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# Home country bias in divestment decisions of multinational corporations in the EU

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## Abstract

We empirically investigate the claim that Multinational Corporations (MNCs) suffer from a “home country bias” in the divestment decision process: MNCs prefer to divest from foreign affiliates because the emotional involvement and the commitment in divesting from local affiliates be larger. This is an issue not yet empirically explored in the economic literature, although quite recurrent in the political debate on FDI. By using detailed company-level data on EU business groups during the recent economic crisis (2008-2014), we show that, although there is some *prima facie* empirical evidence of a home country bias, it is not robust and tends to disappear controlling for firm-, country- and sector-specific factors.

*Keywords:* European Union, FDI, Foreign divestment, Multinational enterprises

*JEL Classification:* C21, D22, F23, G34, L25

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## 1. Introduction

The European Union (EU) has always been a member of the “triad”, i.e. one of the most important areas in the world together with the United States and Japan, as source and destination of Foreign Direct Investment (FDI). In 2007, EU FDI inflows reached the peak level of \$798 billion, about 43% of total world inflows. With the beginning of the Great Recession in 2008, these flows have started to reduce dramatically. In 2014, FDI inflows to the EU countries

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worth \$258 billion, accounting for 21% of the world total. Inflows fell in 18 out of 28 European countries. During the same period, inward FDI stocks in the EU countries increased on average by 1.7% per year. Despite that, the EU share of inward FDI stocks fell down, from 40% in 2007 to 32% in 2014 (UNCTAD, 2015).

Although FDI reflects long-lasting interest in foreign operations, these figures suggest that, on the one hand, divestment might be quite widespread; on the other hand, they raise concerns about the stability of foreign investment, especially during periods of economic turmoil. Indeed, many countries pursue active policies for attracting FDI. These policies are based on the expected benefits from foreign investment, which are supposed to bring into the country resources, technologies, knowledge and skills that domestic firms do not possess (e.g. van Pottelsberghe de la Potterie and Lichtenberg, 2001; Görg and Strobl, 2001; Görg and Greenaway, 2004; Branstetter, 2006). Clearly, these potential benefits are more relevant the less footloose multinational corporations (MNCs) are.

Exit dynamics of foreign firms have not received the same attention as entry dynamics.<sup>1</sup> Several reasons may explain such lack of coverage. First of all, quantitative information is difficult to obtain, since exits are often considered as an admission of failure (McDermott, 2010; Benito, 1997). Secondly, the divestment decision is one of the most difficult to take: “if investment is a hopeful affair like marriage, divestment is more like divorce” (Boddewyn, 1983a, p.27). It involves unpopular decisions that may damage the reputation and the image of the company both at home and in the host countries.

This notwithstanding, it is usually claimed that foreign divestments are simpler operations than domestic ones, since the approach is more “impersonal” and “the victims are far away – both spatially and emotionally” (Boddewyn, 1983a, p.31). This argument is better illustrated by considering the following anecdotes. In 2014, AB Electrolux, a leading Swedish multinational, announced its decision to restructure its production network in order to enhance efficiency by dismissing some plants. The closure decision was a choice between two production sites: one located in Schwanden (Switzerland) and the other located in Mariestad (Sweden). The company eventually decided to dismiss the Swiss plant. In 1998, Siemens Semiconductors closed one of its three semiconductor plants in Europe. These plants were located in France, UK and Germany. Once again, the choice was between the UK and the German plant, and the final decision was to stop the production in the UK.<sup>2</sup> Another interesting example is the case of Avesta Sheffield, another Swedish multinational that in 1998 decided to close a production plant in the UK and retained a production plant in Sweden (see Richbell and Watts, 2000, for a detailed description of the case). In all these

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<sup>1</sup>McDermott (2010) wrote about foreign divestment as the “neglected area among the international business and business strategy academics” (2010, p.37), while Norbak et al. (2015) pointed out that there is still a gap in the literature “about the decisions of MNCs to divest affiliates” (2015, p.811).

<sup>2</sup>The French plant did not enter into the decision, since it was run jointly with IBM (Richbell and Watts, 2000).

cases, public opinion was particularly negative, and despite the lack of strong evidence sustaining such a claim, it was believed that the decision to close down or sell the subsidiary would not have been taken had a factory been managed by national owners.

