

Home Country Effects of Multinational Network Restructuring in Times of Deglobalisation: Evidence for European MNEs

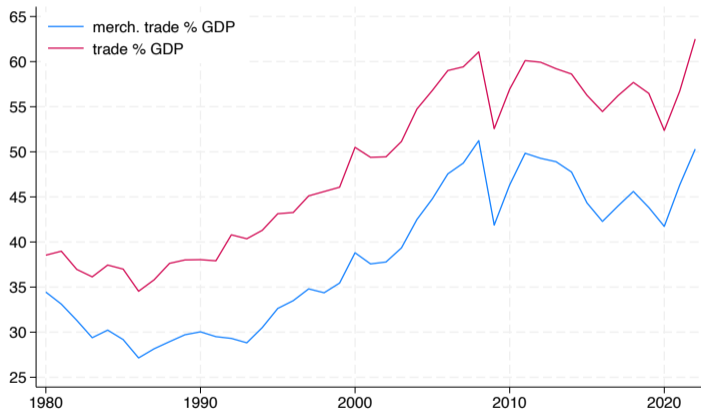
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Bernhard Michel (FPB)

National Bank of Belgium Conference, October 3-4, 2024

Deglobalisation, decarbonisation and digitalisation: How the three Ds affect firm pricing, markups and productivity

Motivation

since late 2000s, various shocks/crises have put an end to rapid economic globalization



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- shift in focus
 - from efficiency gains offered by global production
... towards the risks and reconfiguration of global production
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 - Antras et al. (23), Baldwin and Freeman (22), Fajgelbaum and Khandelwal (22), ...

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 - Antras et al. (23), Baldwin and Freeman (22), Fajgelbaum and Khandelwal (22), ...
- ... but multinational networks account for 2/3 world exports (Miroudot,22)
- deeper understanding of deglobalisation requires insights from **MNE perspective**
 - this is where our paper comes in

Our contribution

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- link with nearshoring and friendshoring

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“Does deglobalisation bring activity back to the home country?”

- event-study diff-in-diff to analyse dynamic effects on domestic economy:
 - domestic intensive margin: various outcomes for parent and affiliates
 - value-added, employment (wages, revenue, total assets, productivity)
 - domestic extensive margin: # affiliates
 - (all-in-one)

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 - increasing trend in the number of foreign contractions
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“*Does deglobalisation bring activity back to the home country?*”

- foreign *contraction*: no evidence of increased home country activity
 - if anything then negative
- foreign *expansion*: benefits for domestic economy
 - both along domestic extensive and intensive margin
- reduced geographic scope and geopolitical reorientation do not induce systematic differences in the home-country effects of expansion/contraction

Roadmap

- Data
- Measuring foreign restructuring
- Deglobalisation patterns
 - role of nearshoring and friendshoring
- Home country effects of foreign restructuring
 - role of nearshoring and friendshoring

Data - Merlevede and Theodorakopoulos (2024)

- dataset of *worldwide* affiliate networks of *European* parents
 - worldwide extensive margin (# affiliates)
 - 'European' intensive margin (affiliate sales, assets, employment, ...)
 - 4,368,016 affiliate-parent-year observations

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 - 4,368,016 affiliate-parent-year observations
- focus analysis on deglobalisation period (2010-2020)
 - MNE networks per year: 45k-60k NW per year
 - MNE parent premium over domestic NW parent: larger, more efficient MNE premium

Measuring foreign restructuring

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 - reduce sample to meaningfully identify episodes: drop short-observed networks, no network birth, episodes ending in 2010-19, not 2020 (end of sample), drop start-stop

