

The Multinational Revenue, Employment, and Investment Database (MREID)

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USITC, May 31, 2023

Motivation for a New Database on Multinational Firm Activities

- ① New datasets such as the International Trade and Production Database (ITPD-E) have allowed the Commission to employ state-of-the-art gravity models to conduct policy assessments at a detailed sector level.
- ② However, data limitations have restricted the Commission's gravity modeling of FDI flows to either a single country (TPA 2016) or to aggregate flows across countries (TPA 2021).
- ③ Thus, a database that captures multinational activity across countries and sectors over several years would help advance the Commission's gravity analysis any future factfinding investigations on FDI.

Challenge with foreign investment data

“One major challenge with foreign investment data is their scarcity. (...) We have relatively-high-quality trade data for more than half of a century and many countries and country pairs. However, in spite of the widely acknowledged importance of MNEs, relatively long (covering many years) and wide (covering many country pairs) panel data on MNE activity are not easily available. However, the latter would be important to have (...)” Egger et al., (2023, WE)

Contract Objectives

- ① Build a representative firm-level dataset of “Foreign Direct Investment” with
“data on public and private firms located in the US controlled by foreign investors, data on US controlled firms invested in partner countries; data on mergers and acquisitions (M&As) in the US by foreign investors, as well as M&As by US firms abroad; data on greenfield projects in the US by foreign investors, as well as greenfield projects by US firms abroad.”
- ② Aim of the contract:
“Assistance in development of Commission databases involves contributions to USITC datasets used for estimations in ex-ante and ex-post studies of impacts of trade and investment policy changes. Assistance includes the compilation and consolidation of historical ownership information, foreign sales, and employment data from Orbis into a panel dataset, the resolution of complex ownership issues, and the handling of missing or incomplete data. Assistance also includes reviewing the compilation of M&A and Greenfield project data and reconciling differences from other available sources. It also involves advising staff on the application of the database in estimations of effects of trade and investment policy changes.”

1 Introduction

2 Data Source: ORBIS

- ORBIS Overview
- ORBIS Variables
- Background

3 Search Strategy & ORBIS limitations

- MREID Variables

4 Description of the MRIED Database

- Overview
- Statistics, trends, and distributions
- Country coverage maps
- Country flows
- Sectors
- Country and sector flows
- Greenfield FDI
- Mergers & Acquisitions FDI
- Total vs. M&As vs. Greenfield FDI

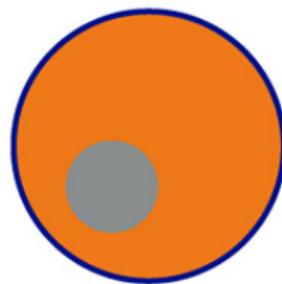
5 Validity

- External Wealth of Nations (EWN), Brookings
- FDIMarkets, The Financial Times
- Bureau of Economic Analysis
- Spanish administrative data

6 Conclusion

ORBIS (Bureau Van Dijk - Moody's)

We provide more hierarchy linkages than any other global dataset



1.6bn
total ownership links
▲ +20%
1.4bn
historic ownership links
▲ +22%
203m
active ownership links
▲ +8%
20m
headquarter-branch links



entities ←→ entities
people ←→ entities
people ←→ people
headquarter ←→ branch

...and we cover companies in *all* countries



Geography & sector

Standardized city
Country ISO code
Latitude / Longitude
BvD sectors
NACE Rev. 2, core code (4 digits)
NAICS 2017, core code (4 digits)
US SIC, core code (3 digits)

Firm

BvD ID number
Orbis ID number
National ID
VAT/Tax number
Status
Date of incorporation
“Also known as”
Consolidation code
Last available year
Number of years
Listing status

Key financials

Revenue (FAS)
Number of employees
Costs of employees
Total assets
Fixed assets
Financial Capital
P/L (Net income)
Added Value
ROE / ROA
Intangible fixed assets
Tangible fixed assets
Material costs
Costs of employees
Research & Development
Patents

ORBIS in the literature

- ❑ *Kalemli-Ozcan, et al. (2015, 2022, NBER). "How to construct nationally representative firm level data from the Orbis global database: New facts and aggregate implications"*
Standard search strategy
- ❑ *Gopinath et al. (2017, QJE). "Capital allocation and productivity in south Europe"*
One of the first top-5 papers using a similar search strategy in ORBIS to research capital stock (fixed assets), output (sales) and employees. They show that ORBIS data coverage is comparable to Spanish administrative data.
- ❑ *Alabrese and Casella (2020, JoF); Alfaro and Chen (2018, AEJ:EP); Cravino and Levchenko (2017, QJE); Fonseca et al. (2023, JIE); Liu (2021, EER); Osnago et al. (2017, CJE)*

Similar Datasets: EU FOWN

- ① A firm-level database from EU Commission to capture activity of non-EU owned firms operating in the EU
- ② Data is from 2007-16 and aggregated at NACE 4-digit level
- ③ EU FOWN database has 3 components:
 - ① Historical ownership information from Orbis to identify public and private firms located in Europe with non-European owners
 - ② Zephyr's Mergers and Acquisitions data to analyze M&A deals in EU involving foreign investors,
 - ③ Cross-border Investments for greenfield investments made by non-European investors in the EU

MREID key dimensions

- ① Time span: 12 years
- ② Bilateral
- ③ Countries: 185
- ④ Sectors: 25
- ⑤ Domestic data for all variables
- ⑥ FDI variables
 - ① Extensive margin: (number of affiliates)
 - ② Revenue
 - ③ Employees
 - ④ Investment: Assets (fixed and total)
- ⑦ FDI types
 - ① Total
 - ② Greenfield
 - ③ Mergers and Acquisitions

ORBIS limitations

- 10 year period window
- Some data is estimated
- Export a maximum of 3154 companies
- Entry and exit are not clearly identified
- “Global ultimate owner” available only for the present day:
 - US - non US Acquisition after 2013
 - US - US Acquisition after 2013
 - Corporate restructuring

Search strategy

► Example

- Keep companies with more than 1 million USD in Revenue or Assets.
- Majority control threshold (50.01%)
- Active companies
- Mistakes are corrected
- Select domestic and foreign affiliates
- Entry and exit
 - Entry: Date of incorporation
 - Exit: Affiliates with more than four or more consecutive years without reports on any of the key financials.

15+1 Reasons Why Gravity Should Be Estimated with Domestic Trade (Yotov, 2022)

- The use of domestic trade flows in gravity estimations is:
 - ① consistent with trade theory of the intensive margin of trade,
 - ② available and
 - ③ it does not matter much which to use! (Campos et al., 2021),
 - ④ consistent with trade theory of the extensive margin of trade.
- ④ The use of domestic trade flows allows:
 - for estimation of the effects of international borders and home biases,
 - ⑤ for estimation of heterogeneous domestic and regional trade costs,
 - ⑥ for a systematic analysis of the determinants of domestic trade costs,
 - ⑦ for country-specific asymmetries in the vector of international trade costs,
 - ⑧ for identification of the trade-diversion effects of bilateral trade policies,
 - ⑨ for identification of the effects of non-discriminatory trade policies on bilateral trade flows,
 - ⑩ for identification of the effects of country-specific characteristics on bilateral trade flows,
 - ⑪ for identification of the country-specific effects of trade policies,
 - ⑫ to a solution to “The Distance Puzzle of International Trade”,
 - ⑬ for solving “The Missing Globalization Puzzle”,
 - ⑭ for solving the puzzle that “Larger Countries Should Be Richer than Smaller Countries”,
 - ⑮ for solving the puzzle of “The Missing WTO Effects”.

MREID Variables

- **Affiliates:** Count of foreign affiliates and domestic operations
- **Revenue:** Total operating revenues (= net sales + other operating revenues + stock variations) excluding taxes.
- **Employees:** Total number of employees included in the company's payroll.
- **Investment:** Total assets and fixed assets.
 - Total assets: The sum of total current assets (e.g., financial assets) and fixed assets.
 - Fixed assets: Tangible fixed assets, intangible fixed assets, and other fixed assets.

MREID Overview

- MREID spans 12 years from 2010 through 2021
- 362,845 parent companies (or Global Ultimate Owner) and 1,132,707 affiliates.
 - 351,600 are foreign affiliates from 70,661 parent companies
- 186 countries
 - 11 countries that only have outward FDI
 - 14 countries that only have inward FDI
 - 139 countries with domestic data
- 25 sectors (two digits)
- 1,132,000 raw observations per year at the firm level
 - 27,340 at the country-sector level
 - 4410 at the country pair level

Summary Statistics

Cuadro: Summary statistics at the country-pair (foreign affiliates)

	Panel A: Totals			Panel B: Average per affiliate		
	mean	max	sd	mean	max	sd
Affiliates	90	25,299	536			
Revenue	3,940	609,312	20,362	57	5,772	236
Employees	7,029	1,735,375	43,965	191	156,239	2,619
Total assets	14,480	6,309,828	132,300	221	56,616	1,432
Fixed assets	5,198	1,615,221	48,817	60	15,276	507
Revenue/emp	48,251	65,794,332	1,282,092			

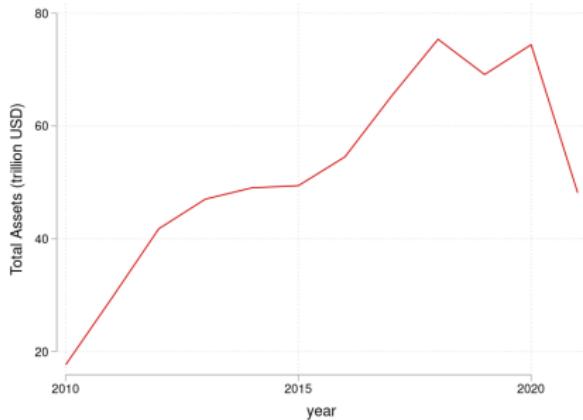
4410 pairs

Notes: Revenue and assets in million USD . Rev/emp th. USD.

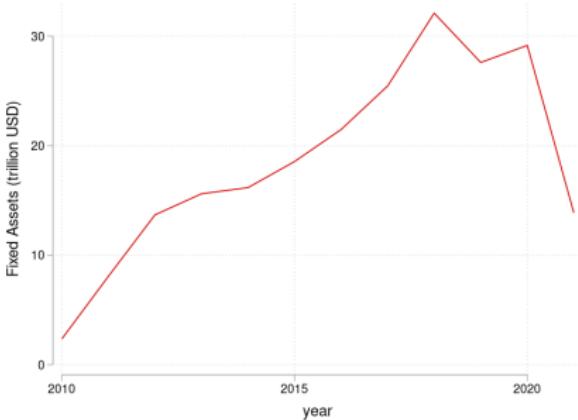
Statistics at the host country-pair level, yearly averages

Total Foreign Revenue, Employees, Assets

(a) Total Assets (million USD)

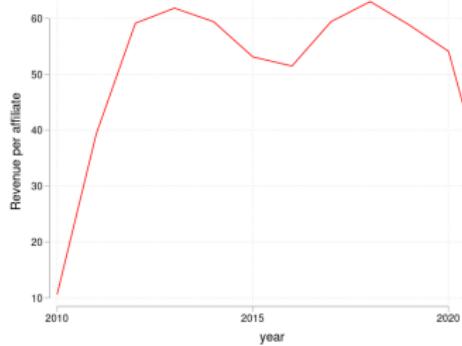


(b) Fixed Assets (million USD)

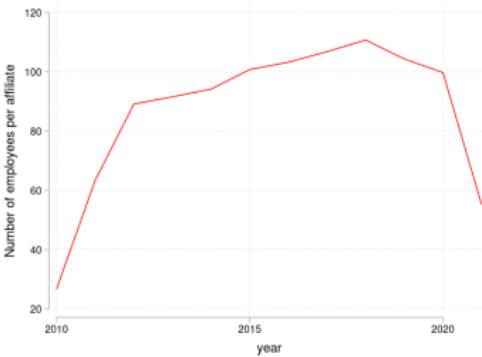


Total Foreign Revenue, Employees, Assets per affiliate

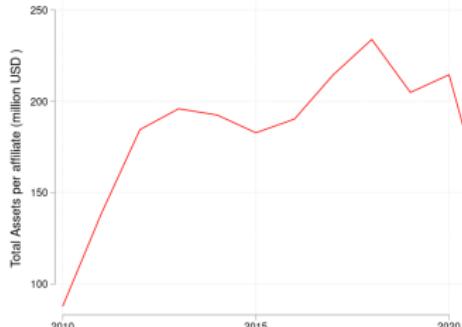
(a) Revenue (million USD)



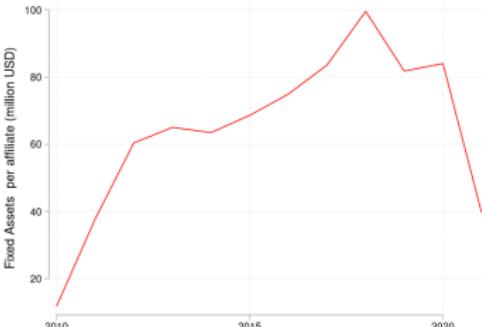
(b) Employees



(c) Total Assets (million USD)



(d) Fixed Assets (million USD)



Summary Statistics

Cuadro: Summary statistics at the host country by ownership (per affiliate)

	Panel A: Domestic			Panel B: Foreign		
	mean	max	sd	mean	max	sd
Revenue	76	970	171	93	1,224	188
Employees	250	3,829	624	282	5,095	697
Total assets	424	11,394	1,224	431	5,505	749
Fixed assets	51	1,490	160	94	3,915	428

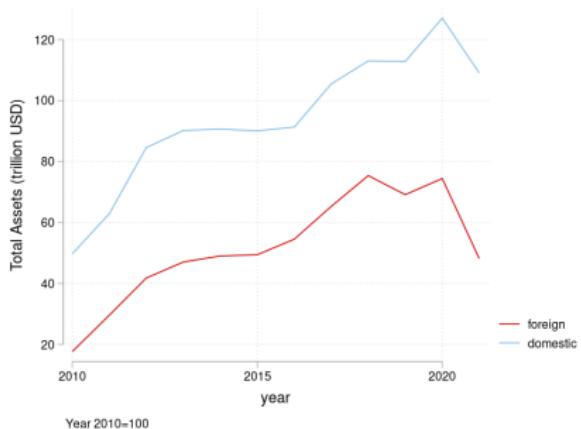
Notes: Revenue and assets in million USD