These examples hint at the existence of a possible “home country bias” in divestment decisions of MNCs, i.e. the possibility that MNCs are more likely to divest production plants located abroad rather than in their own home country. Economic downturns might further exacerbate this bias, provided that it does exist.

The issue of foreign divestment has received scant attention by scholars to date, both from a theoretical and an empirical perspective. As for the former, [Boddewyn \(1983b\)](#) suggest that foreign divestment, i.e. “deliberate and voluntary reduction or elimination of actively controlled foreign subsidiaries and branches through sale or liquidation” ([1983b](#), p.346), can be treated as the reverse process of foreign investment. From this perspective, the factors driving foreign divestment are the same as foreign investment, with the opposite sign, and some empirical works provide support to this “reversed theory” ([Boddewyn, 1979](#); [Chen and Wu, 1996](#); [Belberdos and Zou, 2006](#)). Although the empirical evidence is not conclusive, the most important incentives to exit are low profits, poor performance and low productivity, which in turn may be due to high costs, permanent decreases in demand or the entry of new, more efficient competitors, as well as by uncertainty, government instability and regulatory inefficiency ([Berry, 2013](#); [Benito, 1997, 2005](#); [Harrigan, 1981](#); [Belberdos and Zou, 2006](#)).

Besides concerns about profit and performance, as well as other (both subsidiary and parent) firm characteristics, market factors can also play a role in divestment decisions. In particular, empirical evidence suggests that divestment probability responds positively to product unrelatedness and product and geographical diversification, and negatively to age, size, experience in market, the degree of integration within the group and sunk costs ([Berry, 2013](#)). Subsidiaries with product lines related to the parent firm’s core business may benefit from synergies that come from sharing not only resources, but also knowledge and information and from cooperation with other subsidiaries. Control and effort losses may also arise from diversification, both at geographic and productive level. The further away from the core activities of the group a unit is, the less likely intergroup communication and cooperation are, and the greater the likelihood of divestment ([Berry, 2013](#)).

Many scholars have confirmed the existence of a “liability of newness” ([Stinchcombe, 1965](#); [Geroski, 1995](#)), i.e. a positive relationship between firms’ age and divestment (e.g. [Freeman et al., 1983](#); [Dunne and Hughes, 1994](#); [Carroll and Hannan, 2000](#)).<sup>3</sup> Also smallness may generate disadvantages that increase the probability of divestment (e.g. [Jovanovic, 1982](#); [Pakes and Ericson, 1998](#); [Honjo, 2000](#); [Norbak et al., 2015](#)). Finally, multiproduct plants have better chance to

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<sup>3</sup>Some authors find evidence of a nonlinear inverted U-shaped relationship between the firm’s age and its survival probability (e.g. [Bruderl and Schussler, 1990](#); [Mahmood, 2000](#)).

survive than single product units, because sunk costs related to the production of multiple goods and services reduces competition by incumbent and exit probability (Bernard et al., 2007).

Despite these studies provide information about the magnitude and causes of foreign divestment, they are not useful in understanding whether this decision process is similar to those of domestic firms;<sup>4</sup> or if there is some systematic difference in the way MNCs treat local vs. foreign branches in divestment decisions. The above mentioned studies actually adopt a one-country perspective: either the home (Benito, 2005; Berry, 2013; Norbak et al., 2015) or the host country (Godart et al., 2012; Soule et al., 2014; Chen and Wu, 1996). This implies that they cannot analyze foreign divestment as part of an international or regional plant network strategy of MNCs (Belberdos and Zou, 2006). Another limitation of these studies is that they barely compare firms across different industries and distinguish foreign from domestic divestment.<sup>5</sup>

The purpose of this paper is to investigate these issues. More specifically, we analyze companies closure and exit rates within business groups in the EU27 during the recent economic crisis (2008-2014). We consider groups of different nationality and search for systematic differences in company exit rates between national and foreign branches in the group not accounted for by other firm-, industry- and (home and host) country-specific factors.

Results show that there is some *prima facie* empirical evidence of a home country bias. However, this evidence is not robust and tends to disappear when one accounts for firm characteristics as well as industry and (home and host) country specific effects.

The rest of the paper is organized as follows. Section 2 describes the data, the variables and discusses the empirical strategy. Section 3 presents the main results. Section 4 concludes.