Measuring foreign restructuring

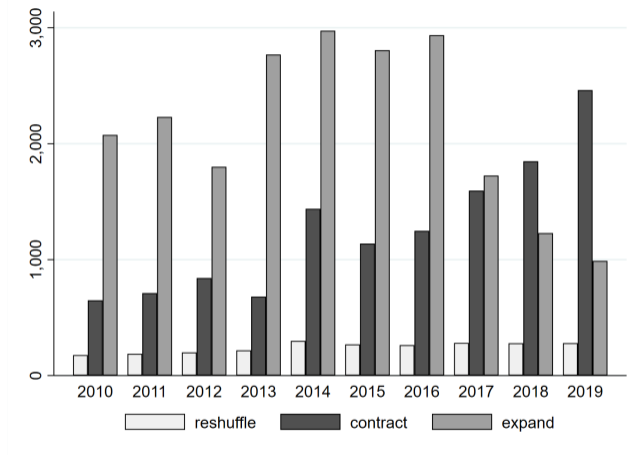
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 - reduce sample to meaningfully identify episodes: drop short-observed networks, no network birth, episodes ending in 2010-19, not 2020 (end of sample), drop start-stop
 - 41,485 MNEs: 60% with ≥ 1 foreign restructuring episode (22% ≥ 2)
 - quarter of episodes lasts more than one year
 - episodes uniformly spread over years

Episode types and deglobalisation patterns

Based on the change in # foreign affiliates over the episode we identify three types:

- expansion: # foreign affiliates increases
- reshuffle: # foreign affiliates remains the same
- contraction: # foreign affiliates decreases
 - indication of deglobalisation

Result I: Trend towards deglobalisation



i) increasing trend contractions – ii) drop # expansions – iii) reshuffle small & stable

Nearshoring and friendshoring?

popular notions of specific restructuring outcomes in times of deglobalisation

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 - nearshoring = episode resulting in lower average physical within-network distance

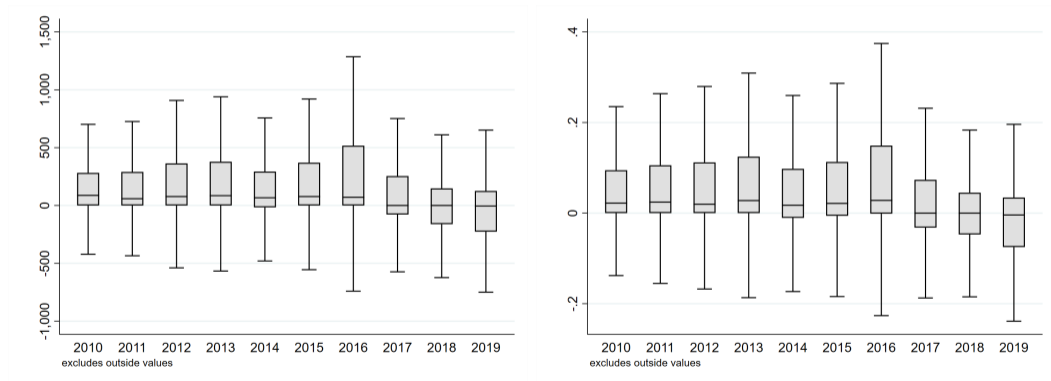
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- 'friendshoring' = NW more concentrated in geopolitically aligned countries
 - calculate average geopolitical distance between affiliates and parent
 - bilateral ideal point differences from Bailey et al. (17); average 2020-22
 - friendshoring = episode resulting in lower average geopolitical within-network distance

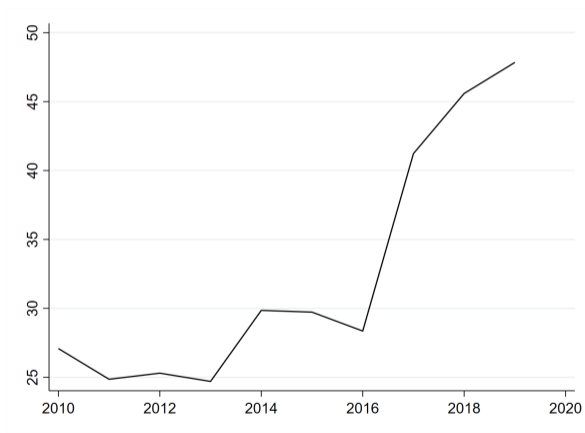
Restructuring increasingly associated with nearshoring and friendshoring

