FDI and credit constraints: The role of foreign subsidiaries

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Valencia's Fiesta

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Valencia's Fiesta



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Valencia's Fiesta



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Ford in Valencia

- In June 2011, Ford announced its biggest reinvestment (€812 million or \$1.2 billion) in the Spanish plant since 35 years (Reuters, 2011).
- Two years later, in May 2013, the Spanish plant finally received 72% of the planned investment (Euro Weekly News, 2013).
- The Spanish Registry for FDI accounted an 86% increase of new foreign investment in automobile manufactures during that period (excluding Ford's).

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Outline



Motivation

- Example
- Contributions
- Stylized facts on Reinvestment
- The model
 - Domestic production
 - Foreign production
 - The role of foreign subsidiaries
- Emprical Strategy
 - Results
 - OLS & PPML
 - Quantile Regressions
 - Robustness & Endogeneity

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Conclusions

- presents a model for FDI finance which includes capital, labor and credit constraints.
 - gives theoretical substance to previous empirical findings (Gil-Pareja *et al.*, 2013)
- Provides a rationale to explain the role of settled affiliates in new FDI: and
- In provides empirical evidence suggesting that settled investors
 - Increase Greenfield FDI
 - Offset credit constraints at home
 - Offset distance costs

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Global FDI flows (and projections)



 Source: World Investment Report (WIR), 2013
 Image: Algorithm of the second se

Fact 1: Credit constraints impact FDI.



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Greenfield projects represent a significant share of FDI outflows (WIR, 2013)

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Greenfield projects decreased during the crisis (Gil-Pareja *et al.*, 2013)

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Developed economies Co-Location

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Summary statistics

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		Green field	Reinvestment	
Number of Projects	Total	76,380	12,888	
Jobs created	Total	15,071,984	3,092,384	
	Average	197	239	
Capital investment*	Total	5,599,262	1,056,642	
	Average	73.30	82	
Source: FDIMarkets, period 200-2010, (*million USD)				

Table: Summary statistics

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Figure: Greenfield & Reinvestment FDI



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• Credit constraints affect FDI

- Empirical evidence reveals certain heterogeneity: greenfield vs. reinvestment
- Reinvestment in foreign affiliates may spill-over to other foreign firms
 - and financial constraints play a role in the magnitude of the spill-over.
- The aim of this paper is to connect the dots between greeneld FDI, credit constraints and foreign subsidiaries,

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Take Away

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 - and financial constraints play a role in the magnitude of the spill-over.
- The aim of this paper is to connect the dots between greeneld FDI, credit constraints and foreign subsidiaries, as facilitators of access to foreign credit

• Greenfield firms choose between domestic and foreign capital finance in a Melitz framework

- Domestic finance entails transfer costs and foreign finance bears search costs.
- Firms determine their financial choice with their financial ability in foreign markets.
 - Foreign affiliates alleviate the searching costs in the foreign financial market.
- Credit constraints limit the effect of foreign affiliates
 - at the source country encourage the search for foreign finance
 - at the host country mitigate the positive effect of settled affiliates

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• A firm k from country i uses capital and labor to produce goods

- The firm procures capital through negotiation with domestic banks :
 - At this point, capital costs are only related to interest rates $(r_i + 1)$.
 - We assume that search costs are irrelevant for domestic firms
- Limited commitment between the firm and the bank: incomplete contracts (Nunn, 2007)

Domestic Production

 $\max_{K,L} \pi_{iz}^{Dom} = \max\{\rho_i \theta_z(K_D)^a(L)^b - (r_i+1)((1-\gamma_i)+\gamma_i \delta) K_D - w_i L - f_i\},\$

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Trade

The firm starts exporting to country j and faces transfer prices of $p_{ij} = p_i/\tau_{ij}$, where τ_{ij} is iceberg type costs between countries, which increases with distance:

$$\max_{K,L} \pi_{ijz}^{Exp} = \max\{p_i \tau_{ij}^{-1} \theta_z(K_D)^a(L)^b - (r_i + 1)((1 - \gamma_i) + \gamma_i \delta) K_D - w_i L - f_i\}$$

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Foreign Production with domestic finance