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<sup>4</sup>Several reasons suggest that significant differences may exist. First, while most domestic firms are independent companies, foreign firms are usually part of a network. Therefore, they might exhibit greater longevity than domestic firms with similar characteristics (Mata and Portugal, 2002). Second, MNCs are more footloose than are their domestic counterparts; therefore, the probability to leave an economy, should this economy experience an economic downturn, is higher for foreign than for domestic enterprises (Alfaro and Rodríguez-Clare, 2004; Driffield and Noor, 1999; Görg and Strobl, 2003). The less embeddedness into host economies of foreign firms reflects the fact that foreign firms, being part of international production networks, tend to source their production resources mainly from abroad. At the same time, they are more export oriented than domestic firms. This implies that the local market is less important for foreign firms than for domestic ones (Godart et al., 2012). Some authors suggest that the opposite reasoning may also apply. Foreign firms are less likely to exit because the sunk costs related to the activity of investing abroad are likely to be higher than those related to the settlement of a domestic production plant. In order to be able to afford the burden of higher sunk costs, foreign firms need to be more productive than domestic ones (Doms and Jensen, 1998; Helpman et al., 2004; Girma and Görg, 2007; Godart et al., 2012).

<sup>5</sup>Notable exceptions are Godart et al. (2012) and Norbak et al. (2015), who however adopt a one-country perspective, i.e. Ireland (host country) and Norway (home country) respectively.

## 2. Data description and empirical strategy

By using data on financials and ownership structure drawn from Amadeus, a dataset edited by Bureau van Dijk, we started considering all the companies active in 2008 located in the EU-27, i.e. before the financial and economic crisis started to hit Europe and retain only the companies for which a Global Ultimate Owner(s) (GUO) – i.e., an independent entity whose (direct plus indirect) share in the company is greater than 50% – is identified (1,524,654 companies).

For these companies we checked whether they were still active in 2014<sup>6</sup> and collect data on location, core and secondary business codes (4-digit NAICS 2012 classification), year of incorporation, employees and turnover from 2006 to 2009.

For each GUO we collect data on country and sector (at the 2-digit NACE Rev.2) when the GUO is a company. In the sample, there are 1,211,894 distinct GUOs. Each GUO identifies a different business group. For a subsample (11,232 GUOs), we observe both subsidiaries in the home country and abroad: these are international business groups which have national and foreign branches in the EU27.

Table 1 shows the distribution by country of these GUOs. Table 2 reports the mean size of the national and foreign branches of business groups – i.e. the number of companies having the same GUO in the GUO home country and abroad – along with its standard deviations.<sup>7</sup>

Finally, Table 3 summarizes the distribution of the exit rates from 2008 to 2014 computed within national/foreign branches of each business group.<sup>8</sup> The mean exit rate in foreign branches is 1.40%, greater than the mean rate in national branches (0.84%): +0.56 p.p. (Table 3). The difference amounts to 0.33 p.p. (from 0.90% to 1.23%) in the subset of international business groups with both national and foreign branches in the sample.

Such difference hints at a possible “home country bias” in divestment decisions of MNCs in the EU27, i.e. their preference for foreign divestments over national ones in economic downturns.

A simple way to test for the presence of this systematic difference accounting for GUO unobserved factors is to treat the exit rates in national branches and foreign branches as pair samples matched at the GUO level. Under the null of no home country bias the sample mean of the differences of paired data should not be statistically significant; under the alternative that sample mean should be statistically smaller than zero.

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<sup>6</sup>A firm has been considered inactive if in liquidation, bankruptcy, dissolved, or if no financial information has been provided for the last six years. A firm may dissolve because of a merger or take-over, a de-merger, after liquidation or at the end of the bankruptcy process. Companies with an unknown status have been deleted.

<sup>7</sup>There are 178,384 companies with two GUOs. Such companies have been attributed to two different groups.

<sup>8</sup>The exit rate of the national (foreign) branch of a business group is equal to the number of inactive companies over the total number of companies with the same GUO located in the same (a different) country of the GUO.