Figure: Boxplots of change over episode in average physical distance (left panel) and average geopolitical distance (right panel)



Result II: Trend towards nearshoring and friendshoring

Figure: 'Near/friendshoring' episodes as a share of total episodes



Home country effects of foreign restructuring

Empirical framework: event study-approach

$$Y_{ijct} = \sum_{\tau=t_{start}-5}^{t_{end}+5} \beta_{type,\tau} \times RestrType_i \times \mathbb{1}(t = \tau) + \alpha_i + \delta_{jct} + \varepsilon_{ijct} \quad (1)$$

- event = restructuring episode
 - expand, reshuffle, contract, contract&dissolve

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- outcomes: VA, L, W, Y, TA, TFP, and # domestic afs.
 - estimate for parents and domestic affiliates ('stayers')
- firm FE; country×industry×year FE
- sample: NW with one episode and NW without episode
 - sample size: 44,781 (VA); 94,959 (L); 63,221 (W); 88,602 (Y); 186,803 (TA); and 39,907 (TFP)

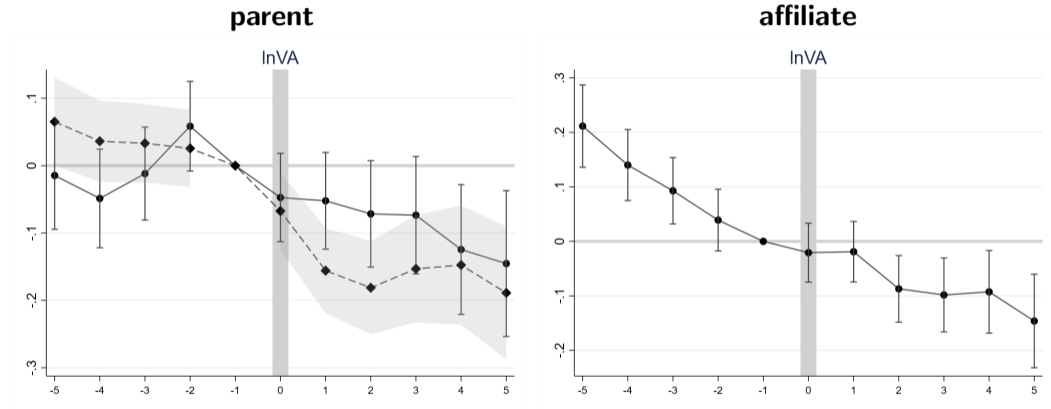
Home country effects of foreign restructuring

Many results, focus on answering:

“Does deglobalisation bring activity back to the home country?”

- value-added and employment at
 - parents
 - domestic affiliates in NW before and after episode
- # domestic affiliates
- for contraction episodes

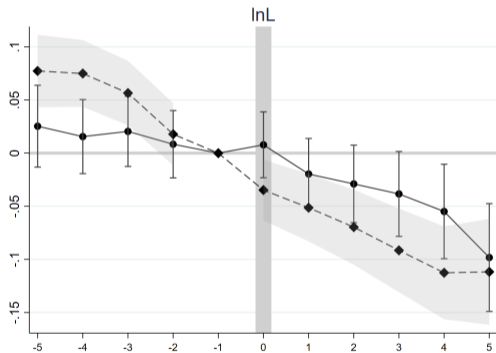
Foreign contraction and value added at parents and domestic affiliates



