax		34.0160	6.1491

Table 2
The Impact of Political Risk on Affiliate Leverage and Ownership Share

Dependent Variable	(1) Leverage	(2) Leverage	(3) Ownership Share	(4) Ownership Share
Political Risk	0.1358**	0.1675***	-0.1322*	-0.1404**
	(0.0563)	(0.0540)	(0.0675)	(0.0622)
Log (Sales)	0.0102***	0.0108***	-0.0055***	-0.0050***
	(0.0023)	(0.0022)	(0.0014)	(0.0014)
Profit/ Total Assets	-0.4608***	-0.4495***	-0.0182**	-0.0167**
	(0.0809)	(0.0846)	(0.0084)	(0.0080)
Fixed/ Total Assets	-0.0889***	-0.0764***	-0.0236**	-0.0295**
	(0.0194)	(0.0184)	(0.0107)	(0.0118)
Private Credit	-0.0309**	-0.0300*	-0.0410***	-0.0447***
	(0.0147)	(0.0162)	(0.0108)	(0.0091)
Inflation	-0.0000	-0.0005	-0.0001	0.0001
	(0.0001)	(0.0003)	(0.0001)	(0.0003)
Log (GDP)	-0.0018	-0.0078*	-0.0062*	-0.0030
	(0.0039)	(0.0042)	(0.0032)	(0.0031)
Log (GDP per Capita)	0.0206***	0.0214***	0.0284***	0.0269***
	(0.0069)	(0.0064)	(0.0086)	(0.0063)
Statutory Tax		0.0027***		-0.0016**
		(0.0007)		(0.0006)
Constant	0.2448***	0.1599**	0.7370***	0.7822***
	(0.0818)	(0.0800)	(0.0955)	(0.0848)
Observations	78917	73898	71114	66472
Number of Mothers	8059	7936	7985	7860
R-squared	0.15	0.15	0.05	0.05

OLS regression including mother fixed effects
Year and affiliate industry dummies included
Robust standard errors in parentheses
(Corrected for clustering by country)
*** p<0.01, ** p<0.05, * p<0.1

Datasources: Firm-level variables are taken from the Microdatabase Direct Investment of the German Bundesbank. Private Credit is provided in Beck et al. (1999). Inflation, Log of GDP, Log of GDP per capita are taken from the IMF. Statutory Tax rates are taken from the IFS, as well as from the Corporate Tax Guides of Ernst&Young, KPMG and Pricewaterhouse Coopers .

Table 3

Dependent Variable	(1) Ownership Share	(2) Ownership Share
Political Risk	-0.1382**	-0.1489**
	(0.0679)	(0.0617)
Leverage	0.0455***	0.0526***
	(0.0082)	(0.0074)
Log (Sales)	-0.0060***	-0.0056***
	(0.0013)	(0.0014)
Profit/ Total Assets	0.0025	0.0065
	(0.0078)	(0.0070)
Fixed/ Total Assets	-0.0197*	-0.0257**
	(0.0103)	(0.0114)
Private Credit	-0.0397***	-0.0432***
	(0.0109)	(0.0093)
Inflation	-0.0001	0.0002
	(0.0001)	(0.0003)
Log (GDP)	-0.0061*	-0.0025
	(0.0032)	(0.0031)
Log (GDP per Capita)	0.0275***	0.0258***
	(0.0087)	(0.0063)
Statutory Tax		-0.0018***
		(0.0006)
Constant	0.7257***	0.7735***
	(0.0959)	(0.0846)
Observations	71114	66472
Number of Mothers	7985	7860
R-squared	0.05	0.05

OLS regression including mother fixed effects
Year and affiliate industry dummies included
Robust standard errors in parentheses
(Corrected for clustering by country)
*** p<0.01, ** p<0.05, * p<0.1

Datasources: Firm-level variables are taken from the Microdatabase Direct Investment of the German Bundesbank. Private Credit is provided in Beck et al. (1999). Inflation, Log of GDP, Log of GDP per capita are taken from the IMF. Statutory Tax rates are taken from the IFS, as well as from the Corporate Tax Guides of Ernst&Young, KPMG and Pricewaterhouse Coopers .

Table 4
Test for Partial Correlation between Leverage and Retained Profits

Dependent Variable	(1) Leverage	(2) Leverage
Retained Profit / Total Assets	-0.2474**	-0.2446**
	(0.1112)	(0.1167)
Political Risk	0.1595***	0.1972***
	(0.0554)	(0.0503)
Log (Sales)	0.0117***	0.0124***
	(0.0024)	(0.0023)
Profit/ Total Assets	-0.4630***	-0.4518***
	(0.0820)	(0.0857)
Private Credit	-0.0269*	-0.0252
	(0.0139)	(0.0153)
Fixed/ Total Assets	-0.0903***	-0.0781***
	(0.0194)	(0.0183)
Inflation	-0.0000	-0.0004
	(0.0001)	(0.0003)
Log (GDP)	-0.0040	-0.0106**
	(0.0040)	(0.0041)
Log (GDP per capita)	0.0249***	0.0262***
	(0.0076)	(0.0069)
Statutory Tax		0.0029***
		(0.0007)
Constant	0.2149**	0.1185
	(0.0855)	(0.0845)
Observations	78917	73898
Number of mothers	8059	7936
R-squared	0.18	0.18

OLS Regression including mother fixed effects
Year and affiliate industry dummies included in regression
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Datasources: Firm-level variables are taken from the Microdatabase Direct Investment of the German Bundesbank. Private Credit is provided in Beck et al. (1999). Inflation, Log of GDP, Log of GDP per capita are taken from the IMF. Statutory Tax rates are taken from the IFS, as well as from the Corporate Tax Guides of Ernst&Young, KPMG and Pricewaterhouse Coopers .

Table 5
Instrumental Variables Regression
Leverage Instrumented by Retained Profits

Dependent Variable	(1) Ownership Share	(2) Ownership Share
Political Risk	-0.1529***	-0.1618***
	(0.0147)	(0.0155)
Leverage	0.1583***	0.1326***
	(0.0161)	(0.0163)
Log (Sales)	-0.0071***	-0.0065***
	(0.0007)	(0.0007)
Profit/ Total Assets	0.0538***	0.0419***
	(0.0085)	(0.0084)
Fixed Assets	-0.0101**	-0.0199***
	(0.0043)	(0.0043)
Private Credit	-0.0364***	-0.0410***
	(0.0023)	(0.0023)
Inflation	-0.0001	0.0002*
	(0.0000)	(0.0001)
Log (GDP)	-0.0059***	-0.0019***
	(0.0006)	(0.0007)
Log (GDP per Capita)	0.0252***	0.0241***
	(0.0014)	(0.0015)
Statutory Tax		-0.0020***
		(0.0001)
Constant	0.6976***	0.7603***
	(0.0245)	(0.0248)
Observations	71114	66472
Number of mothers	7985	7860

OLS Regression including mother fixed effects
Year and affiliate industry dummies included in regression
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Datasources: Firm-level variables are taken from the Microdatabase Direct Investment of the German Bundesbank. Private Credit is provided in Beck et al. (1999). Inflation, Log of GDP, Log of GDP per capita are taken from the IMF. Statutory Tax rates are taken from the IFS, as well as from the Corporate Tax Guides of Ernst&Young, KPMG and Pricewaterhouse Coopers .