Table 1: Geographical distribution of GUOs

Country		GUO with local and foreign companies					
		No		Yes		Total	
		No.	%	No.	%	No.	%
EU27	AT	36,720	3.1	753	6.7	37,473	3.1
	BE	15,900	1.3	742	6.6	16,642	1.4
	BG	8,266	0.7	8	0.1	8,274	0.7
	CY	1,384	0.1	8	0.1	1,392	0.1
	CZ	9,572	0.8	57	0.5	9,629	0.8
	DE	426,023	35.5	2,573	22.9	428,596	35.4
	DK	27,749	2.3	607	5.4	28,356	2.3
	EE	1,381	0.1	22	0.2	1,403	0.1
	ES	132,684	11.1	506	4.5	133,190	11.0
	FR	21,535	1.8	474	4.2	22,009	1.8
	GB	39,581	3.3	985	8.8	40,566	3.3
	GR	7,374	0.6	54	0.5	7,428	0.6
	HR	6,056	0.5	19	0.2	6,075	0.5
	HU	958	0.1	8	0.1	966	0.1
	IE	7,946	0.7	820	7.3	8,766	0.7
	IT	226,779	18.9	1,459	13.0	228,238	18.8
	LT	2,400	0.2	21	0.2	2,421	0.2
	LU	3,418	0.3	65	0.6	3,483	0.3
	LV	3,219	0.3	18	0.2	3,237	0.3
	MT	385	0.0	11	0.1	396	0.0
	NL	62,634	5.2	1,263	11.2	63,897	5.3
	PL	8,767	0.7	45	0.4	8,812	0.7
	PT	9,532	0.8	74	0.7	9,606	0.8
	RO	82,066	6.8	9	0.1	82,075	6.8
	SE	23,742	2.0	560	5.0	24,302	2.0
	SI	7,954	0.7	39	0.3	7,993	0.7
	SK	1,447	0.1	32	0.3	1,479	0.1
RoW	CH	4,208	0.4	0	0.0	4,208	0.3
	US	5,860	0.5	0	0.0	5,860	0.5
	Others	15,122	1.3	0	0.0	15,122	1.2
Total		1,200,662	100.0	11,232	100.0	1,211,894	100.0

Table 2: Means, standard deviations and frequencies of business groups size across foreign/national branches

	GUOs with local and foreign companies								
	No			Yes			Total		
	Mean	S.D.	Obs.	Mean	S.d.	Obs.	Mean	S.D.	Obs.
National companies	1.27	1.20	1,150,495	7.10	28.69	11,232	1.33	3.12	1,161,727
Foreign companies	2.14	7.37	50,167	4.66	18.11	11,232	2.61	10.26	61,399
Overall	1.31	1.92	1,200,662	11.76	42.12	11,232	1.41	4.59	1,211,894

Table 3: Means, standard deviations and frequencies of exit rates across foreign/national branches of business groups

	GUOs with local and foreign companies								
	No			Yes			Total		
	Mean	S.D.	Obs.	Mean	S.d.	Obs.	Mean	S.D.	Obs.
National companies	0.84%	8.84	1,150,495	0.90%	6.90	11,232	0.84%	8.83	1,161,727
Foreign companies	1.44%	11.31	50,167	1.23%	9.41	11,232	1.40%	10.99	61,399
Overall	0.87%	8.96	1,200,662	1.06%	5.78	11,232	0.87%	8.94	1,211,894

This amounts to regress  $e_{jf}$ , the exit rate in the national/foreign branch –  $f \in \{\text{national, foreign}\}$  – of the international business group  $j$ , on a series of GUO dummies ( $\mu_j$ ) and a dummy  $h_f$  equal to one if the branch is national and zero otherwise:

$$e_{jf} = \beta_0 + \mu_j + \beta_1 h_f + u_{jf} \quad (1)$$

and test for the statistical significance of  $\beta_1$ .

Since exit rates are computed at the national/foreign branch level of each business group and their size is different, a rather natural set of weights is made up of the branch size. Equation (1) can be therefore estimated more efficiently by Weighted Least Squares (WLS), with weights equal to the number of companies over which rates are computed.<sup>9</sup>

In fact, the former procedure produces the same point estimate of the “home country bias” as the following simple Linear Probability Model (LPM):

$$y_i = \alpha_0 + \mu_j + \alpha_1 h_{ij} + \nu_i \quad (2)$$

where  $y_i$  is a dummy equal to 1 if the company is inactive and 0 otherwise,  $\mu_j$  are GUO dummies,  $h_{ij}$  is a dummy equal to 1 if the company and its GUO are located in the same country and 0 otherwise, and the “home country bias” is given by  $\alpha_1$ .