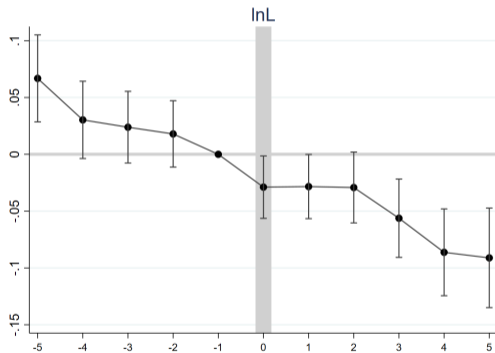
The horizontal axis marks the time relative to the episode-end which is labelled 0. The vertical shaded area around time zero highlights the episode. Coefficients are normalized relative to the year before the episode starts (timestamp '-1'). Point estimates are indicated by the dots connected by full lines, and 90% confidence intervals are given by vertical lines with caps.

Foreign contraction and employment at parents and domestic affiliates

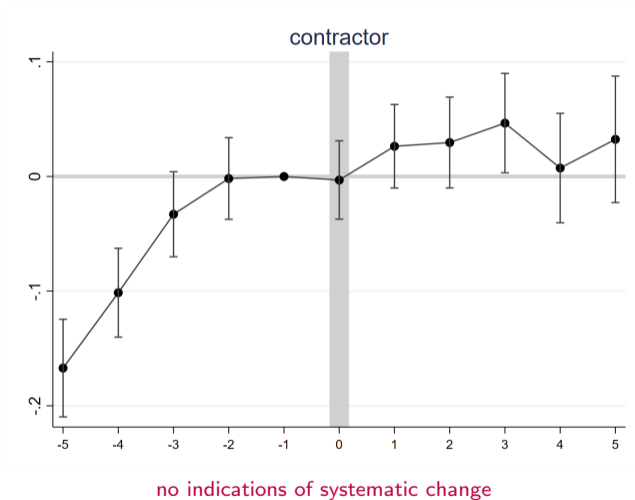
parent



affiliate



Foreign contraction and # domestic affiliates



Contraction Episodes – Summary

Key takeaway: **NO signs of bringing back activity to the home country!**

- dissolving NWs: parents likely to be on a downward trend for most outcomes
- contracting NWs: negative effect along domestic intensive margin

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Full result summary:

- parents [full results](#)
 - decrease in VA and L after episode (contract or dissolve)
 - TA, Y, and W decrease but mostly for parents of dissolving networks
 - no significant trends before episode (L and TA declining at dissolving NWs)
- # domestic affiliates
 - no significant effect, neither at end, before, or after episode
- domestic affiliates (intensive margin, stayers) [full results](#)
 - VA, L, and Y: continuously decreasing trend that is not changed by episode
 - TA and TFP: decreasing trend after end of episode

Expansions Episodes – Summary

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Full result summary:

- parents [full results](#)
 - results suggestive of scale effect
 - increases in VA, L, Y, and TA by the end of episode
 - sustained afterward
 - ‘preparing’ for expansion: outcomes also increasing before episode
- # domestic affiliates [full results](#)
 - increase # domestic affiliates after (not sustained?)
 - trend started before episode
- domestic affiliates (intensive margin) [full results](#)
 - domestic affiliates either unaffected or mild mostly insignificant negative trend

Home-country effects & nearshoring and friendshoring?

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- Key takeaway: **No systematic differences between contract-expand(-reshuffle) with and without near/friendshoring**

Conclusion

We use a large micro-level dataset of MNE networks to answer two questions:

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- foreign *contraction*: no evidence of increased home country activity
 - if anything then negative effect
- foreign *expansion* in deglobalisation times: benefits for domestic economy
- near/friendshoring do not induce systematic differences in home-country effects

DATA OVERVIEW

Data - Number of networks per year [back to data](#)

	No.
2010	43,760
2011	47,847
2012	49,737
2013	54,456
2014	57,308
2015	60,580
2016	64,049
2017	66,532
2018	67,126
2019	66,923
2020	67,755

Data - Top 10 Parent country location frequency (unique parents)

[back to data](#)

	No.	%
GB	13,183	13.4
NL	11,395	11.5
IT	9,815	9.9
DE	9,594	9.7
BE	7,710	7.8
ES	6,051	6.1
DK	5,098	5.2
AT	4,409	4.5
FR	4,286	4.3
SE	3,857	3.9
Total	98,749	100.0

- most European **multinational** networks are small!