Foreign statistics at the host country level, year averages

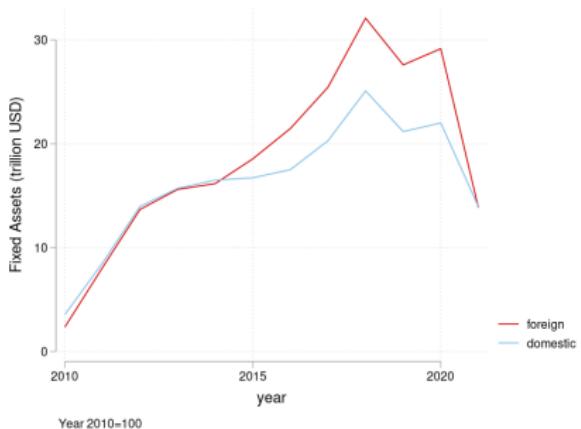
Averages per affiliate

Total Foreign Revenue, Employees, Assets by ownership

(a) Total Assets (million USD)

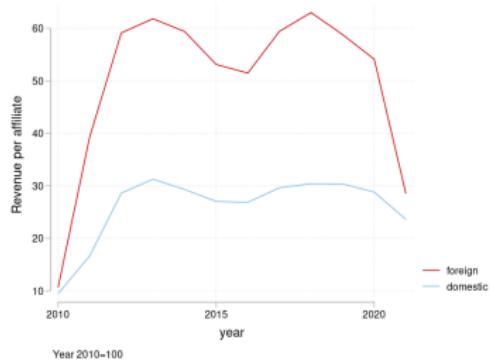


(b) Fixed Assets (million USD)

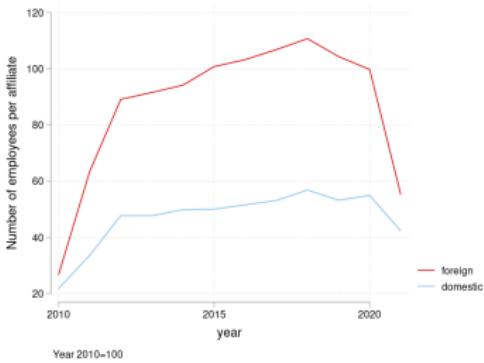


Total Foreign Revenue, Employees, Assets per affiliate by ownership

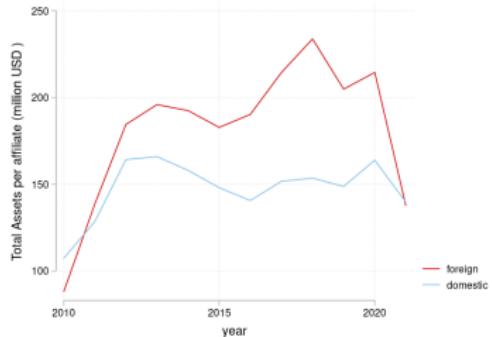
(a) Revenue (million USD)



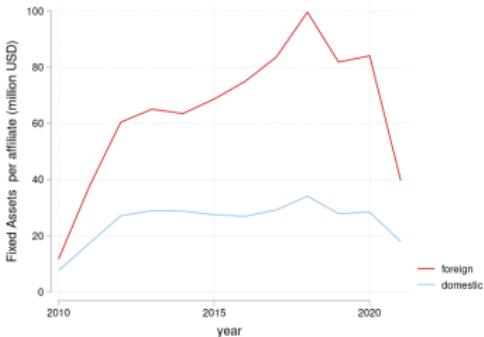
(b) Employees



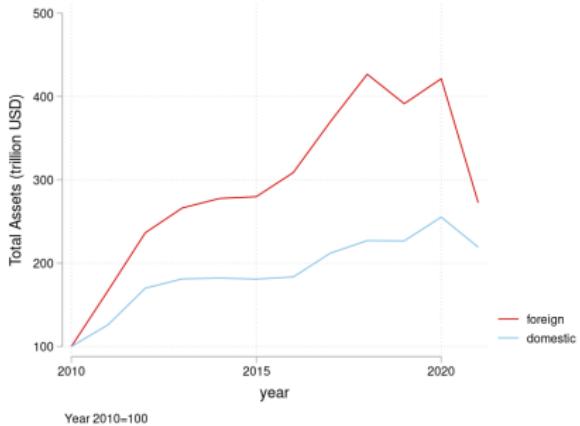
(c) Total Assets (million USD)



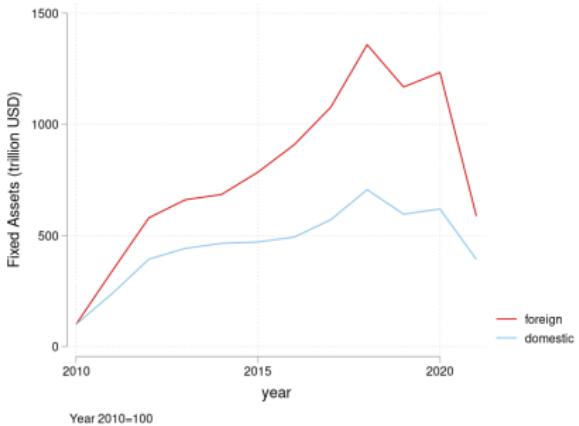
(d) Fixed Assets (million USD)



(a) Total Assets (million USD)

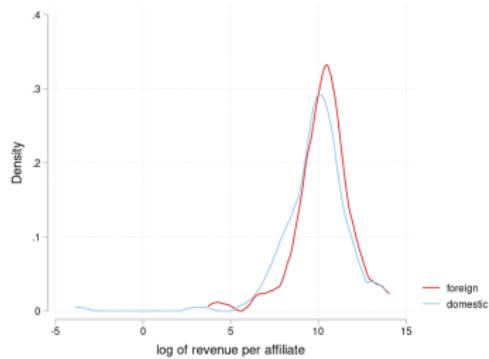


(b) Fixed Assets (million USD)

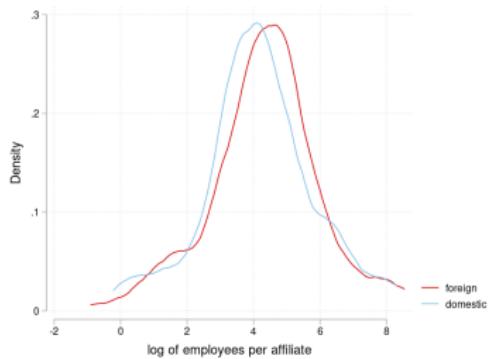


Distributions per host country (average per affiliate) by ownership

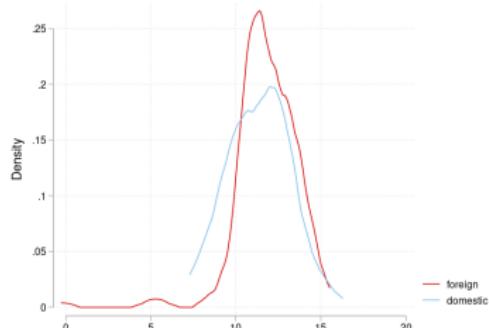
(a) Revenue (million USD)



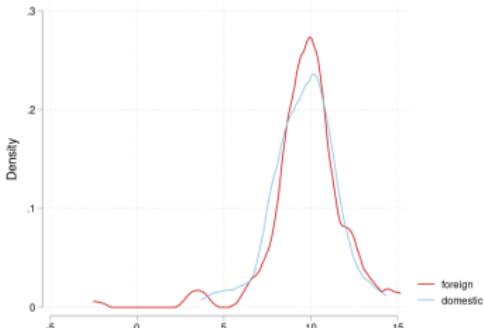
(b) Employees



(c) Total Assets (million USD)



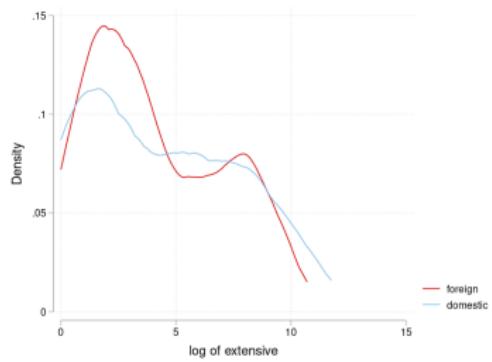
(d) Fixed Assets (million USD)



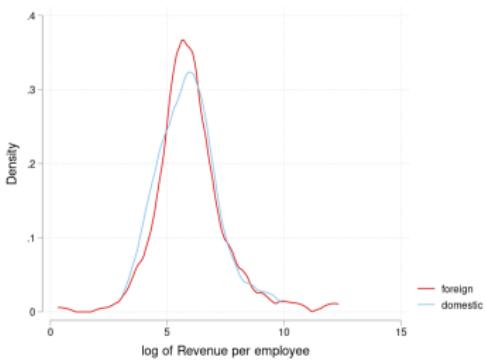
Distributions per host country by ownership

► totals

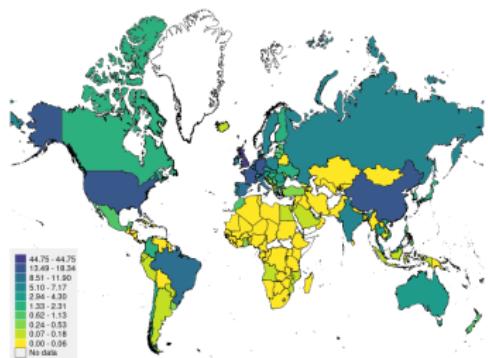
(a) Number of affiliates



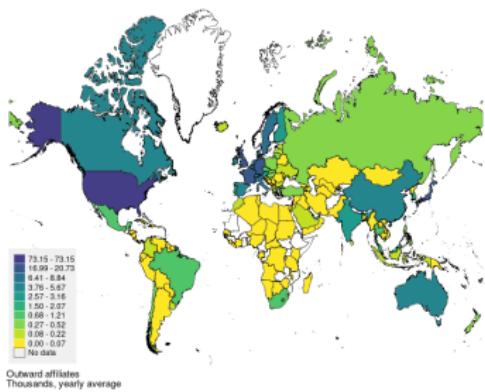
(b) Revenue per employee



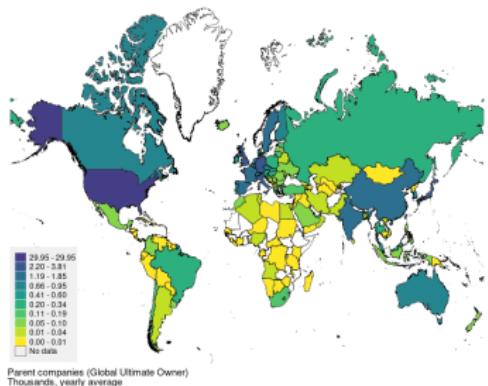
(a) Inward affiliates



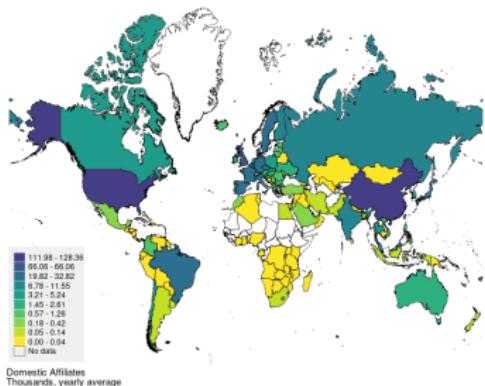
(b) Outward affiliates



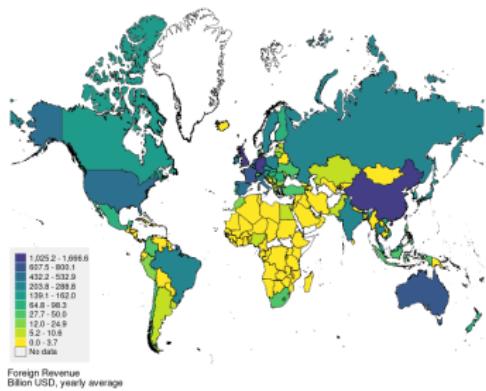
(c) Parent firm (GUO)



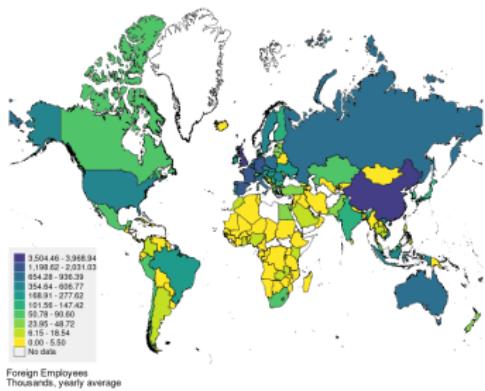
(d) Domestic Affiliates



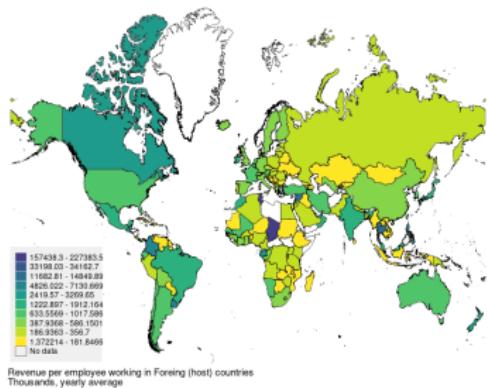
(a) Revenue in foreign countries



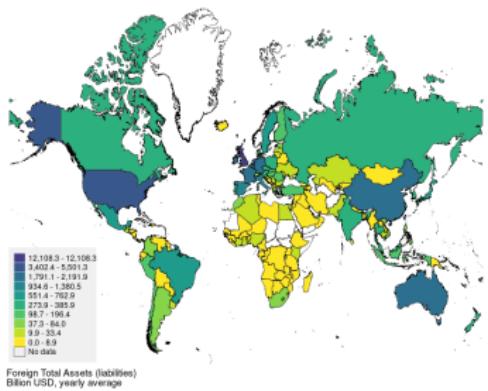
(b) Employees in foreign countries



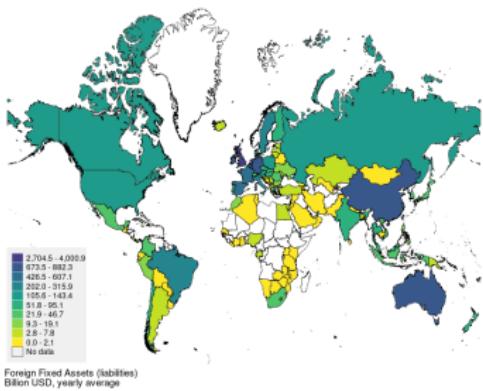
(c) Rev/emp in foreign countries



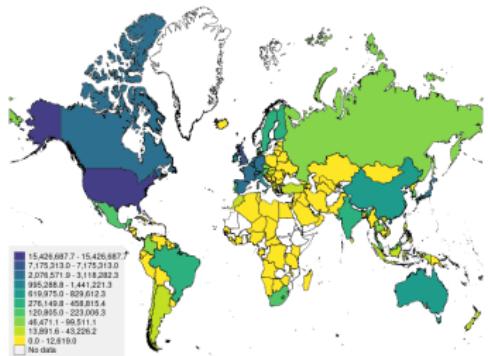
(a) Foreign Total Assets (liabilities)