The MNE faces the following problem to determine its cross border investment:

$$\max_{K,L} \pi_{ijz}^{FDI(K_D)} = \max\{p_j \theta_z(K_D)^a(L)^b - \tau_{ij}(r_i+1)((1-\gamma_i)+\gamma_i\delta)K_D - w_jL - f_j\}$$

Foreign Capital and labor

$$\begin{split} \mathcal{K}_{D}^{*} &= \begin{cases} \left(\frac{p_{j}\theta_{z}\,a\sigma^{b}}{\left(\tau_{ij}\left(r_{i}+1\right)\left(\left(1-\gamma_{i}\right)+\gamma_{i}\delta\right)\right)^{1-b}w_{j}^{b}} \right)^{\frac{1}{1-\mu}} & \text{if } \pi_{ijz}^{FDI(K_{D})} > \pi_{ijz}^{Exp} \\ 0 & \text{otherwise.} \end{cases} \\ \mathcal{L}^{*} &= \begin{cases} \left(\frac{p_{j}\theta_{z}\,b\sigma^{-a}}{\left(\tau_{ij}\left(r_{i}+1\right)\left(\left(1-\gamma_{i}\right)+\gamma_{i}\delta\right)\right)^{a}w_{j}^{1-a}} \right)^{\frac{1}{1-\mu}} & \text{if } \pi_{ijz}^{FDI(K_{D})} > \pi_{ijz}^{Exp} \\ 0 & \text{otherwise.} \end{cases} \end{split}$$

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Foreign Production with foreign finance

- The firm chooses finance if it is able to negotiate with foreign creditors in the same terms as indigenous firms.
- This scenario is similar to domestic production
 - the bank in *j* lends capital to firm which will operate in *j*.
 - no transaction costs associated with distance.
- We assume that this depends on adeptness of other subsidiaries to the foreign financial market.

Our firm faces now the following limitation

$\max_{K,L} \pi_{ijz}^{FDI(K_F)} = \max\{p_j \theta_z(K_F)^a(L)^b - c_{ijz}(r_j+1)((1-\gamma_j)+\gamma_j\delta)K_F - w_jL - f_j\}$

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Our firm faces now the following limitation

$$\max_{K,L} \pi_{ijz}^{FDI(K_F)} = \max\{p_j \theta_z(K_F)^a(L)^b - c_{ijz}(r_j+1)((1-\gamma_j)+\gamma_j\delta)K_F - w_jL - f_j\}$$

$$ho = rac{ au_{ij}(r_i+1)\left((1-\gamma_i)+\gamma_i\delta
ight)}{c_{ijz}(r_j+1)\left((1-\gamma_j)+\gamma_j\delta
ight)} > 1$$

Foreign finance increases in the:

- 💶 distance between countries
 - if an affiliate is present!
- Interpretent of the source country Interpretent of the source country
- Interpretent in the source country is a second s

Foreign finance decreases in the

- financial frictions of the host country
- 2 financial costs of the host country

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FDI and credit constraints

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Effect on capital and employment

• The foreign finance parameterho measures the effect of access to foreign credit greenfield FDI:

$$K_F^* = \rho^{\frac{1-b}{1-\mu}} K_D^*$$
(1)
$$L_F^* = \rho^{\frac{a}{1-\mu}} K_D^*.$$
(2)

- The model leads to three main predictions for foreign capital investment and foreign jobs:
 - Access to foreign credit through foreign affiliates reduces the negative impact of distance on FDI
 - ullet If an affiliate is present, ho increases with distance
 - and reduces the impact of systemic banking crises at home and increase investment, but
 - I foreign finance is limited by credit constraints at the host country.