	2020		All years	
	No.	%	No.	%
1	30,908	45.6	289,558	45.9
2	13,411	19.8	124,251	19.7
3	7,177	10.6	65,658	10.4
4	4,201	6.2	39,227	6.2
5	2,808	4.1	24,846	3.9
6 to 10	5,528	8.2	51,055	8.1
11 and more	3,722	5.5	36,138	5.7
Total	67,755	100.0	630,733	100.0

Data - Number of **country-industry combinations** per parent

[back to data](#)

	2020		All years	
	No.	%	No.	%
1	33,411	49.3	316,115	50.1
2	14,734	21.7	136,496	21.6
3	7,645	11.3	68,752	10.9
4	4,202	6.2	37,984	6.0
5	2,442	3.6	21,485	3.4
6 to 10	3,800	5.6	34,531	5.5
11 and more	1,521	2.2	15,370	2.4
Total	67,755	100.0	630,733	100.0

MNE parents are special: outperform parents of domestic networks

[back to data](#)

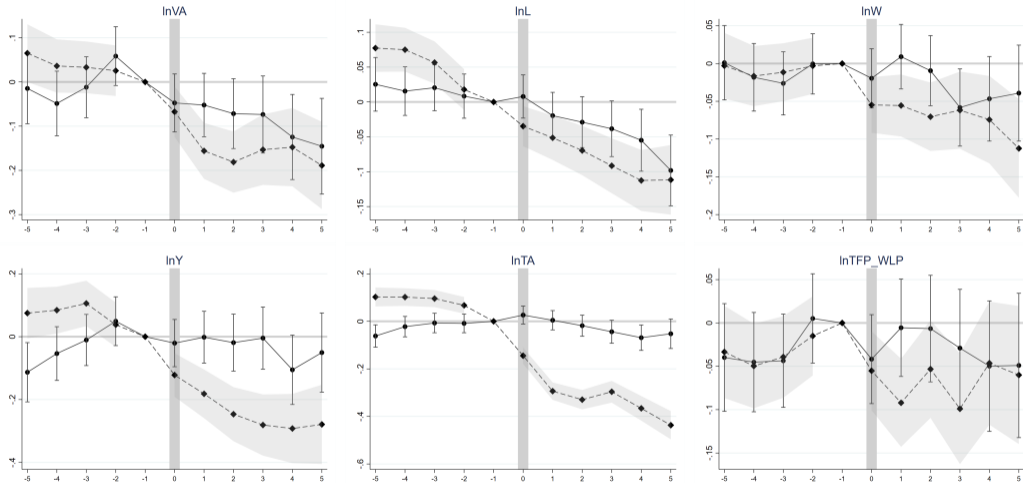
	(1) # aff.	(2) lnVA	(3) lnL	(4) lnW	(5) lnY	(6) lnTA	(7) lnTFP
MNE	0.270*** [0.001]	0.727*** [0.006]	0.383*** [0.002]	0.185*** [0.002]	0.730*** [0.005]	0.628*** [0.003]	0.287*** [0.003]
# aff.		0.593*** [0.003]	0.271*** [0.001]	0.162*** [0.001]	0.557*** [0.003]	0.923*** [0.002]	0.210*** [0.002]
Observations	7,149,810	1,170,104	2,452,616	1,294,614	2,256,101	5,790,361	802,844
R-squared	0.083	0.369	0.532	0.465	0.388	0.271	0.411
C×I×Y FE	Y	Y	Y	Y	Y	Y	Y