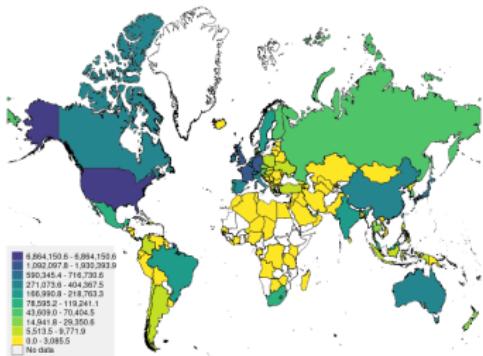
(b) Foreign Fixed Assets (liabilities)



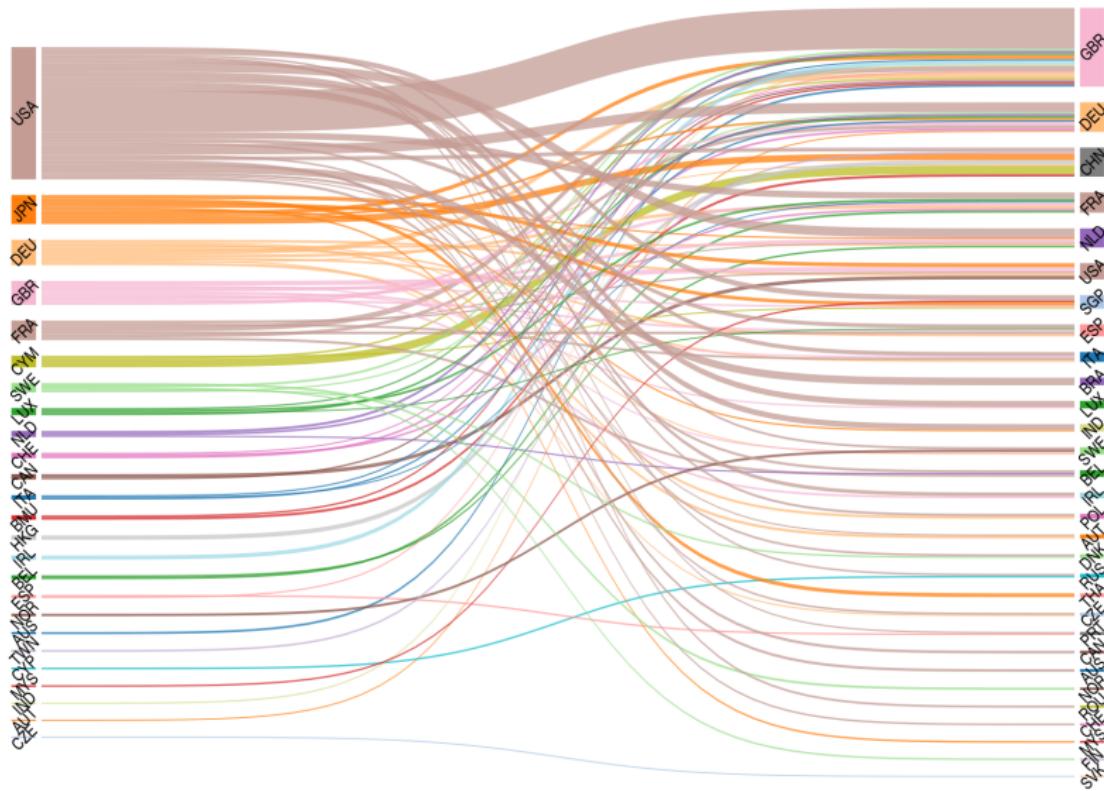
(c) Total Assets in Foreign Countries



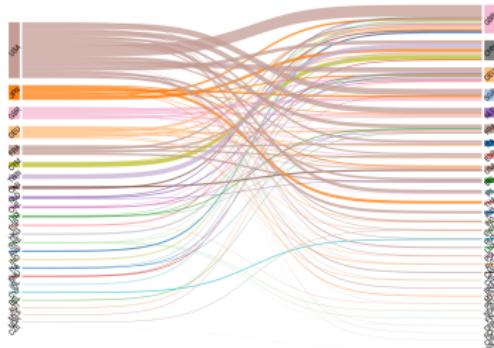
(d) Fix. Assets in Foreign Countries



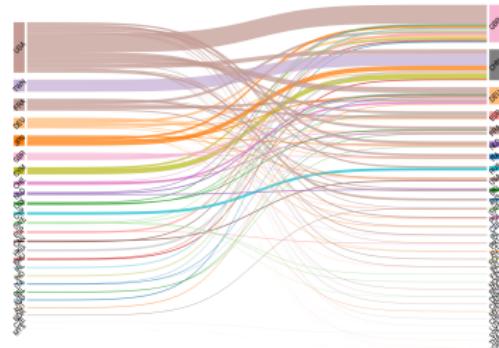
Foreign investment flows (affiliates)



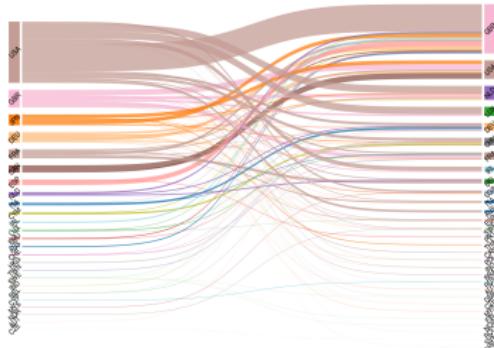
(a) Revenue



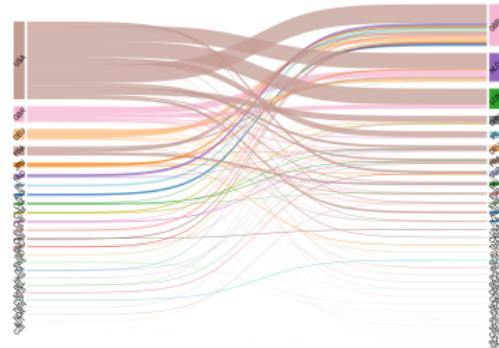
(b) Employees



(c) Total assets

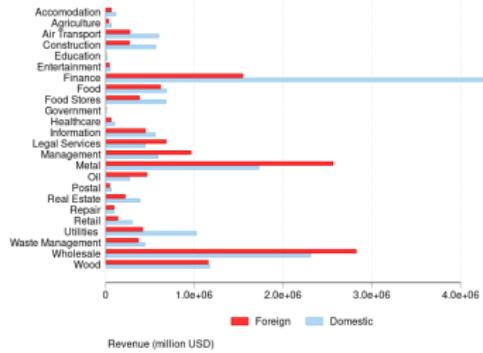


(d) Fixed assets

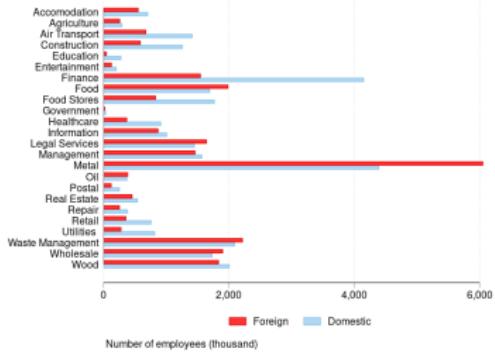


Sectors: Total Foreign Revenue, Employees, Assets by ownership

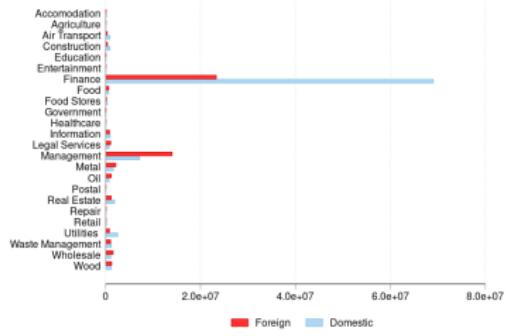
(a) Revenue (million USD)



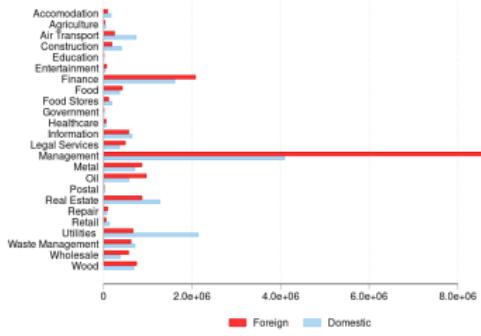
(b) Employees



(c) Total Assets (million USD)

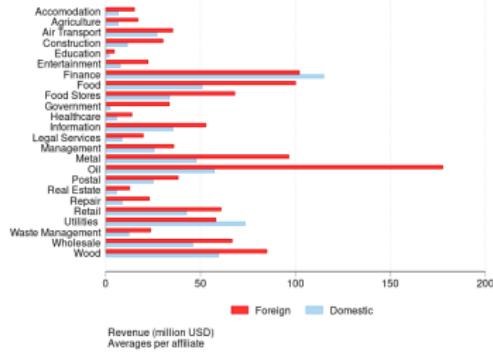


(d) Fixed Assets (million USD)

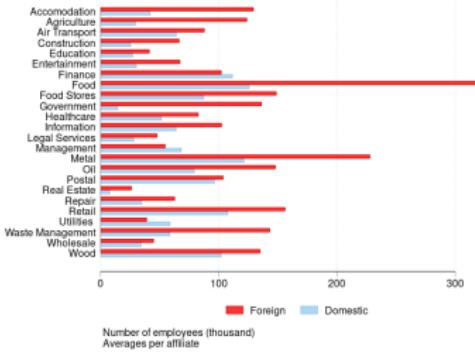


Sectors: Foreign Revenue, Employees, Assets per affiliate and by ownership

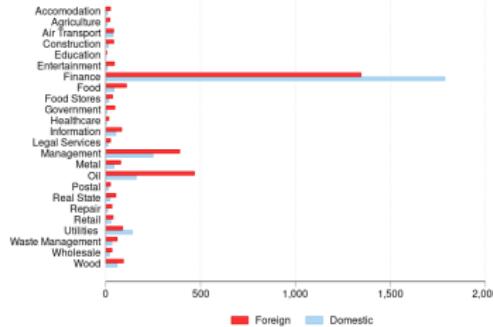
(a) Revenue (Million USD)



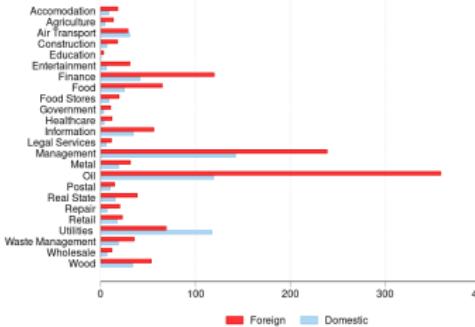
(b) Employees



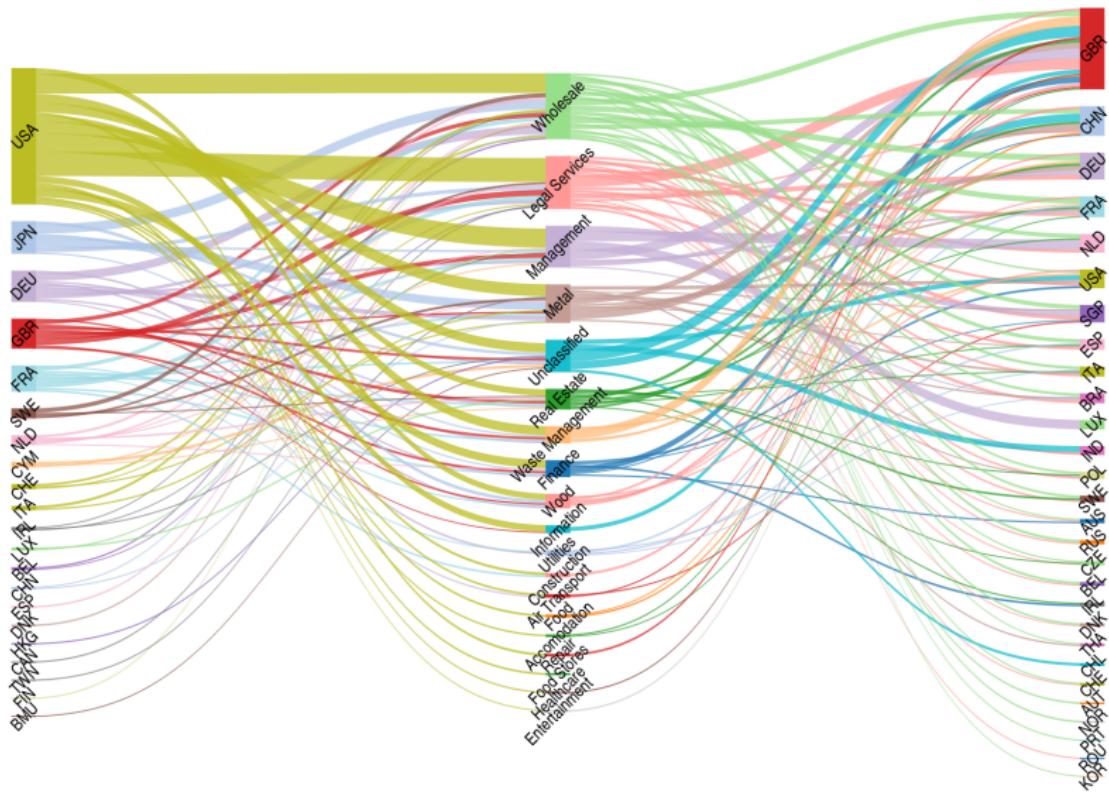
(c) Total Assets (million USD)



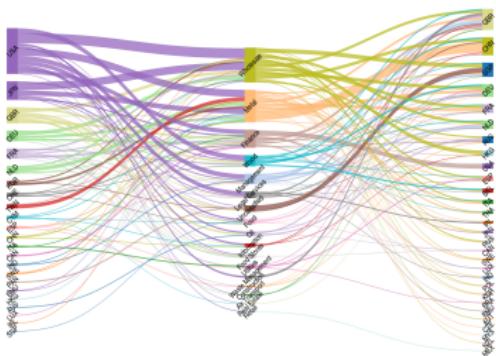
(d) Fixed Assets (million USD)



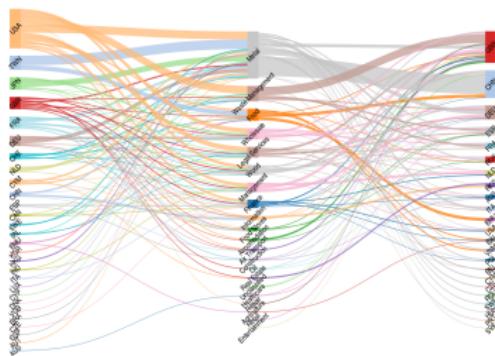
Foreign investment flows per country and sector (affiliates)