Equation (2) also allows us to include other controls at the level of the individual company ( $\mathbf{X}_i$ ) and of the GUO-company paired characteristics ( $\mathbf{Z}_{ij}$ ):

$$y_i = \alpha_0 + \mu_j + \alpha_1 h_{ij} + \alpha_2 \mathbf{X}_i + \alpha_3 \mathbf{Z}_{ij} + \nu_i \quad (3)$$

In particular, in line with the literature on firm exit and foreign divestment, we control for: i) country- and sector-specific factors, by including sector and country dummies in the specification; ii) company-level characteristics, by including the age of the company<sup>10</sup> and size dummies;<sup>11</sup> iii) factors associated with the relation between the subsidiary and the parent firm, by including a dummy equal to one if the firm and its GUO operate in the same sector.<sup>12</sup>

### 3. Results

Columns (1) and (2) of Table 4 summarizes the results of the OLS and WLS estimates of the home country bias from Equation (1). Results show that there is some *prima facie* evidence of the bias: the mean exit rate in national branches

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<sup>9</sup>This can be easily justified from a theoretical perspective if the exit equation at the level of the individual company satisfies the Gauss-Markov assumptions, so that the error  $\epsilon_{jf}$  in (1) has a variance proportional to the inverse of the branch size.

<sup>10</sup>In order to account for possible nonlinearities in the effect of age on exit probability, we include also the squared age.

<sup>11</sup>Firms were classified as micro, small, medium or large on the base of their 2006-10 average employees and turnover, following the criteria set by the European Commission in the Commission Recommendation of May 6<sup>th</sup>, 2003.

<sup>12</sup>When the GUOs is not itself a company the dummy has been set to zero.



Table 4: OLS and WLS estimation results

	Whole subsample		Business groups having experienced shutdowns	
	(1) OLS	(2) WLS	(3) OLS	(4) WLS
Home country bias	-.00336*** (.00106)	-.00316*** (.00073)	-.0463*** (.0145)	-.00930** (.00466)
Distinct GUOs (absorbed)	11,232	11,232	814	814
Observations	22,464	22,464	1,628	1,628

Dependent variable: exit rate in the national/foreign branch of each international business group. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .  
In Weighted Least Squares (WLS), weights given by the size of the national/foreign branch for each group before the crisis.

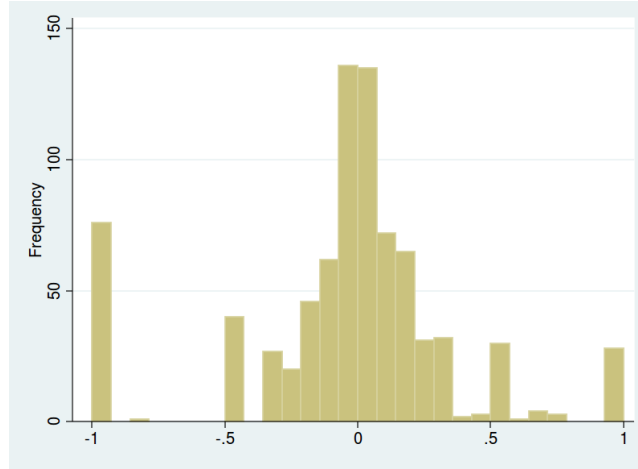


Figure 1: Frequency histogram of the difference of exit rates in national vs. foreign branches in business groups operating in at least two EU countries and having experienced some closure from 2008 to 2014 ( $N = 814$ )

of international business groups is significantly lower than in foreign branches of the same groups.

Moreover, the bias turns out to be greater when we restrict the sample and consider only the international business groups having experienced at least an exit from 2008 to 2014, as these are the groups likely hit by the crisis and forced to shutdown some companies in their branches (columns (3) and (4)). Figure 1 shows the frequency histogram of the difference of exit rates between national and foreign branches of such groups, providing further mild evidence of a “home country bias”.<sup>13</sup>

<sup>13</sup>Although the t-test rejects the null of zero expected value ( $t = -3.19$ , two-tailed  $p$ -value = .0015), the evidence is not strong enough for the Wilcoxon signed-rank test to reject the null of the distribution being symmetric about zero ( $z = -1.073$ ,  $p$ -value = .28).