Sample of parents of both multinational and domestic networks that are active in the business economy and report unconsolidated accounts. Multinational networks have at least one cross-border affiliate at some point in time; domestic networks never have a cross-border affiliate. About 9% of observations in the estimation samples refer to MNE networks with slight variations across columns. Sample period is 2010-2020. All dependent variables are in logs. Dependent variables are indicated in column headings. # aff.: number of affiliates in the network, VA: real value-added (real operating revenue minus real material costs, double deflated by separate industry-level output and material deflators), L: number of employees, W: real average wage (real total costs of employees divided by the number of employees), Y: real operating revenue, TA: parent real total assets, TFP: total factor productivity (Wooldridge-Levinsohn-Petrin technique). Variables are winsorized at the first and 99th percentile. All specifications include country × NACE 4-digit industry × year fixed effects. Standard errors in brackets; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

FULL RESULTS

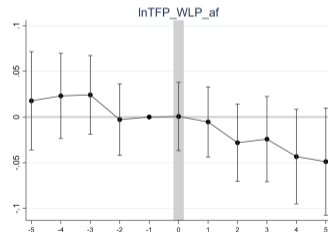
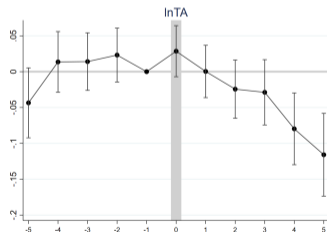
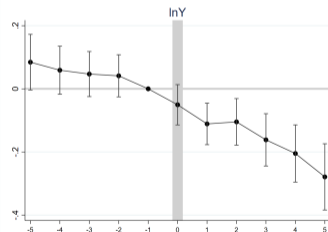
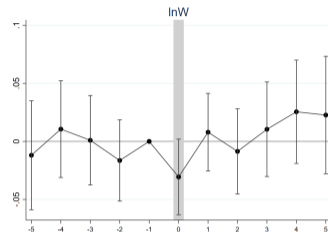
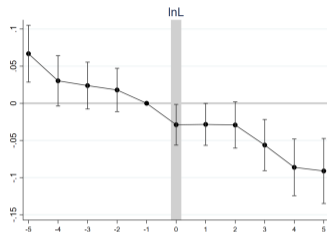
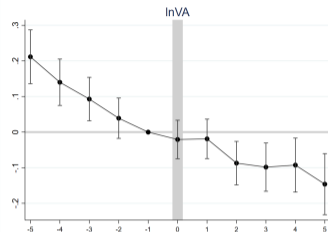
CONTRACTION EPISODES

Foreign contraction and parent outcomes [back to contractions](#)



post: decrease VA, L (contract/dissolve); TA, Y, W (dissolve)
pre: decrease L, TA (dissolve)

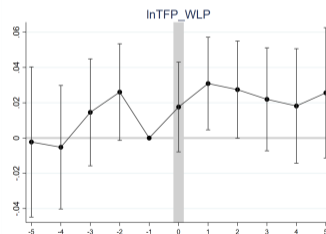
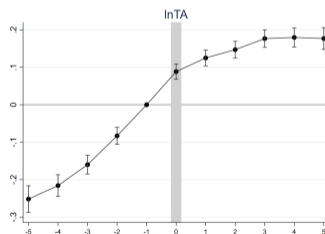
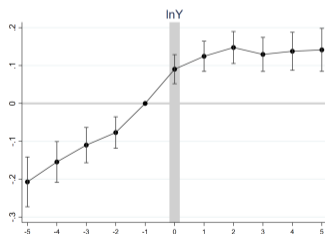
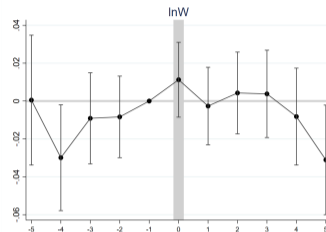
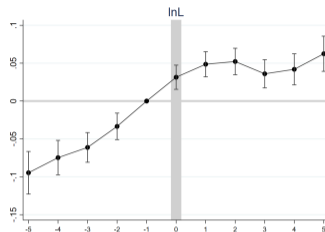
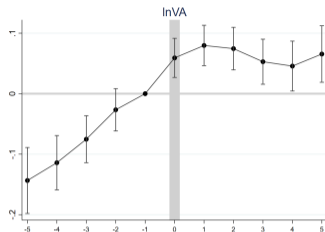
Foreign contraction and domestic affiliate outcomes [back to contractions](#)