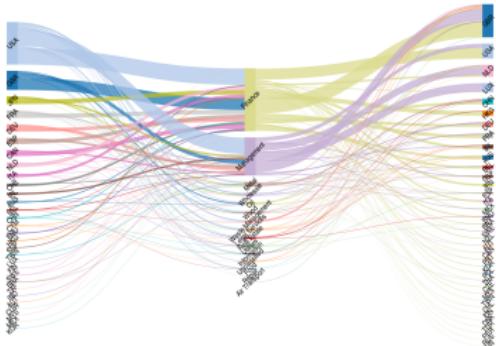
(a) Revenue



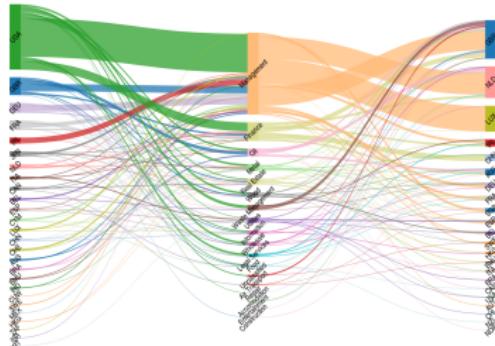
(b) Employees



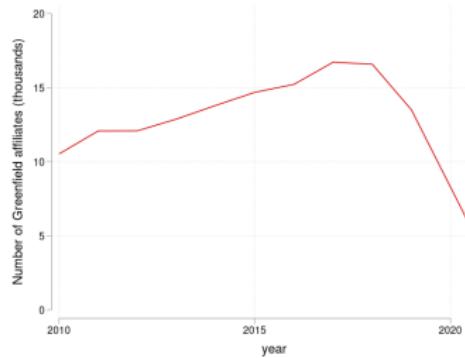
(c) Total assets



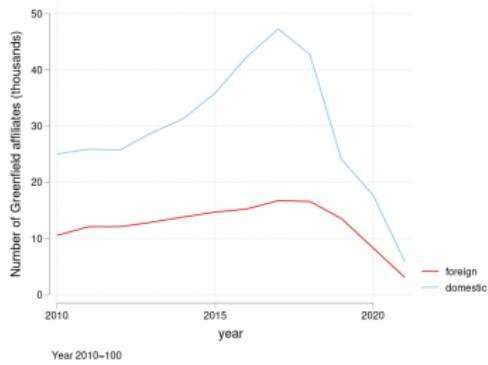
(d) Fixed assets



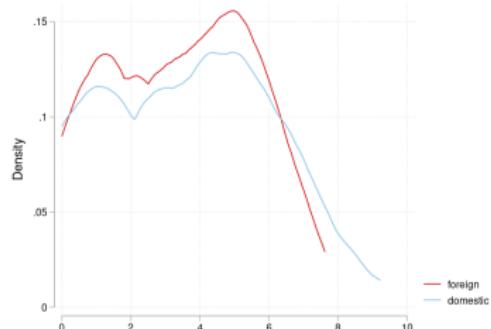
(a) New affiliates



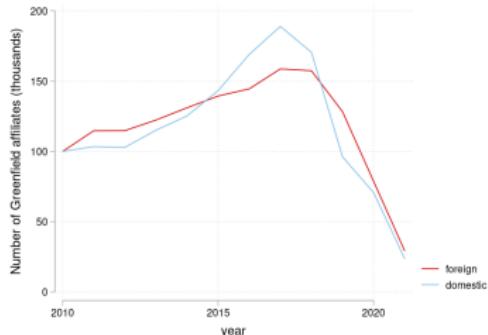
(b) New affiliates by ownership



(c) Distribution by ownership

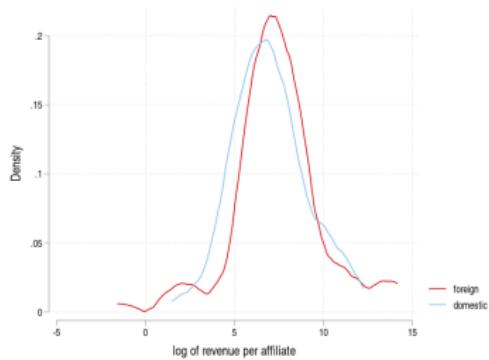


(d) Growth rate by ownership

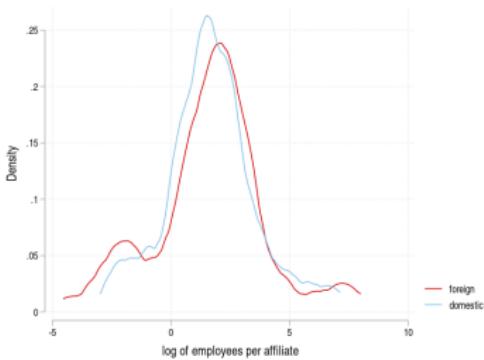


Distributions per host country (average per affiliate) Greenfield

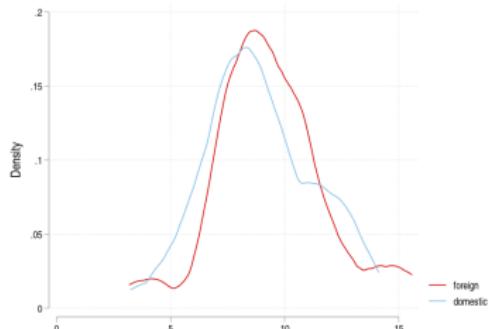
(a) Revenue (million USD)



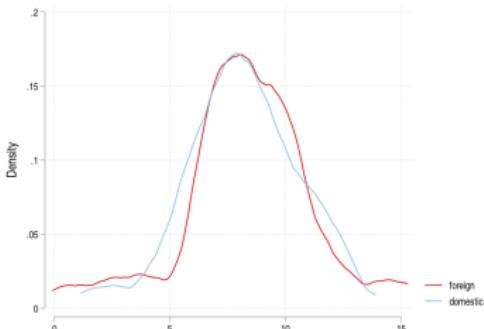
(b) Employees



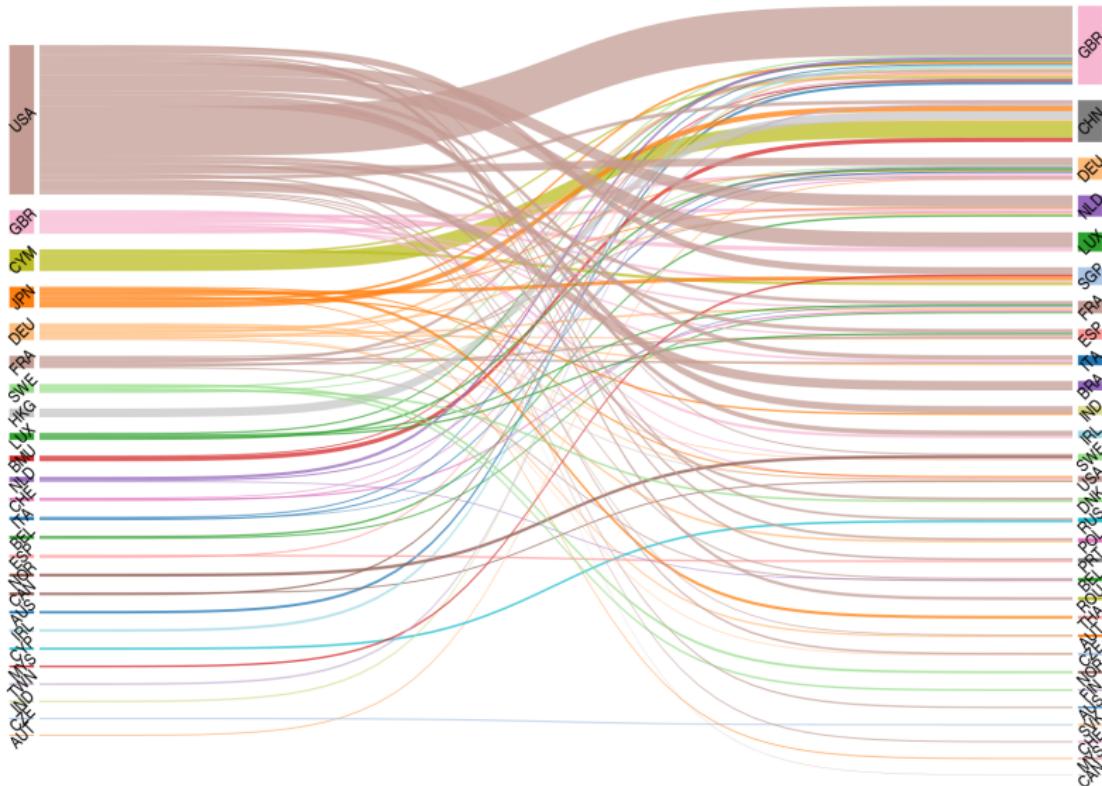
(c) Total Assets (million USD)



(d) Fixed Assets (million USD)

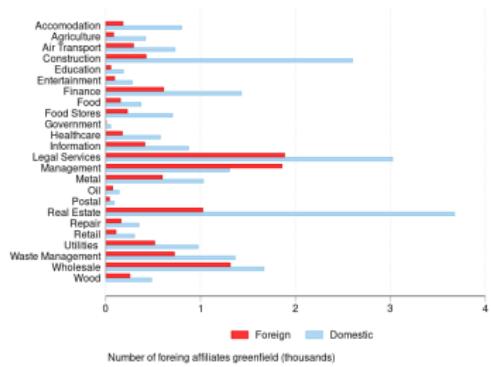


Greenfield Foreign investment flows (affiliates)

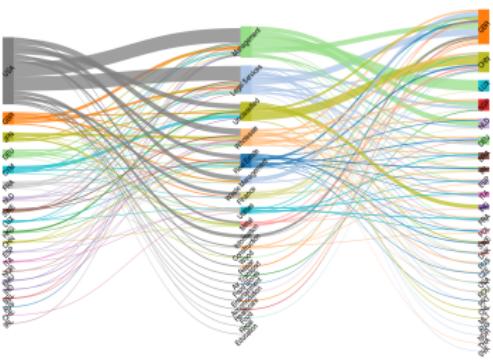


Greenfield Foreign investment

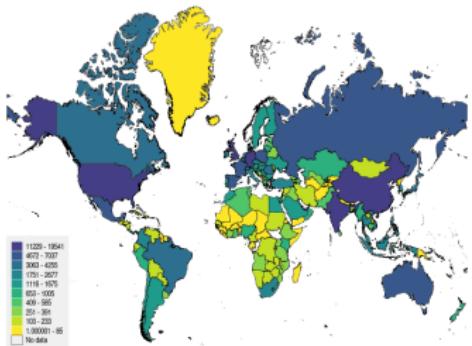
(a) Affiliates per sector



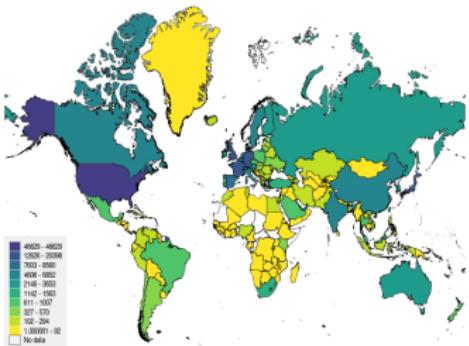
(b) Flows per country and sector



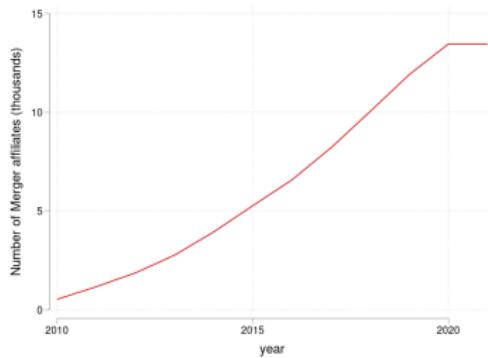
(c) Inward affiliates map



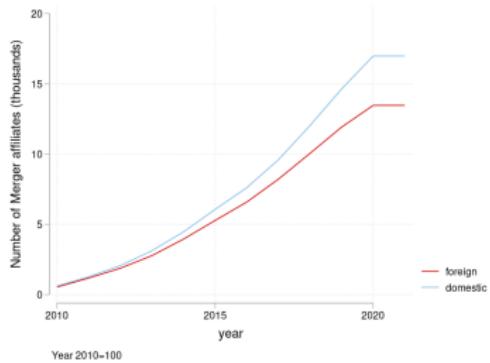
(d) Outward affiliates map



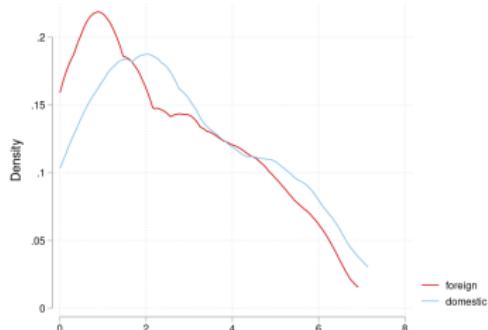
(a) New affiliates



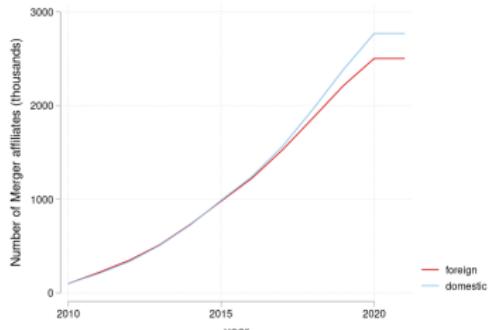
(b) New affiliates by ownership



(c) Distribution by ownership

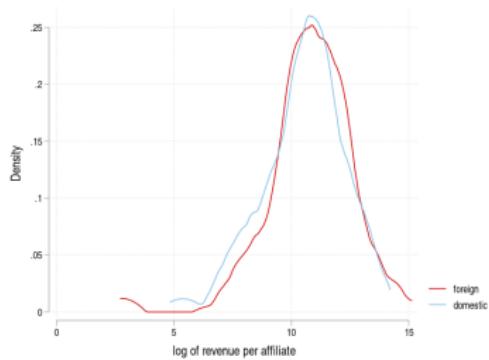


(d) Growth rate by ownership

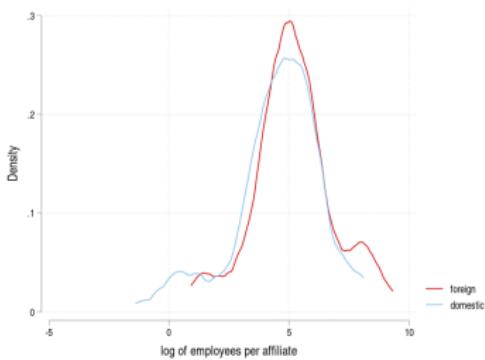


Distributions per host country (average per affiliate) Mergers & Acquisitions

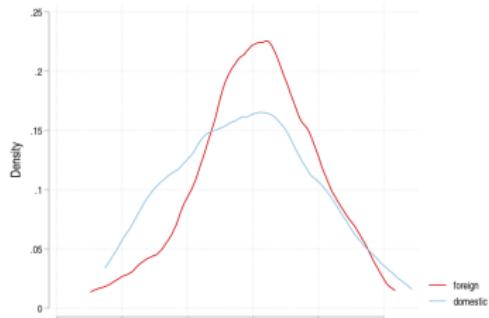
(a) Revenue (million USD)