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FDI and credit constraints

	FI	DI	Extensiv	e Margin	Forein	g Jobs
	(1)	(2)	(3)	(4)	(5)	(6)
ln (D _j)	-0.202***	-0.427**	-0.073***	-0.328***	-0.221***	-0.398***
	(0.03)	(0.03)	(0.01)	(0.03)	(0.03)	(0.04)
colj	0.388***	0.537***	0.142***	0.559***	0.320***	0.471***
	(0.07)	(0.05)	(0.02)	(0.06)	(0.07)	(0.07)
lang _i	0.375***	0.472***	0.089***	0.426***	0.343***	0.673***
	(0.06)	(0.05)	(0.02)	(0.06)	(0.06)	(0.07)
smctry _j	0.175	0.130	0.002	-0.007	0.196	-0.084
	(0.15)	(0.09)	(0.04)	(0.09)	(0.14)	(0.16)
border j	0.125	0.024	0.070**	0.928	0.215***	0.132
	(0.0768)	(0.06)	(0.02)	(0.06)	(0.07)	(0.08)
rel _ĝ	0.226*	0.383***	0.094**	0.213***	0.168*	0.128
	(0.119)	(0.12)	(0.03)	(0.10)	(0.10)	(0.11)
comcur _{ĝ t}	0.012	0.051	-0.005	-0.005	0.048	-0.041
	(0.04)	(0.03)	(0.01)	(0.03)	(0.03)	(0.04)
FTA șt	0.0813	0.030	-0.016	0.100**	0.048	0.218***
	(0.06)	(0.05)	(0.01)	(0.04)	(0.05)	(0.07)
BIT _{it}	-0.152***	-0.107**	-0.083***	-0.158***	-0.147***	-0.090*
	(0.05)	(0.05)	(0.01)	(0.04)	(0.04)	(0.0)
Z _{jt}	0.146*	0.148**	0.027	0.113	0.054	0.240**
	(0.08)	(0.07)	(0.03)	(0.09)	(0.07)	(0.09)
$Z_{ijt} * GR_{it}$	-0.117	0.174	-0.022	-0.101	-0.152	-0.339
	(0.221)	(0.14)	(0.09)	(0.21)	(0.23)	(0.22)
$Z_{ijt} * GR_{jt}$	-0.384	-0.115	-0.167***	-0.282**	0.003	0.278
	(0.32)	(0.26)	(0.05)	(0.12)	(0.33)	(0.31)
$Z_{ijt}*\ln\left(D_{ij}\right)$	0.019**	0.018**	0.00353	0.014*	0.007	0.025**
	(0.01)	(0.01)	(0.003)	(0.01)	(0.01)	(0.01)
Observations	8877	27423	8877	27143	8877	27122
R ²	0.45	0.70	0.42	0.71	0.68	0.77
Method	OLS	PPML	OLS	PPML	OLS	PPML

Robust standard errors in parentheses. Country*Year Fixed Effects included

* $\rho < 0.10$, ** $\rho < 0.05$, *** $\rho < 0.01$

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FDI and credit constraints

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	F	DI	Extensive	e Margin	Foreign Jobs	
	(1)	(2)	(3)	(4)	(5)	(6)
Z _{ijt}	0.146*	0.148**	0.027	0.113	0.054	0.240**
	(0.08)	(0.07)	(0.03)	(0.09)	(0.07)	(0.09)
$Z_{ijt} * GR_{it}$	-0.117	0.174	-0.022	-0.101	-0.152	-0.339
	(0.221)	(0.14)	(0.09)	(0.21)	(0.23)	(0.22)
$Z_{ijt} * GR_{jt}$	-0.384	-0.115	-0.167***	-0.282**	0.003	0.278
	(0.32)	(0.26)	(0.05)	(0.12)	(0.33)	(0.31)
$Z_{ijt}*\ln(D_{ij})$	0.019**	0.018**	0.00353	0.014*	0.007	0.025**
	(0.01)	(0.01)	(0.003)	(0.01)	(0.01)	(0.01)
Observations R^2	8877	27423	8877	27143	8877	27122
	0.45	0.70	0.42	0.71	0.68	0.77
Method	OLS	PPML	OLS	PPML	OLS	PPML

Robust standard errors in parentheses. Country*Year Fixed Effects included

* *p* < 0.10, ** *p* < 0.05, *** *p* < 0.01

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	F	DI	Extensive	e Margin	Foreign Jobs		
	(1)	(2)	(3)	(4)	(5)	(6)	
Z _{ijt}	0.146*	0.148**	0.027	0.113	0.054	0.240**	
	(0.08)	(0.07)	(0.03)	(0.09)	(0.07)	(0.09)	
Z _{ijt} * GR _{it}	-0.117	0.174	-0.022	-0.101	-0.152	-0.339	
	(0.221)	(0.14)	(0.09)	(0.21)	(0.23)	(0.22)	
$Z_{ijt} * GR_{jt}$	-0.384	-0.115	-0.167***	-0.282**	0.003	0.278	
	(0.32)	(0.26)	(0.05)	(0.12)	(0.33)	(0.31)	
$Z_{ijt}*\ln(D_{ij})$	0.019**	0.018**	0.00353	0.014*	0.007	0.025**	
	(0.01)	(0.01)	(0.003)	(0.01)	(0.01)	(0.01)	
Observations R^2	8877	27423	8877	27143	8877	27122	
	0.45	0.70	0.42	0.71	0.68	0.77	
Method	OLS	PPML	OLS	PPML	OLS	PPML	