As argued in Section 2, a WLS estimator at the international business group level with weights equal to the national/foreign branch size produces the same point estimate of the home country bias of the LPM estimated at the individual-company level (Equation 2). This can be easily seen by comparing the estimates in columns (2) and (4) of Table 4 with the estimates of column (1) of Tables 5 and 6 respectively.

Although the OLS and WLS estimates in Table 4 control for the unobserved heterogeneity at the business group level, they do not control for the other factors at the level of the individual subsidiary that might systematically affect the probability of divestment. This is something that can be instead easily done when we directly model and estimate the individual exit Equation (3).

In particular, in column (2) of Tables 5 and 6 we introduce country dummies to control for the common unobserved factors at the level of the individual country where the subsidiary company is located. Since on average foreign subsidiaries are located in countries severely hit by the crisis and this *ceteris paribus* increases the probability of divestment, the introduction of such controls reduces the point estimate and the significance of the home market effect.<sup>14</sup>

In columns (3)-(6) of Tables 5 and 6 we add controls for the sector, age and size of the subsidiary and a dummy equal to one if the sector of the parent company and the subsidiary is the same, to control somehow for business relatedness. Results confirm the “liability of newness” (the older the company, the lower the closure probability)<sup>15</sup> and the “liability of smallness” (the smaller the company, the higher the closure probability). Divestment turns out to be slightly more likely for companies operating in the same sector of the parent companies. This may suggest that horizontal FDI are more likely to be divested than vertical FDI, since the former are less integrated within the group than the latter and duplicate activities already carried out by other plants.<sup>16</sup>

Last but not least, it is worth noting that when the full set of controls is accounted for the home country bias tends to disappear. This implies that the empirical evidence in favor of such bias, although present, is not strong enough to pass a tougher test.

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<sup>14</sup>For estimating the LPMs, we use the OLS estimator and compute robust standard errors to correct for heteroskedasticity. Although for the LPM the OLS estimator is unbiased and consistent, it is inefficient. An asymptotically more efficient linear estimator can be computed as follows: i) estimate the model by OLS and obtain the fitted values  $\hat{y}_i$ ; ii) bring all the fitted values into the unit interval (in particular, we set  $\hat{y}_i = .001$  when  $\hat{y}_i < 0$ ); iii) compute the estimated variances  $\hat{\sigma}_i = \hat{y}_i(1 - \hat{y}_i)$ ; iv) estimate the main equation by WLS using weights  $\hat{\sigma}_i^{-1}$  (see Wooldridge, 2010, pp. 562-565). This WLS estimator in our case produces estimates rather similar to the ones produced by the OLS estimator in terms of sign, size and significance. We therefore decided to report and discuss only the latter. Results available at request.

<sup>15</sup>Nonlinear effects, although present and statistically significant, are practically insignificant as the coefficient attached to the square of age, although positive as expected, is very close to zero.

<sup>16</sup>This result is not in line with previous similar studies (e.g. Benito, 1997), which, however, take a narrow perspective than the present study and, therefore, cannot be generalized.

Table 5: Linear Probability Model estimation results

	(1)	(2)	(3)	(4)	(5)	(6)
Home country bias	-.00316*** (.000726)	-.00140* (.000776)	-.000863 (.000773)	-.000965 (.000757)	.000189 (.000759)	.000162 (.000738)
Age			-.0000707*** (.0000207)	-.0000751*** (.0000207)	-.0000277 (.0000184)	-.0000310* (.0000183)
Age <sup>2</sup>			1.83e-07*** (6.82e-08)	1.89e-07*** (6.98e-08)	7.86e-08* (4.71e-08)	8.26e-08* (4.81e-08)
GUO-firm same sector			.00206* (.00116)	.00246** (.00122)	.000675 (.00115)	.000217 (.00116)
Headquarter				-.00119 (.000955)		-.00180* (.000928)
Services				-.000988 (.000851)		-.00177** (.000890)
Small					-.00361*** (.000947)	-.00329*** (.000925)
Medium					-.00751*** (.000995)	-.00717*** (.000972)
Large					-.0109*** (.00118)	-.0106*** (.00115)
Country dummies (26)	No	Yes	Yes	Yes	Yes	Yes
2-digit NAICS sector dummies (23)	No	No	Yes	No	Yes	No
Distinct GUOs (absorbed)	11,232	11,232	11,232	11,232	10,547	10,547
Observations	132,120	132,120	129,945	129,945	93,937	93,937