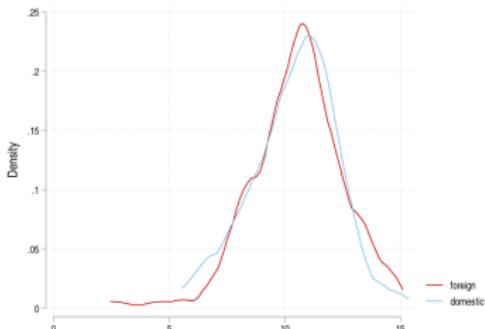
(b) Employees



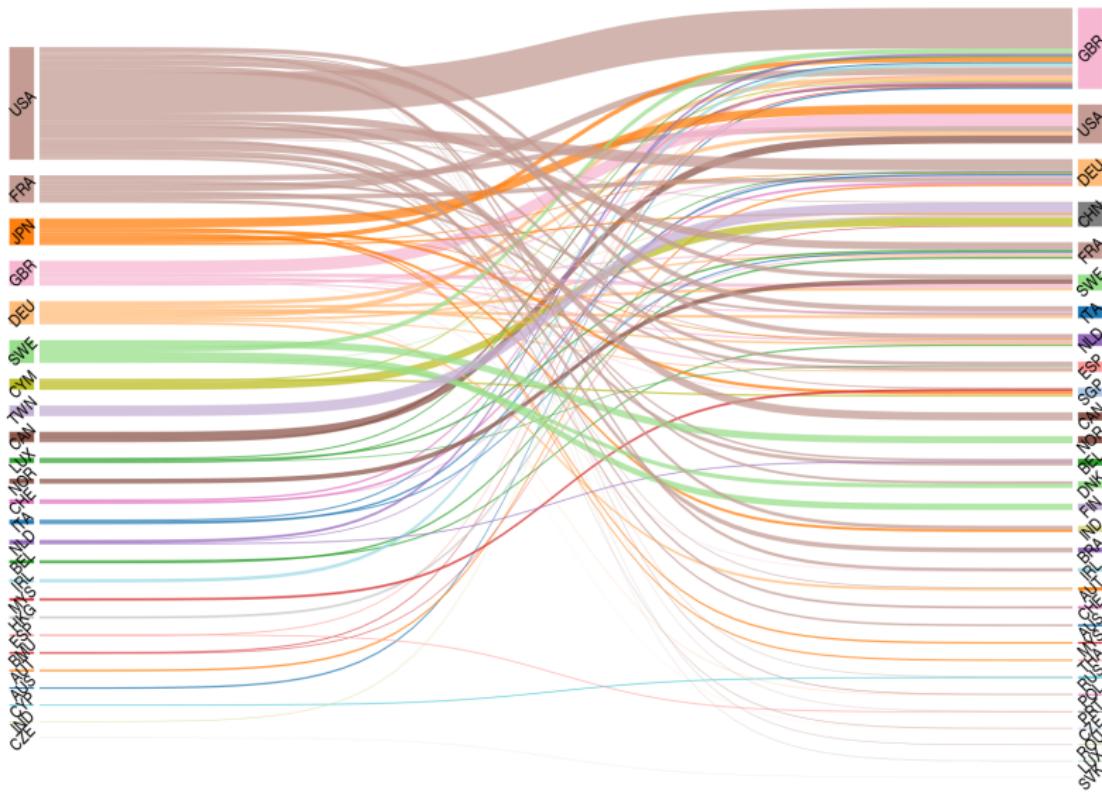
(c) Total Assets (million USD)



(d) Fixed Assets (million USD)

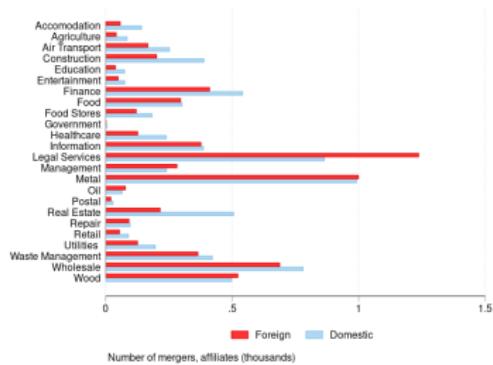


Mergers & Acquisitions Foreign investment flows (affiliates)

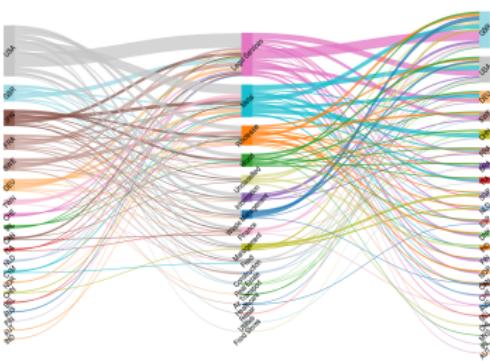


Mergers & Acquisitions Foreign investment

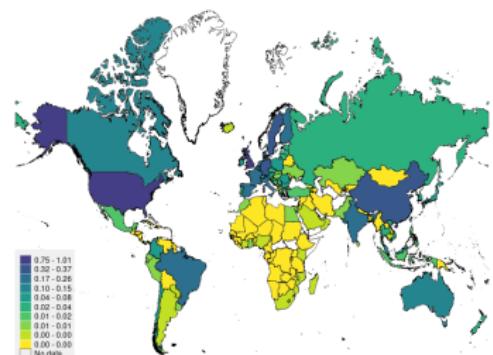
(a) Affiliates per sector



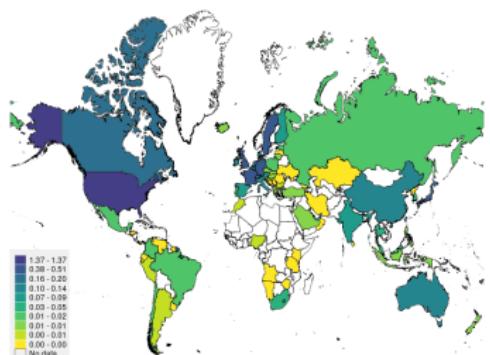
(b) Flows per country pair sector



(c) Inward affiliates map

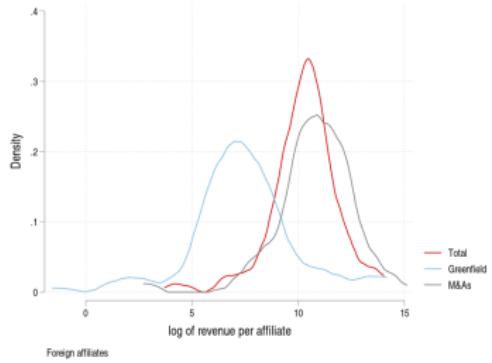


(d) Outward affiliates map

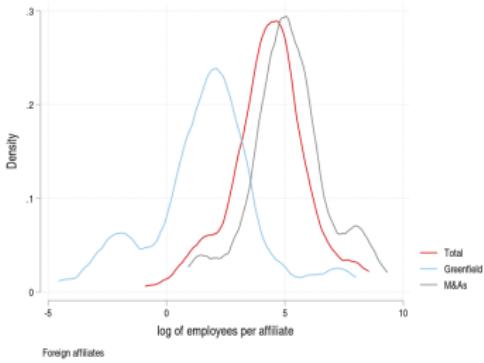


Total vs. M&As vs. Greenfield

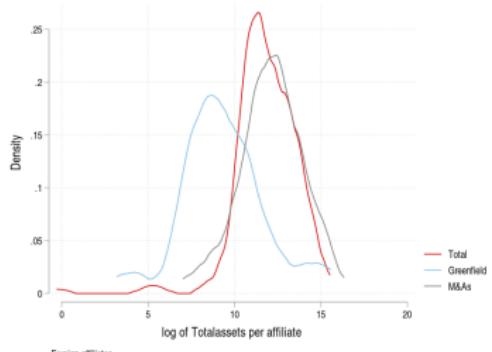
(a) Revenue (million USD)



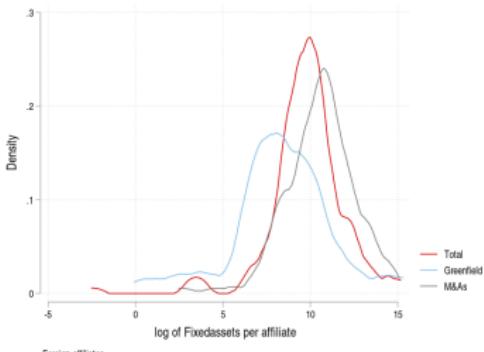
(b) Employees



(c) Total Assets (million USD)

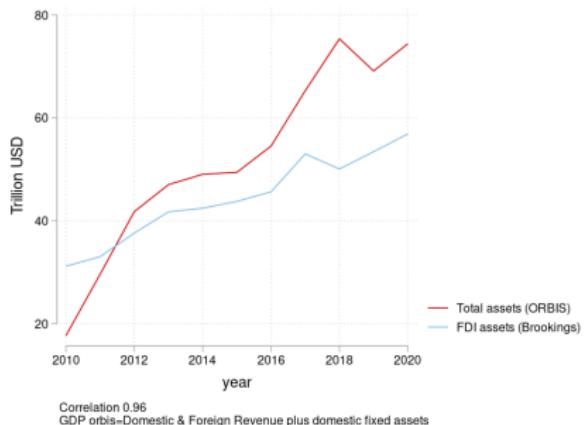


(d) Fixed Assets (million USD)

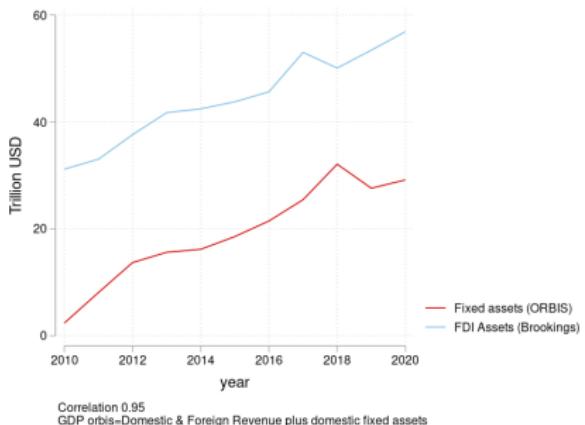


MREID vs EWN, FDI liabilities, time-series correlation

(a) Total Assets



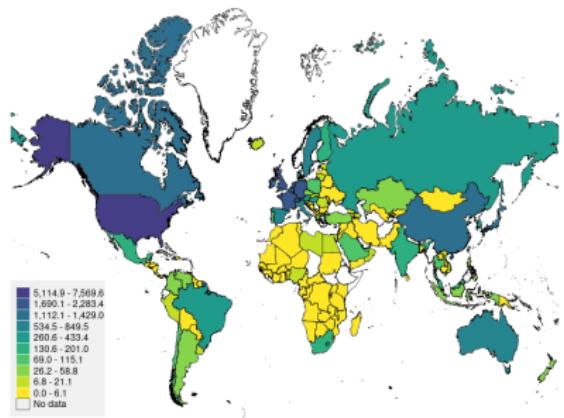
(b) Fixed Assets



MREID vs EWN, FDI Assets & liabilities, spatial correlation

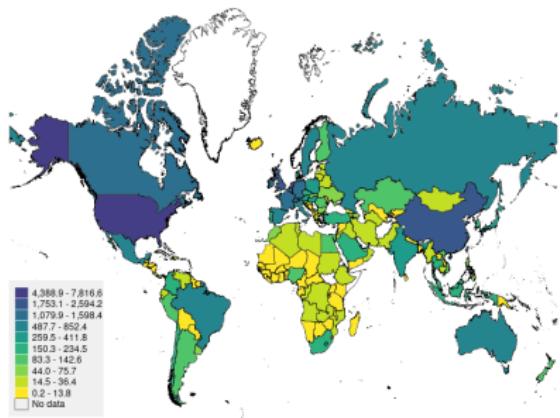
Figura: EWN FDI maps, spatial correlation

(a) FDI Assets



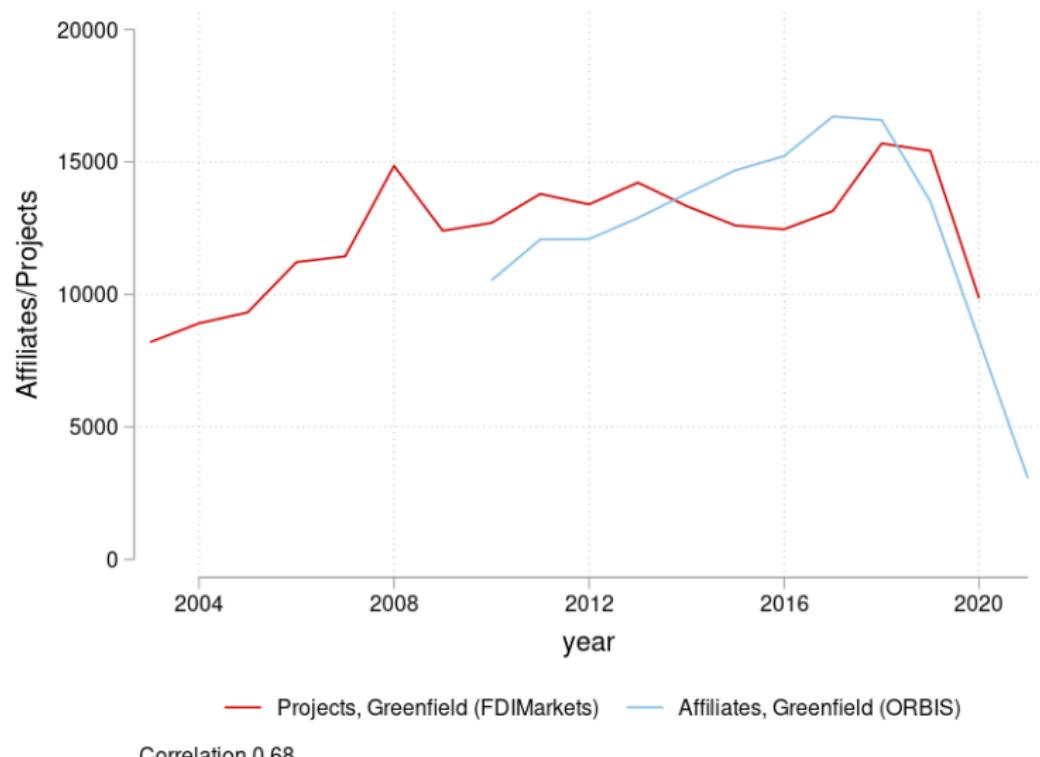
FDI Assets in Foreign countries (Brookings)
Billion USD, yearly average
Spatial correlation with ORBIS Assets: 0.70