Robust standard errors in parentheses. Country*Year Fixed Effects included

* p < 0.10, ** p < 0.05, *** p < 0.01

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	F	DI	Extensive	e Margin	Foreign Jobs	
	(1)	(2)	(3)	(4)	(5)	(6)
Z _{ijt}	0.146*	0.148**	0.027	0.113	0.054	0.240**
	(0.08)	(0.07)	(0.03)	(0.09)	(0.07)	(0.09)
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	(0.221)	(0.14)	(0.09)	(0.21)	(0.23)	(0.22)
$Z_{ijt} * GR_{jt}$	-0.384	-0.115	-0.167***	-0.282**	0.003	0.278
	(0.32)	(0.26)	(0.05)	(0.12)	(0.33)	(0.31)
$Z_{ijt} * \ln(D_{ij})$	0.019**	0.018**	0.00353	0.014*	0.007	0.025**
	(0.01)	(0.01)	(0.003)	(0.01)	(0.01)	(0.01)
Observations R^2 Method	8877	27423	8877	27143	8877	27122
	0.45	0.70	0.42	0.71	0.68	0.77
	OL S	PPMI	OL S	PPMI	OL S	PPMI

Robust standard errors in parentheses. Country*Year Fixed Effects included

* *p* < 0.10, ** *p* < 0.05, *** *p* < 0.01

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FDI		Extensive	e Margin	Foreign Jobs	
(1)	(2)	(3)	(4)	(5)	(6)
0.146*	0.148**	0.027	0.113	0.054	0.240**
(0.08)	(0.07)	(0.03)	(0.09)	(0.07)	(0.09)
-0.117	0.174	-0.022	-0.101	-0.152	-0.339
(0.221)	(0.14)	(0.09)	(0.21)	(0.23)	(0.22)
-0.384	-0.115	-0.167***	-0.282**	0.003	0.278
(0.32)	(0.26)	(0.05)	(0.12)	(0.33)	(0.31)
0.019**	0.018**	0.00353	0.014*	0.007	0.025**
(0.01)	(0.01)	(0.003)	(0.01)	(0.01)	(0.01)
8877	27423	8877	27143	8877	27122
0.45	0.70	0.42	0.71	0.68	0.77
	F1 (1) 0.146* (0.08) -0.117 (0.221) -0.384 (0.32) 0.019** (0.01) 8877 0.45 OLS	FDI (1) (2) 0.146* 0.148*** (0.08) (0.07) -0.117 0.174 (0.221) (0.14) -0.384 -0.115 (0.32) (0.26) 0.019** 0.018*** (0.01) (0.01) 8877 27423 0.45 0.70 OI S PPML	FDI Extensive (1) (2) (3) 0.146* 0.148** 0.027 (0.08) (0.07) (0.03) -0.117 0.174 -0.022 (0.221) (0.14) (0.09) -0.384 -0.115 -0.167*** (0.32) (0.26) (0.05) 0.019** 0.018** 0.00353 (0.01) (0.01) (0.003) 8877 27423 8877 0.45 0.70 0.42 OL S PPML OL S	FDI Extensive Margin (1) (2) (3) (4) 0.146* 0.148** 0.027 0.113 (0.08) (0.07) (0.03) (0.09) -0.117 0.174 -0.022 -0.101 (0.221) (0.14) (0.09) (0.21) -0.384 -0.115 -0.167*** -0.282** (0.32) (0.26) (0.05) (0.12) 0.019** 0.018** 0.00353 0.014* (0.01) (0.01) (0.003) (0.01) 8877 27143 0.45 0.70 0.45 PPML QL S PPML	FDI Extensive Margin Forei (1) (2) (3) (4) (5) 0.146* 0.148** 0.027 0.113 0.054 (0.08) (0.07) (0.03) (0.09) (0.07) -0.117 0.174 -0.022 -0.101 -0.152 (0.221) (0.14) (0.09) (0.21) (0.23) -0.384 -0.115 -0.167*** -0.282** 0.003 (0.32) (0.26) (0.05) (0.12) (0.33) 0.019** 0.018** 0.00353 0.014* 0.007 (0.01) (0.01) (0.003) (0.01) (0.01) 8877 27143 8877 0.45 0.70 0.45 PPML OLS PPML OLS