Dependent variable: dummy equal to 1 if the company is not active in 2014 and 0 otherwise.  
Heteroskedasticity-robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 6: LPM estimation results: subsample of companies in a business group having experienced at least a shutdown

	(1)	(2)	(3)	(4)	(5)	(6)
Home country bias	-.00930*** (.00206)	-.00709*** (.00228)	-.00590*** (.00225)	-.00609*** (.00223)	.000570 (.00221)	.000145 (.00218)
Age			-.000200*** (.0000534)	-.000205*** (.0000532)	-.0000882* (.0000478)	-.0000940** (.0000472)
Age <sup>2</sup>			4.46e-7** (2.19e-7)	4.35e-7* (2.24e-7)	1.78e-7 (1.13e-7)	1.73e-7 (1.16e-7)
GUO-firm same sector			.00421 (.00270)	.00495* (.00267)	.00232 (.00281)	.000878 (.00273)
Headquarter				-.00430* (.00255)		-.00481* (.00280)
Services				-.00292 (.00216)		-.00374* (.00225)
Small					-.0120*** (.00277)	-.0111*** (.00272)
Medium					-.0217*** (.00271)	-.0207*** (.00265)
Large					-.0291*** (.00290)	-.0280*** (.00282)
Country dummies (26)	No	Yes	Yes	Yes	Yes	Yes
2-digit NAICS sector dummies (23)	No	No	Yes	No	Yes	No
Distinct GUOs (absorbed)	814	814	814	814	762	762
Observations	45,224	45,224	44,227	44,227	30,097	30,097

Dependent variable: dummy equal to 1 if the company is not active in 2014 and 0 otherwise.  
Heteroskedasticity-robust standard errors in parentheses. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 4. Conclusions

Using company-level data on international business groups at the European level (EU27) during the recent economic crisis, in this paper we analyze divestment decisions taking into account different locations and comparing whether and to what extent domestic affiliates are less likely to be divested with respect to foreign affiliates during periods of economic turmoil. This is in contrast with the existing literature that does not distinguish between intra-national and cross-boundary closures.

Prima facie empirical evidence somehow confirms that domestic affiliates are less likely to be divested than foreign ones. However, when controlling for country specific effects and the characteristics of each affiliate, the empirical evidence in support of this home bias tends to disappear.

There are interesting and novel implications from our results. First of all, divestment is the product of a complex restructuring strategy within an international business group, which does not seem to be affected by emotional elements. Secondly, economic downturns, *per se*, do not make MNCs more footloose. The lack of evidence on these important facts suggests that host countries should maintain and strengthen their efforts to attract foreign investment.

Despite the fact that we analyze company closures by using data on a large number of companies and international business groups, and we account for industry and country specific factors, some caveats are in order. First of all, while employees and financial data are reported annually in Amadeus, so that we are able to calculate either annual changes or averages over the period, structural data – i.e. sector of activity, location, and, most importantly, ownership structure with the associated company’s Global Ultimate Owner (GUO) – refer to the latest available year only. This may represent a severe shortcoming of the analysis, in particular as far as the ownership structure is concerned, because it is not possible to know whether or when it has changed over the period.<sup>17</sup> Secondly, there could exist other factors able to affect MNCs divestment decisions that may worth including in the analysis; for instance: the impact of distance, both physical and cultural; the presence of other affiliates belonging to the same business group in the location; the presence of imitation effects among MNCs; as well as the intensity and the nature of the economic downturns (i.e., financial crisis vs. permanent decline in demand or sovereign debt crisis).

Moreover, besides the home market bias, there are other aspects of foreign divestment that seems worth studying, as, for example, the capacity to survive during economic turmoil, that might be different between domestic and foreign firms; the different effects of the factors affecting the exit probability between foreign and domestic firms. These extensions are all feasible, and will further improve the present knowledge on MNCs’ divestment process, since cross-boundary

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<sup>17</sup>In order to overcome this shortcoming, we tried to integrate the data by using another dataset from Bureau van Dijk (Orbis), which includes also historical data. However, since the coverage has increased over time, there were a lot of missing values, in particular as far as the information on GUOs was concerned. So we eventually decided not to use these data.

closures are likely to increase and become more important as the EU market becomes larger in size and easier of internal movements ([Richbell and Watts, 2000](#)).

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