(b) FDI liabilities



FDI Liabilities (Brookings)
Billion USD, yearly average
Spatial correlation with ORBIS Assets: 0.77

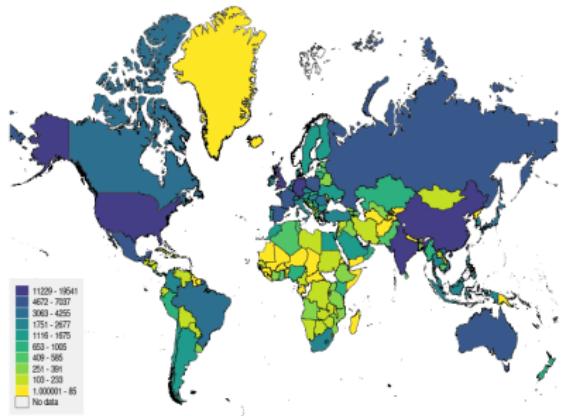
MREID vs. FDIMarkets, time-series correlation ➔ jobs,capital



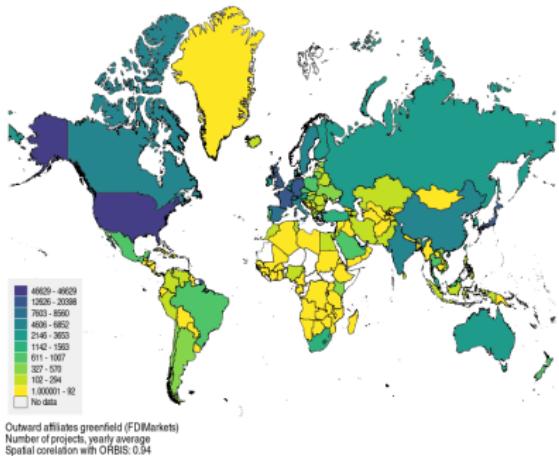
MREID vs. FDIMarkets, spatial correlation

Figura: Greenfield FDIMarkets maps (Projects)

(a) Inward Greenfield FDI



(b) Outward Greenfield FDI



MREID vs. BEA (& Spanish admin. data & FDIMarkets)

US FDI in Spain in 2019

► China

► Germany

► Time Series

	Number of parent companies	Number of affiliates	Total assets	Net property, plant & equipment	Fixed assets	Capital expenditures	Sales	Net income	Value added	Cost of employees	Number of employees	M&A value
BEA (>25M assets)	N/A	708	185,260	17,830		2,367	92,507	7,735	18,022	11,589	180.6	
Spanish Admin. Data (>0 assets)					92,264		94,380	5,050			317.0	
ORBIS (>25M assets)	359	711	149,574		72,206		104,940	2,664	22,704	14,436	248.1	
ORBIS-vertical (>25M assets)	146	323	58,205		34,104		33,018	898	7,402	4,371	76.4	
ORBIS-horizontal (>25M assets)	213	388	91,369		38,103		71,922	1,765	15,303	10,065	171.7	
ORBIS (>0 assets)	1,902	2,490	158,059		74,971		115,090	2,484	25,922	17,447	298.7	
Spanish Admin. Data (>0) Greenfield						3,628**						
FDIMarkets (>25M assets); Greenfield	14	22				1,462	3034*				5.3	
ORBIS (>25M assets); Greenfield	24	27	10,142			2,941**	2,669	330	910	352	5.4	
ORBIS (>25M assets); M&A	1	1	72		69		3	39	59	5	0	78

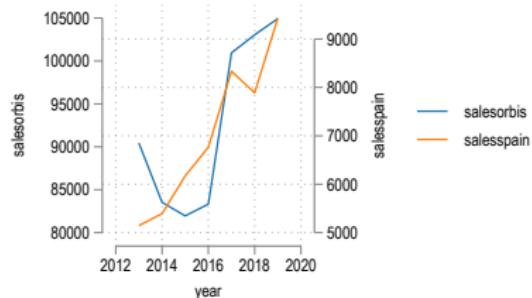
Notes: *Constructed sales. **New fixed assets. Data in million USD, employee in thousands

ORBIS vs. Spanish admin. data

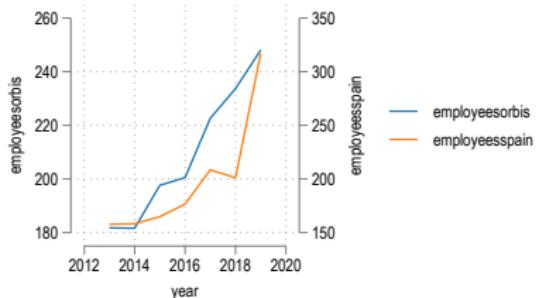
US FDI in Spain, 2013-2019

► More Greenfield FDI

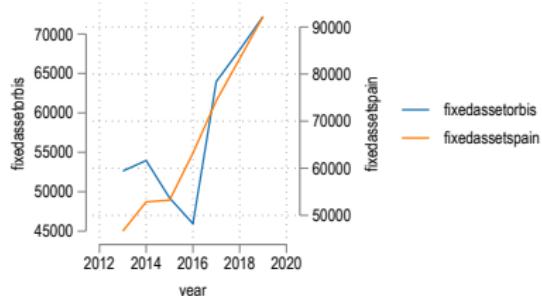
sales corr 0.82



employees corr 0.87



fixed assets corr 0.87



Conclusions

- Types:
 - Greenfield, M&As, Total
- Variables (FDI measures)
 - Affiliates, Revenue, Employment, Investment
- Coverage & validity:
 - Coverage: 186 countries (135 with domestic data). 25 sectors
 - Validity: High correlation with external datasets at the aggregate and country-level.
- Roadmap
 - Add a year annually
 - Historical data available
- New Research
 - Economic determinants of FDI
 - Policy
 - Gravity

Thank you

ORBIS search

[Back](#)

USA FDI in Spain 2013-2019

Your search: 3,787 companies

Search step	Result for:	Step	Search
1. Status: Active companies, Unknown situation	>	305,883,607	305,883,607
2. Subsidiaries with Ultimate Owners by profile: UO located in United States of America (US): GUO and DUO:Def. of the UO: min. path of 50.01%, known or unknown shareholder	>	5,319,532	5,319,532
3. World region/Country/Region in country: Spain	>	4,985,843	3,787
4. Subsidiaries with a specific number of shareholders: 1, more than 100, 11 to 100, 2, 3, ...	>	91,079,231	3,787
Boolean search: 1 and 2 and 3 and 4		Total:	3,787

Your search: 711 companies

Search step	Result for:	Step	Search
1. Status: Active companies, Unknown situation	>	305,883,582	305,883,582
2. Subsidiaries with Ultimate Owners by profile: UO located in United States of America (US): GUO and DUO:Def. of the UO: min. path of 50.01%, known or unknown shareholder	>	5,319,532	5,319,532
3. World region/Country/Region in country: Spain	>	4,985,843	3,787
4. Total assets (in USD): min>25, Last available year, exclusion of companies with no recent financial data and Public authorities/States/Governments	>	803,832	711
Boolean search: 1 and 2 and 3 and 4		Total:	711

ORBIS search result

USA FDI in Spain 2013-2019

ORBIS search result in detail

FORD: US investment prior to 2013

Company name Latin alphabet	Date of incorporation	Operating revenue (Turnover) th USD 2020	Operating revenue (Turnover) th USD 2019	Operating revenue (Turnover) th USD 2018	Operating revenue (Turnover) th USD 2017	Operating revenue (Turnover) th USD 2016	Operating revenue (Turnover) th USD 2015	Operating revenue (Turnover) th USD 2014	Operating revenue (Turnover) th USD 2013	Number of employees 2021	
FORD ESPANA SL	26/09/1973	8,192,268	9,335,711	9,724,681	11,045,112	9,479,463	9,762,205	8,237,819	7,741,234	n.a.	
		Number of employees 2020	Number of employees 2019	Number of employees 2018	Number of employees 2017	Number of employees 2016	Number of employees 2015	Number of employees 2014	Number of employees 2013		
		6,782	7,381	7,498	8,100	8,451	10,052	9,794	7,692		
		Total assets th USD 2020	Total assets th USD 2019	Total assets th USD 2018	Total assets th USD 2017	Total assets th USD 2016	Total assets th USD 2015	Total assets th USD 2014	Total assets th USD 2013		
		5,343,210	4,953,313	4,902,236	4,446,396	3,479,819	4,111,568	4,038,469	3,575,290		

ORBIS search result in detail

Netflix: US Greenfield investment after 2013

Company name Latin alphabet	Date of incorporation	Operating revenue (Turnover) th USD 2020	Operating revenue (Turnover) th USD 2019	Operating revenue (Turnover) th USD 2018	Operating revenue (Turnover) th USD 2017	Operating revenue (Turnover) th USD 2016	Operating revenue (Turnover) th USD 2015	Operating revenue (Turnover) th USD 2014	Operating revenue (Turnover) th USD 2013
NETFLIX SERVICIOS DE TRANSMISION ESPANA SL	27/08/2018	42,462	21,124	46	n.a.	n.a.	n.a.	n.a.	n.a.
Number of employees									
	2020	2019	2018	2017	2016	2015	2014	2013	
	v	v	v	v	v	v	v	v	v
	38	14	n.a.						
Total assets th USD									
	2020	2019	2018	2017	2016	2015	2014	2013	
	v	v	v	v	v	v	v	v	v
	24,625	19,628	154	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

ORBIS search result in detail

Cotsco: Costco Spain appears to be an M&A 2013

Company name Latin alphabet NAME	# of shareholders COUNT	Shareholder - Name SH_NAME	Sharehol- der ~... 01/2012	Sharehol- der ~... r - Country ISO code SH_COUN...	Sharehol- der ~... 01/2013	Sharehol- der ~... 01/2014	Sharehol- der ~... 01/2015	Sharehol- der ~... 01/2016	Sharehol- der ~... 01/2017	Sharehol- der ~... 01/2018	Sharehol- der ~... 01/2019	Sharehol- der ~... 01/2020...	Sharehol- der ~... 01/202...
X 4. COSTCO WHOLESALE SPAIN SLU	3	AUXADI SERVICIOS DE ME... COSTCO WHOLESALE INT... COSTCO WHOLESALE CORP	ES US US	100.00 100.00 100.00	100.00 100.00 100.00							100.00 100.00	

Costco
GETAFE, Spain

Active
BvD ID: E58865094460 Orbis ID: 137528855
Private
The Global Ultimate Owner of this controlled subsidiary is
COSTCO WHOLESALE INTERNATIONAL, INC.

< > Ownership structure

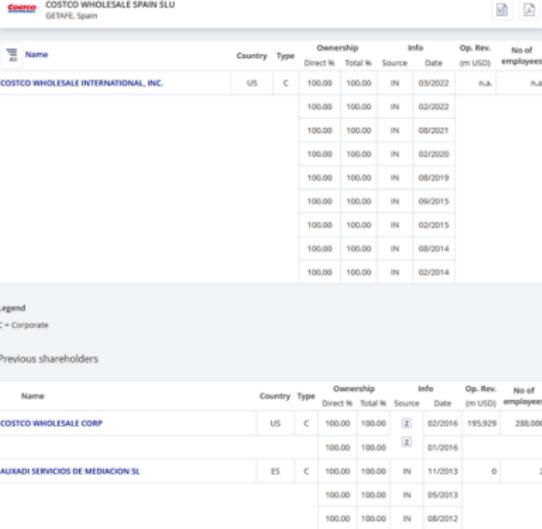
Filter by Shareholders Chart display +

```

graph TD
    A[Costco Wholesale International, Inc.  
US] -- "100.00/100.00" --> B[Costco Wholesale Spain SLU  
ES]
    
```

Is Costco Spain really an M&A?

 COSTCO WHOLESALE SPAIN SLU
GETAFE, Spain



Legend
C = Corporate

Previous shareholders

Name	Country	Type	Ownership	Info	Op. Rev.	No of employees	
			Direct %	Total %	Source	Date	(in USD)
COSTCO WHOLESALE INTERNATIONAL, INC.	US	C	100.00	100.00	IN	03/2022	n.a.
			100.00	100.00	IN	03/2022	
			100.00	100.00	IN	08/2021	
			100.00	100.00	IN	02/2020	
			100.00	100.00	IN	08/2019	
			100.00	100.00	IN	09/2015	
			100.00	100.00	IN	02/2015	
			100.00	100.00	IN	08/2014	
			100.00	100.00	IN	03/2014	

Name	Country	Type	Ownership	Info	Op. Rev.	No of employees	
			Direct %	Total %	Source	Date	(in USD)
COSTCO WHOLESALE CORP	US	C	100.00	100.00	[X]	02/2016	195,929
			100.00	100.00	[X]	01/2016	
AUXADI SERVICIOS DE MEDIACION SL	ES	C	100.00	100.00	IN	11/2013	0
			100.00	100.00	IN	05/2013	2
			100.00	100.00	IN	08/2012	

- Costco Spain was owned by a shell company “AUXADI SERVICIOS DE MEDIACION SL” in 2012 and 2013, who registered the name in behalf of Costco Inc.
- The Kalemli-Ozcan et al. (2015 NBER) procedure would have identified Costco as M&A from a Spanish firm, when in fact it was Greenfield investment

Solution to complex corporate ownership changes: M&As

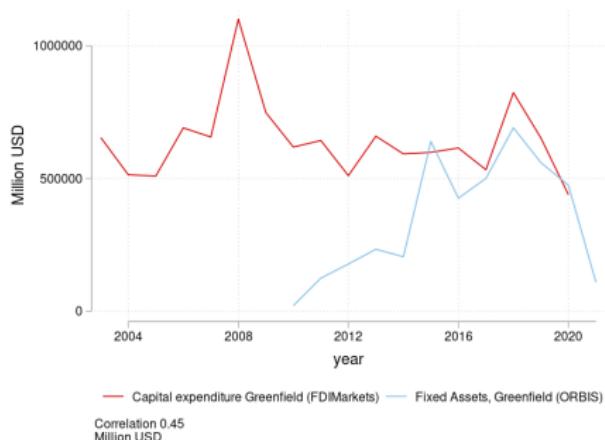
Cosco does not qualify as a completed M&A in ORBIS [» M&A example](#)