Robust standard errors in parentheses. Country*Year Fixed Effects included

* p < 0.10, ** p < 0.05, *** p < 0.01

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Quantile Regressions

	(1)	(2)	(3)	(4)	(5)
	Q(0.10)	Q(0.25)	Q(0.50)	Q(0.75)	Q(0.90)
Z _{ijt}	0.282**	0.144	0.225***	0.187**	0.310***
	(0.14)	(0.12)	(0.08)	(0.09)	(0.07)
$Z_{ijt} * GR_{it}$	0.054	0.030	0.551**	0.483*	0.403*
	(0.36)	(0.35)	(0.23)	(0.26)	(0.20)
$Z_{ijt} * GR_{jt}$	0.063	-0.957*	-0.789*	-0.269	-0.271
	(0.61)	(0.56)	(0.41)	(0.46)	(0.36)
$Z_{ijt} * \ln(D_{ij})$	0.035**	0.022	0.028***	0.023**	0.039***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Observations	8877	8877	8877	8877	8877

Standard errors in parentheses

* p < 0.10, ** p < 0.05, *** p < 0.01

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Quantile Regressions

	(1)	(2)	(3)	(4)	(5)
	Q(0.10)	Q(0.25)	Q(0.50)	Q(0.75)	Q(0.90)
Z _{ijt}	0.282**	0.144	0.225***	0.187**	0.310***
	(0.14)	(0.12)	(0.08)	(0.09)	(0.07)
$Z_{ijt} * GR_{it}$	0.054	0.030	0.551**	0.483*	0.403*
	(0.36)	(0.35)	(0.23)	(0.26)	(0.20)
$Z_{ijt} * GR_{jt}$	0.063	-0.957*	-0.789*	-0.269	-0.271
	(0.61)	(0.56)	(0.41)	(0.46)	(0.36)
$Z_{ijt} * \ln(D_{ij})$	0.035**	0.022	0.028***	0.023**	0.039***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Observations	8877	8877	8877	8877	8877

Standard errors in parentheses

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Graphs



Figure: Reinvestment effect by quantile



Figure: Distance by quantile

Results Quantile Regressions

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FDI and credit constraints

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Graphs



Figure: Credit constraints source



Quantile Regressions

Results

Figure: Credit constraints destination

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FDI and credit constraints

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	F	DI	Extensive	e Margin	Forei	gn Jobs	
	(1)	(2)	(3)	(4)	(5)	(6)	
InFDI _{gt-1}		0.264*** (0.07)					
lnN_{ijt-1}				0.139**			
Injo bs _{ij t -1}				,		-0.051	
ln (<i>D_ğ</i>)	-0.195* (0.11)		-0.353*** (0.10)		0.101 (0.12)	(0.08)	
col _i	-0.016 (0.17)		-0.078 (0.13)		-0.067 (0.20)		
lang j	0.471*** (0.18)		0.472*** (0.17)		0.548** (0.23)		
s mctry _j	0.381 (0.34)		-1.473*** (0.35)		0.431 (0.33)		
border j	-0.312 (0.28)		-0.252 (0.36)		0.244 (0.42)		
rel ij	0.344 (0.27)		-0.220 (0.17)		0.360 (0.28)		
comcurijt	-0.212* (0.12)	0.019 (0.04)	0.221** (0.09)	0.021 (0.04)	-0.148 (0.15)	-0.053 (0.05)	
F TA _{jt}	0.183 (0.19)	-0.736** (0.31)	-0.023 (0.21)	0.330 (0.23)	-0.051 (0.21)	-0.073 (0.52)	
BIT _{it}	-0.105 (0.19)	-1.090 (1.11)	-0.221* (0.13)	0.863 (0.74)	0.109 (0.23)	-1.809 (1.77)	
ln (Reinvestment _{ijt})	0.204*** (0.05)	0.118* (0.06)	0.156*** (0.05)	0.065** (0.03)	0.143** (0.06)	0.149*** (0.06)	
ln (Reinvestment _{ĝt+1})	0.021 (0.04)		-0.058 (0.04)		0.075 (0.06)		
ln (Reinvestment _{ĝt -1})	0.115* (0.06)		0.063* (0.04)		0.017 (0.05)		
Observations	511	871	513	871	≤ 5∏ ト	< 871 <	(★ 문) (★ 문) -