VA, L, Y: continuously decreasing trend
TA, TFP: decreasing trend after episode end

EXPANSION EPISODES

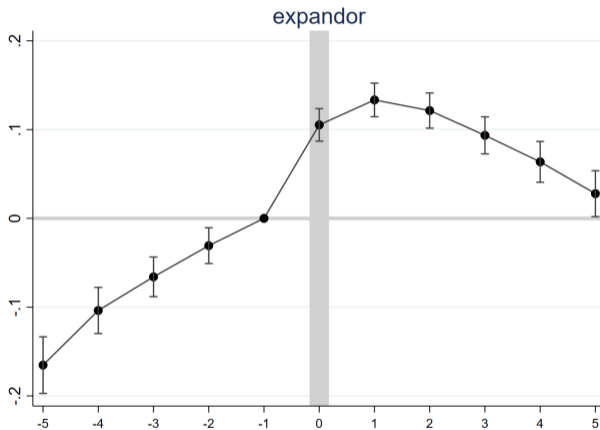
Foreign expansion episodes and parent outcomes [back to expansions](#)



sustained increases in VA, L, Y, TA ('scale' effect)
'preparing' for expansion: outcomes rising before episode

Foreign expansion episodes and # domestic affiliates

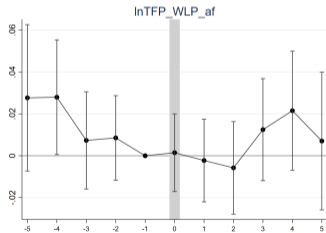
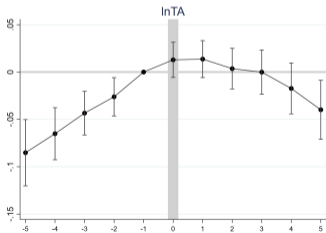
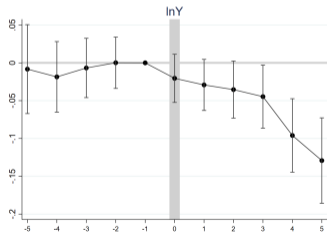
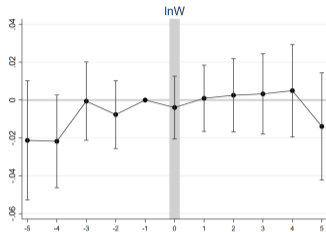
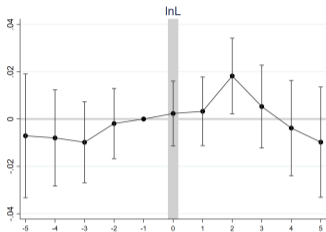
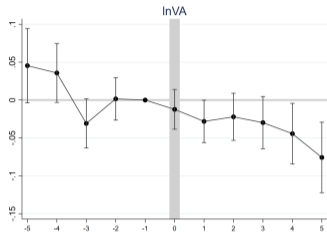
[back to expansions](#)



increase # domestic affiliates after episode (not sustained?)
trend started before episode

Foreign expansion episodes and domestic affiliate outcomes

[back to expansions](#)



outcomes of domestic affiliates either unaffected or mild mostly insignificant negative trend (\leftrightarrow parents)