Your search: 26 deals

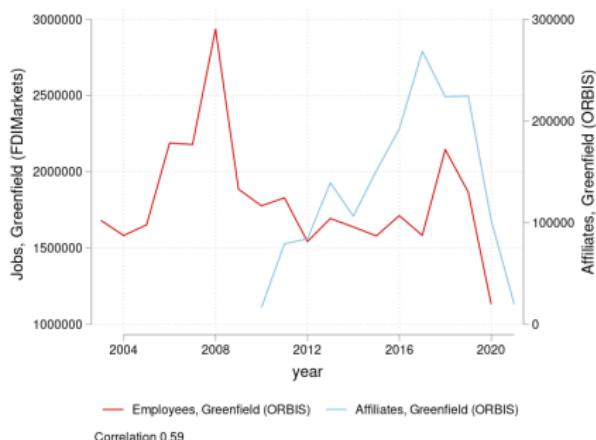
Search step	Result for:	Step	Search
✗ <input checked="" type="checkbox"/> 1. BvD ID number: This search presents a problem, impossible to replay it		1,257	1,257
✗ <input checked="" type="checkbox"/> 2. Deal type: Merger, Acquisition	>	834,876	816
✗ <input checked="" type="checkbox"/> 3. Deal value (USD): all deals with known value (including estimates)	>	1,523,892	141
✗ <input checked="" type="checkbox"/> 4. Deal status: Completed	>	2,026,146	120
✗ <input checked="" type="checkbox"/> 5. Country (primary addresses): United States of America (US) (Acquirer)	>	362,066	45
✗ <input checked="" type="checkbox"/> 6. Country (primary addresses): Spain (ES) (Target)	>	48,831	45
✗ <input checked="" type="checkbox"/> 7. Country (primary addresses): Western Europe, Scandinavia, Baltic states, Eastern Europe, Nordic states, ... (Vendor)	>	603,801	26
Boolean search: <input type="text" value="1 and 2 and 3 and 4 and 5 and 6 and 7"/>	 	Total:	26

MREID vs. FDIMarkets, jobs, capital Back

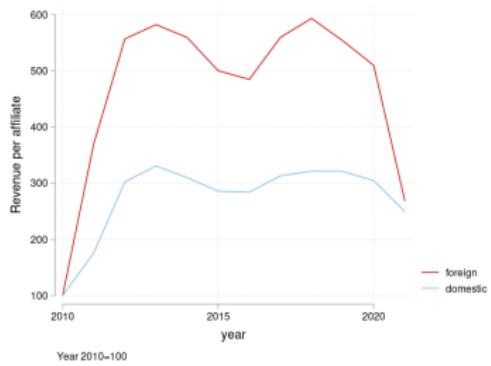
(a) Fixed Assets/Capital expenditure



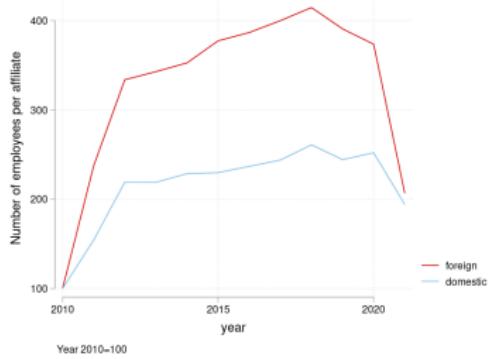
(b) Employees/Jobs



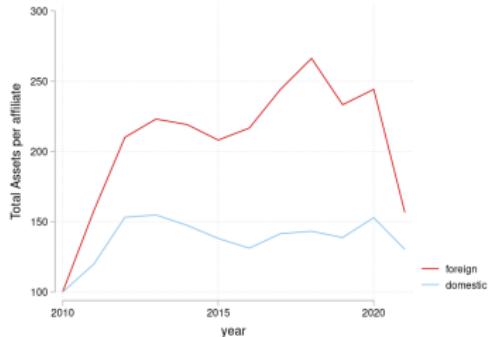
(a) Revenue (Million USD)



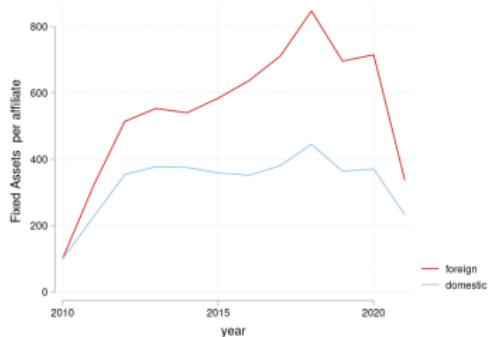
(b) Employees



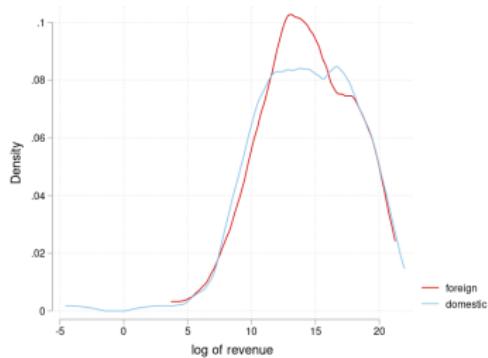
(c) Total Assets (million USD)



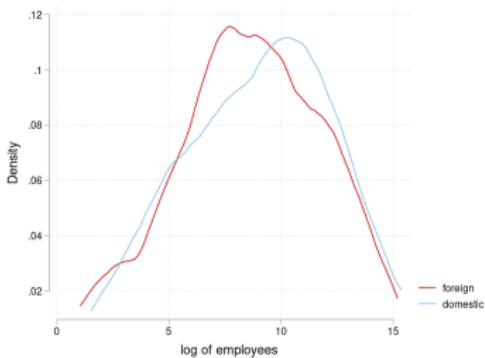
(d) Fixed Assets (million USD)



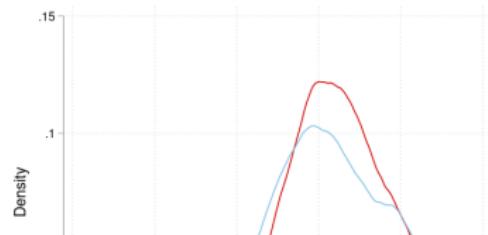
(a) Revenue (million USD)



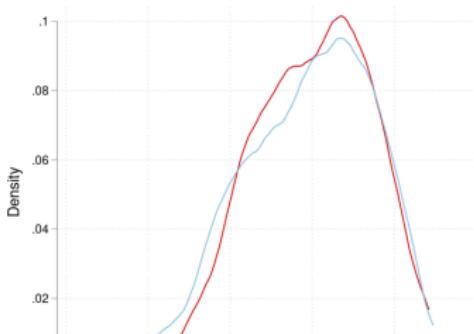
(b) Employees



(c) Total Assets (million USD)



(d) Fixed Assets (million USD)



Greenfield Summary Statistics

[Back](#)

Cuadro: Summary statistics at the host country by ownership (per affiliate)

	Panel A: Domestic			Panel B: Foreign		
	mean	max	sd	mean	max	sd
Revenue	8	211	27	40	1,446	193
Employees	36	1,257	157	65	3,005	350
Total assets	54	1,355	166	172	5,885	750
Fixed assets	28	1,118	121	99	4,467	546

Notes: Revenue and assets in million USD

Foreign statistics at the host country level, year averages

Averages per affiliate

Cuadro: Summary statistics at the host country by ownership (per affiliate)

	Panel A: Domestic			Panel B: Foreign		
	mean	max	sd	mean	max	sd
revenue	116	1,498	213	170	3,767	426
employees	299	3,309	600	616	11,292	1,602
Totalassets	873	21,036	2,608	660	12,517	1,532
Fixedassets	137	4,729	526	149	3,611	420

Notes: Revenue and assets in million USD

Foreign statistics at the host country level, year averages

Averages per affiliate

ORBIS coverage (vs BEA & vs FDIMarkets)

US FDI in China in 2019 [» Back](#)

	Number of parent companies	Number of affiliates	Total assets	Net property, plant & equipment	Fixed assets	Capital expenditures	Sales	Net income	Value added	Cost of employees	Number of employees
BEA	N/A	1,951	453,578	67,825		12,279	378,814	28,652	80,622	33,723	1,653.9
ORBIS	796	2,037	284,450		47,003	11,367	320,249	22,629	N/A	N/A	569.5
FDIMarkets Greenfield	17	96	2,152			55**	12,866*				6.1
ORBIS Greenfield	46	64				8,978**	17,566	-3,449			26.9
ORBIS M&A	4	147			21		200	13			0.68

Notes: *Constructed sales **New fixed assets. Data in million USD, employee in thousands

ORBIS coverage (vs BEA & vs FDIMarkets)

US FDI in Germany in 2019 [Back](#)

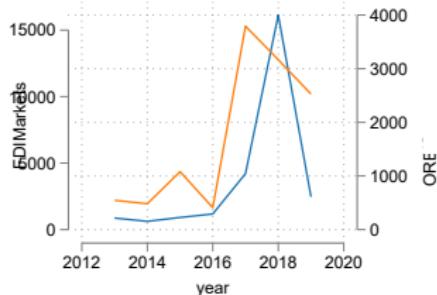
	Number of parent companies	Number of affiliates	Total assets	Net property, plant & equipment	Fixed assets	Capital expenditures	Sales	Net income	Value added	Cost of employees	Number of employees
BEA	N/A	1,969	959,932	54,372		8,068	370,600	18,490	80,935	53,909	682.1
ORBIS	702	1,763	885,594		355,709		345,929	10,251	103,841	48,573	599.9
FDIMarkets Greenfield	15	38				3,562**	1,834*				7.7
ORBIS Greenfield	38	51	14,612			13,000**	2,562	-205	248	503	6.3
ORBIS M&A	24	306			73		266	-15	96	99	1.12

Notes: *Constructed sales **New fixed assets. Data in million USD, employee in thousands

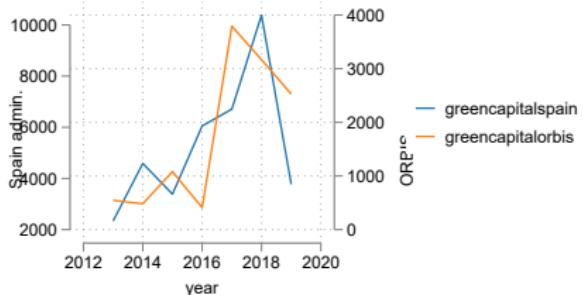
ORBIS vs. Spanish admin. data vs. BEA vs. FDIMarkets

USA Greenfield FDI in Spain, 2013-2019 [▶ Back](#)

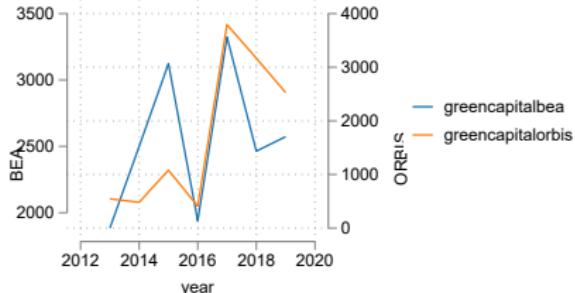
FDIMarkets (capex) corr 0.64



Spanish data (fixed assets) corr 0.59



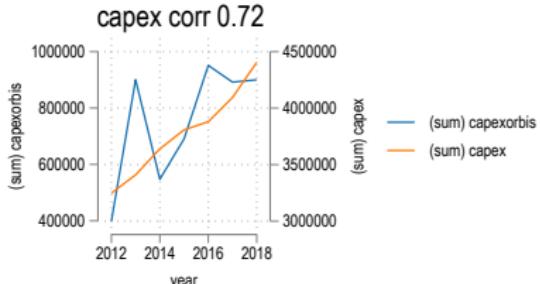
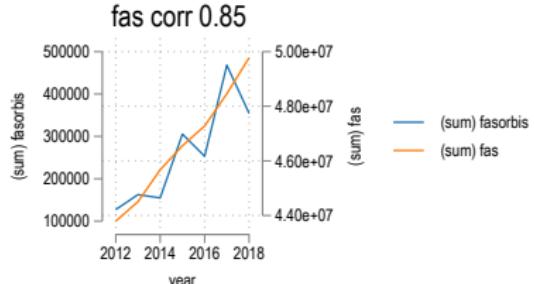
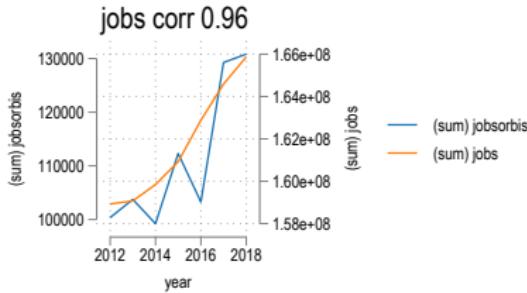
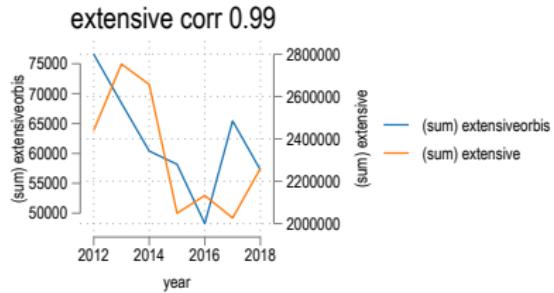
BEA (capex) corr 0.60



ORBIS vs. FDIMarkets

USA Greenfield FDI in Spain, 2013-2019 [▶ Back](#)

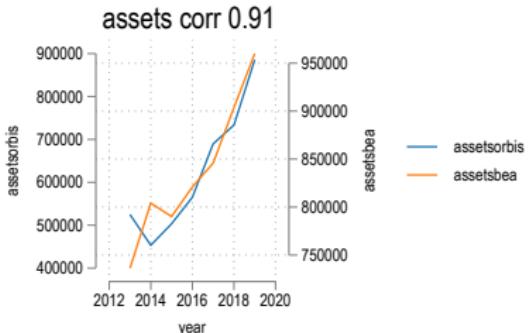
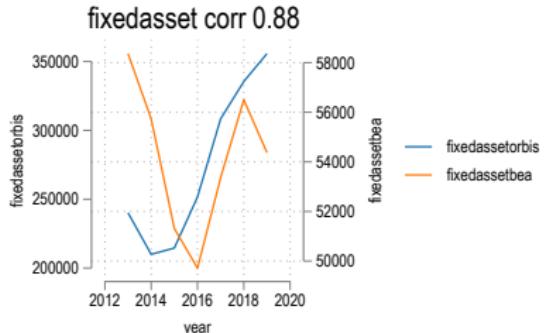
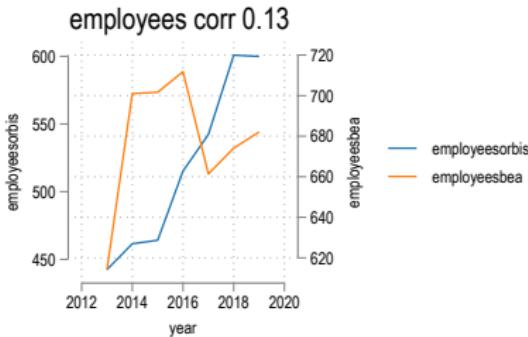
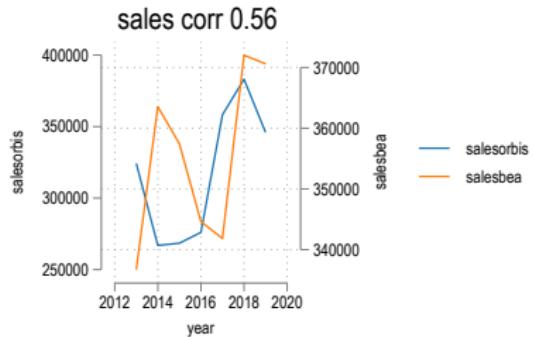
Orbis vs FDIMarkets Outward FDI USA w domestic