Gil, Llorca, Paniagua (UV, UCV)

FD| and credit constraints

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Gil,

	F	DI	Extensiv	e Margin	Foreign Jobs		
	(1)	(2)	(3)	(4)	(5)	(6)	-
InFDI _{ijt-1}		0.264*** (0.07)					-
InN _{ijt-1}				0.139**			
lnjobs _{ijt-1}				(0.00)		-0.051 (0.08)	
ln (<i>Reinvestment_{ijt}</i>)	0.204*** (0.05)	0.118* (0.06)	0.156*** (0.05)	0.065** (0.03)	0.143** (0.06)	0.149*** (0.06)	
$\ln(\textit{Reinvestment}_{ijt+1})$	0.021 (0.04)		-0.058 (0.04)		0.075 (0.06)		
$\ln({\it Reinvestment_{ijt-1}})$	0.115* (0.06)		0.063* (0.04)		0.017 (0.05)		
Observations Method R ²	511 PPML 0.918	871 GMM	513 PPML 0.993	871 GMM	511 PPML 0.983	871 GMM	_
Country*Year FE Year FE	Yes	Yes	Yes	Yes	Yes ♂→ < ≣ → ·	Yes	4
Llorca, Paniagua (UV, UC	CV)	FDI and cre	dit constraints	VAC	EE.	A 2015	25

Gil,

	F	DI	Extensiv	e Margin	Forei	gn Jobs	
	(1)	(2)	(3)	(4)	(5)	(6)	-
InFDI _{ijt-1}		0.264*** (0.07)					-
/nN _{ijt-1}				0.139**			
Injobs _{ijt-1}				(0.00)		-0.051 (0.08)	
ln(<i>Reinvestment_{ijt}</i>)	0.204*** (0.05)	0.118* (0.06)	0.156*** (0.05)	0.065** (0.03)	0.143** (0.06)	0.149*** (0.06)	
$\ln(\textit{Reinvestment}_{ijt+1})$	0.021 (0.04)		-0.058 (0.04)		0.075 (0.06)		
$\ln({\it Reinvestment_{ijt-1}})$	0.115* (0.06)		0.063* (0.04)		0.017 (0.05)		
Observations Method R ²	511 PPML 0.918	871 GMM	513 PPML 0.993	871 GMM	511 PPML 0.983	871 GMM	_
Country*Year FE Year FE	Yes	Yes	Yes	Yes	Yes ♂→ < ≥→ ·	Yes	ý
Llorca, Paniagua (UV, UC	CV)	FDI and cre	dit constraints	VAC	EE.	A 2015	25

Gil,

	F	DI	Extensiv	e Margin	Forei	gn Jobs
	(1)	(2)	(3)	(4)	(5)	(6)
InFDI _{ijt-1}		0.264*** (0.07)				
InN _{ijt-1}				0.139**		
Injobs _{ijt-1}				(0100)		-0.051 (0.08)
ln (<i>Reinvest ment_{ijt}</i>)	0.204*** (0.05)	0.118* (0.06)	0.156*** (0.05)	0.065** (0.03)	0.143** (0.06)	0.149*** (0.06)
$\ln(\textit{Reinvestment}_{ijt+1})$	0.021 (0.04)		-0.058 (0.04)		0.075 (0.06)	
$\ln({\it Reinvestment_{ijt-1}})$	0.115* (0.06)		0.063* (0.04)		0.017 (0.05)	
Observations Method R ²	511 PPML 0.918	871 GMM	513 PPML 0.993	871 GMM	511 PPML 0.983	871 GMM
Country*Year FE Year FE	Yes	Yes	Yes	Yes	Yes ● ► < ≣ ► ·	Yes
Llorca, Paniagua (UV, UC	CV)	FDI and cre	dit constraints	VAC	EE.	A 2015