ORBIS vs. BEA

USA FDI in Germany 2013-2019

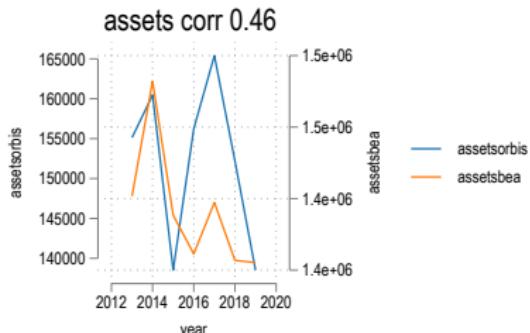
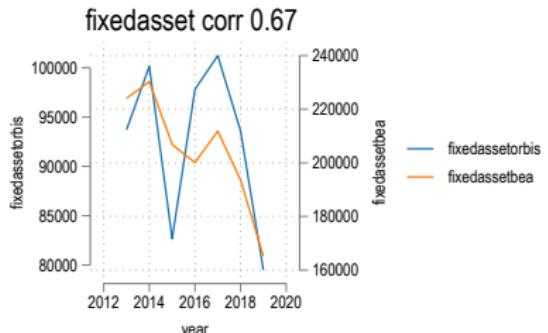
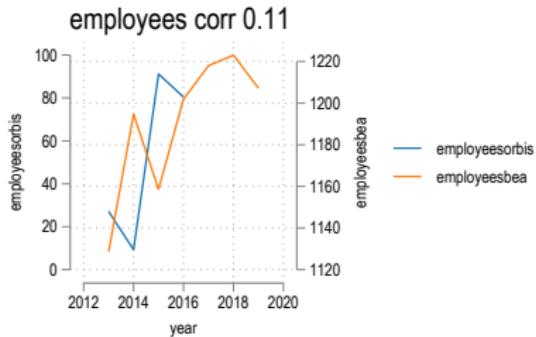
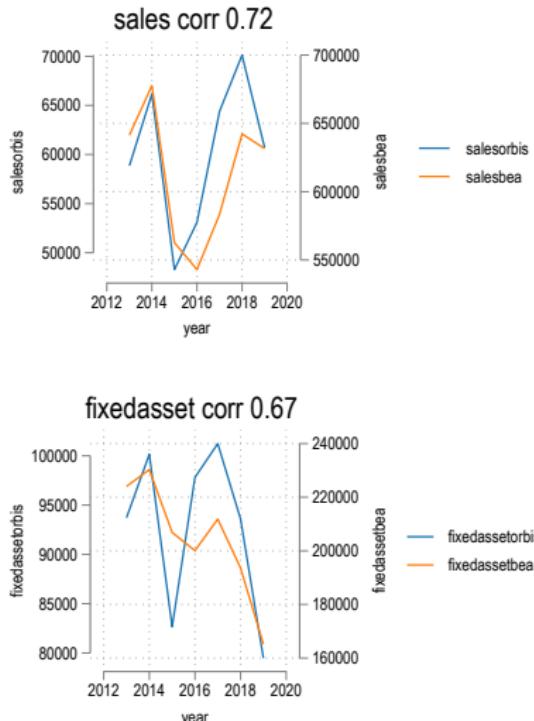
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ORBIS vs. BEA, Canada

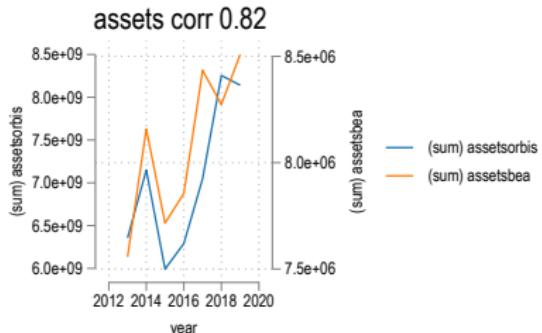
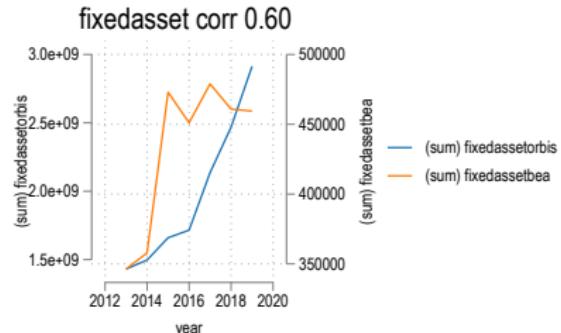
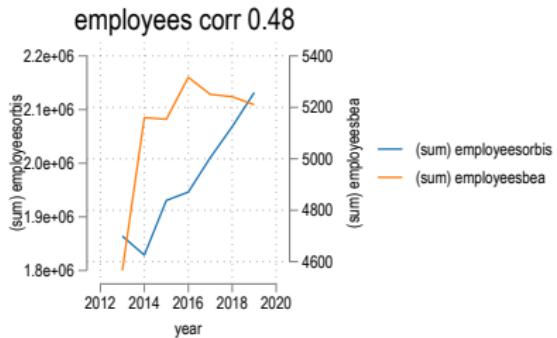
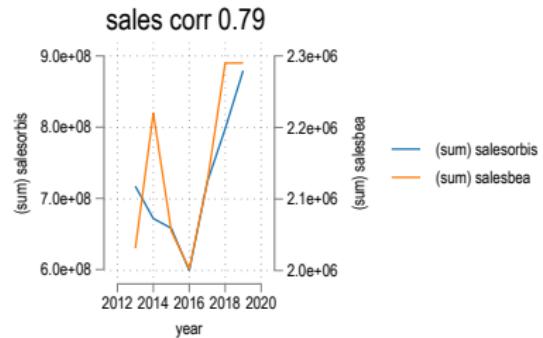
USA FDI in Canada 2013-2019

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ORBIS vs. BEA

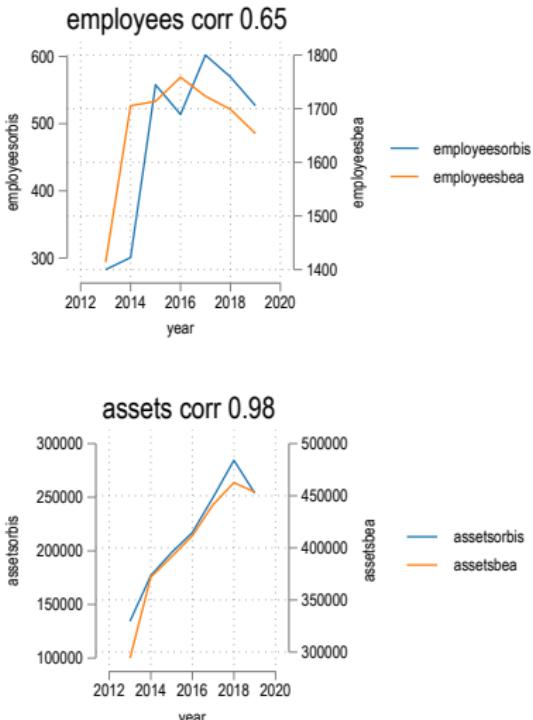
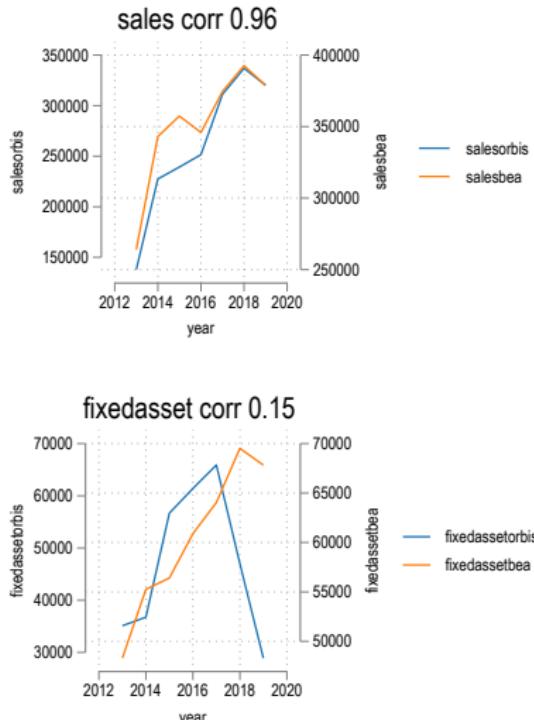
USA FDI in Canada, UK, Germany, China, and Spain 2013-2019



ORBIS vs. BEA, China

USA FDI in China 2013-2019

▶ Back

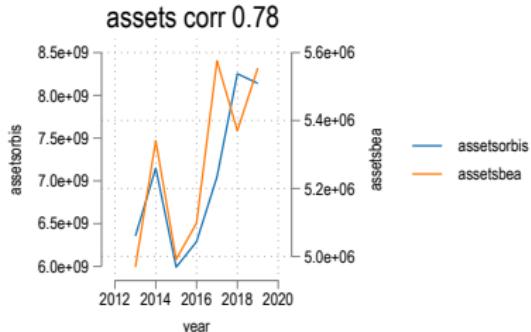
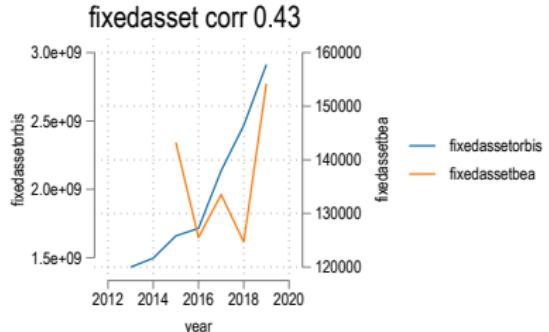
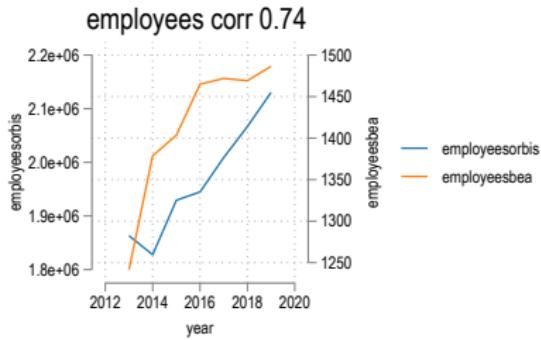
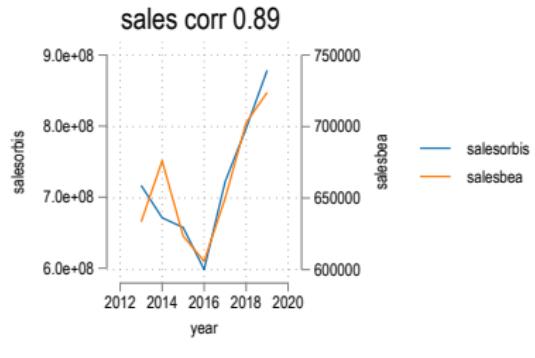


ORBIS vs. BEA

USA FDI in UK 2013-2019

► Canada

► Germany

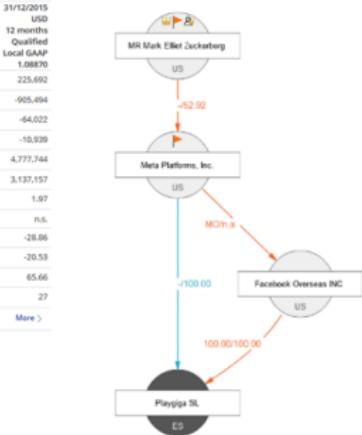


ORBIS M&A

Facebook acquired Playgiga in 2019 » Back

Deal Number	Acquirer name	Acquirer country	Target name	Target country	Deal type	Deal status	Deal value in USD	Last deal status date	Target BvD ID number	Vendor name	Vendor country
15. 1941314668	FACEBOOK INC.	US	PLAYGIGA SL	ES	Acquisition 100%	Completed	78,074.03	18/12/2019	ESB66003955	ADARA ADVISORS SL	Spain

	31/12/2019	31/12/2018	31/12/2017	31/12/2016	31/12/2015
USD	USD	USD	USD	USD	USD
12 months	12 months	12 months	12 months	12 months	12 months
Audit n.a.	Audit n.a.	Audit n.a.	Audit n.a.	Qualified	Qualified
Local GAAP	Local GAAP	Local GAAP	Local GAAP	Local GAAP	Local GAAP
1.12340	1.14500	1.19930	1.05410	1.08870	
Exchange rate: EUR/USD					
Operating revenue (Turnover)	3,427,643 ↗	3,353,770 ↗	1,034,770 ↗	187,149 ↘	225,692
P/L before tax	53,998,996 ↗	-2,429,293 ↘	-2,116,796 ↘	-1,127,454 ↘	-905,494
P/L for period (=Net income)	39,920,934 ↗	-2,187,781 ↘	-1,860,699 ↘	-930,588 ↘	-64,022
Cash flow	40,970,827 ↗	-1,375,885 ↗	-1,529,260 ↘	-861,070 ↘	-10,939
Total assets	71,987,112 ↗	10,400,120 ↗	9,581,834 ↗	5,279,677 ↗	4,777,744
Shareholders funds	56,036,911 ↗	4,926,318 ↘	5,909,440 ↗	3,632,912 ↗	3,137,157
Current ratio (x)	0.21 ↘	1.01 ↘	1.41 ↗	0.82 ↘	1.97
Profit margin (%)	n.s.	-72.44	n.s.	n.s.	n.s.
ROE using P/L before tax (%)	94.94 ↗	-49.31 ↘	-35.82 ↘	-31.03 ↘	-28.86
ROCE using P/L before tax (%)	93.47 ↗	-36.57 ↘	-27.38 ↘	-23.06 ↘	-20.58
Solvency ratio (Asset based) (%)	77.84 ↗	47.37 ↘	61.67 ↘	68.81 ↗	65.66
Number of employees	55 ↘	59 ↗	45 ↗	31 ↗	27



ORBIS vs. BEA

USA FDI in Spain, 2013-2019

► China

► Canada

► UK

► back