Gil,

	F	DI	Extensiv	e Margin	Forei	gn Jobs
	(1)	(2)	(3)	(4)	(5)	(6)
InFDI _{ijt-1}		0.264*** (0.07)				
/nN _{ijt-1}				0.139**		
Injobs _{ijt-1}				(0100)		-0.051 (0.08)
ln (<i>Reinvestment_{ijt}</i>)	0.204*** (0.05)	0.118* (0.06)	0.156*** (0.05)	0.065** (0.03)	0.143** (0.06)	0.149*** (0.06)
$\ln(\textit{Reinvestment}_{ijt+1})$	<mark>0.021</mark> (0.04)		-0.058 (0.04)		0.075 (0.06)	
$\ln({\it Reinvestment_{ijt-1}})$	0.115* (0.06)		0.063* (0.04)		0.017 (0.05)	
Observations Method R ²	511 PPML 0.918	871 GMM	513 PPML 0.993	871 GMM	511 PPML 0.983	871 GMM
Country*Year FE Year FE	Yes	Yes	Yes	Yes	Yes ⊐ ► < ≡ ► ·	Yes
Llorca, Paniagua (UV, UC	CV)	FD and cre	dit constraints	YAC	EE.	A 2015

Gil,

	FDI		Extensive Margin		Foreign Jobs		
	(1)	(2)	(3)	(4)	(5)	(6)	
InFDI _{ijt-1}		0.264*** (0.07)					
/nN _{ijt-1}				0.139**			
Injobs _{ijt-1}				(0100)		-0.051 (0.08)	
ln (<i>Reinvestment_{ijt}</i>)	0.204*** (0.05)	0.118* (0.06)	0.156*** (0.05)	0.065** (0.03)	0.143** (0.06)	0.149*** (0.06)	
$\ln(\textit{Reinvestment}_{ijt+1})$	<mark>0.021</mark> (0.04)		-0.058 (0.04)		0.075 (0.06)		
$\ln({\it Reinvestment_{ijt-1}})$	0.115* (0.06)		0.063* (0.04)		0.017 (0.05)		
Observations Method R ²	511 PPML 0.918	871 GMM	513 PPML 0.993	871 GMM	511 PPML 0.983	871 GMM	
Country*Year FE Year FE	Yes	Yes	Yes	Yes	Yes ● ► < ≣ ► ·	Yes	
Llorca, Paniagua (UV, UCV) FDI		FDI and cre	dit constraints	VAC	EE.	A 2015	

Gil,

	FDI		Extensive Margin		Foreign Jobs		_
	(1)	(2)	(3)	(4)	(5)	(6)	_
InFDI _{ijt-1}		0.264*** (0.07)					
InN _{ijt-1}				0.139** (0.06)			
Injobs _{ijt-1}				. ,		-0.051 (0.08)	
In (Reinvestment _{ijt})	0.204*** (0.05)	0.118* (0.06)	0.156*** (0.05)	0.065** (0.03)	0.143** (0.06)	0.149*** (0.06)	:
$ln(Reinvestment_{ijt+1})$	<mark>0.021</mark> (0.04)		-0.058 (0.04)		0.075 (0.06)		
$\ln({\it Reinvestment_{ijt-1}})$	0.115* (0.06)		0.063* (0.04)		0.017 (0.05)		
Observations Method R ²	511 PPML 0.918	871 GMM	513 PPML 0.993	871 GMM	511 PPML 0.983	871 GMM	
Country*Year FE Year FE	Yes	Yes	Yes	Yes	Yes	Yes	৩৫
Country Pair FE lorca, Paniagua (UV, UC	CV)	FDI and cre	dit constraints	Vec	EE	A 2015	25 / 2

A stylized model to explain FDI under credit contraints

• Incomplete contracts & FDI finance

Foreign subsidiaries

- 2 Reinvestment in foreign subsidiaries alleviates:
 - The negative effect of distance on greenfield FDI
 - Credit constraints at home
- The effect of subsidiaries is driven by the intensive margin
 - Foreign jobs
- Olicies targeted to established serve a double purpose

A stylized model to explain FDI under credit contraints

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Intersect of subsidiaries is driven by the intensive margin

• Foreign jobs

Olicies targeted to established serve a double purpose

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Olicies targeted to established serve a double purpose

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