Do domestic MNEs create higher productivity spillovers than foreign MNEs?

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Answering the question:

Intuitively... most likely!

Domestic MNEs operate as other MNEs in global markets. One would not be surprised to find Domestic MNEs having just as large (or perhaps even larger) productivity spillovers to pure domestic firms.

To our knowledge, no paper in the literature answers the above question.

In prior studies, domestic MNEs are either included as part of the domestic firm dataset (up-biasing the productivity of the domestic firms), or they are excluded all together (creating an omitted variable bias).

Measurement matters!

Identifying **MNEs** is complicated due to indirect ownership structures. Need to find the **global ultimate owner** (World Investment Report, UNCTAD 2016).

Our main contribution - creating a unique dataset (see McGaughey et al., 2020):

- Single releases of ORBIS (1996-2013) for all European firms' financial <u>and</u> ownership data.

- Start with 10m+ obs across 35 European countries and end up working with 2.3m obs. from 20 countries for 2001-2008 period.

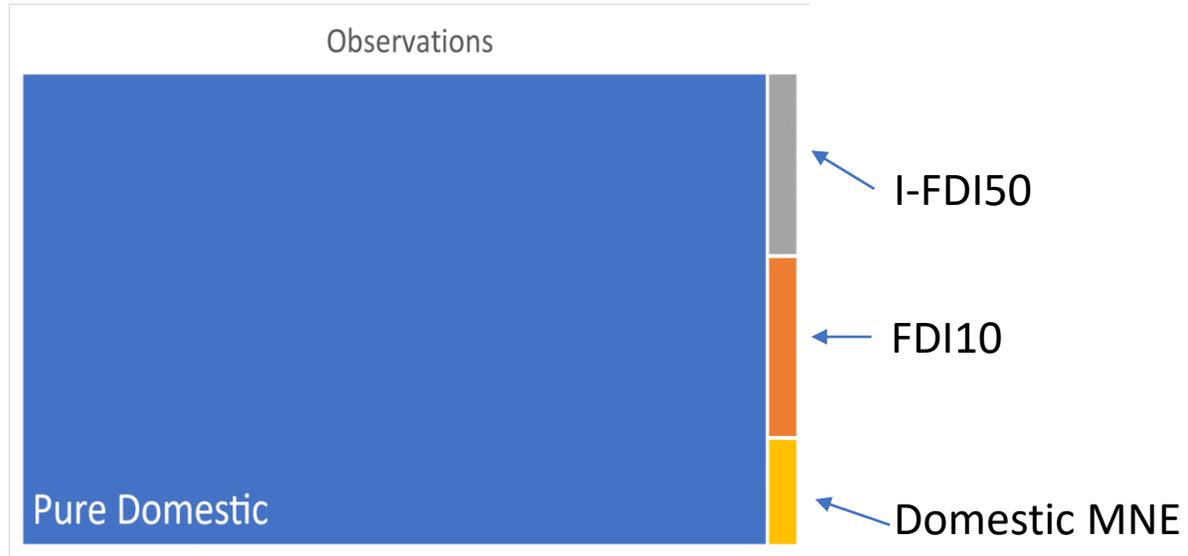- Manufacturing only (b/c we want to estimate productivity).

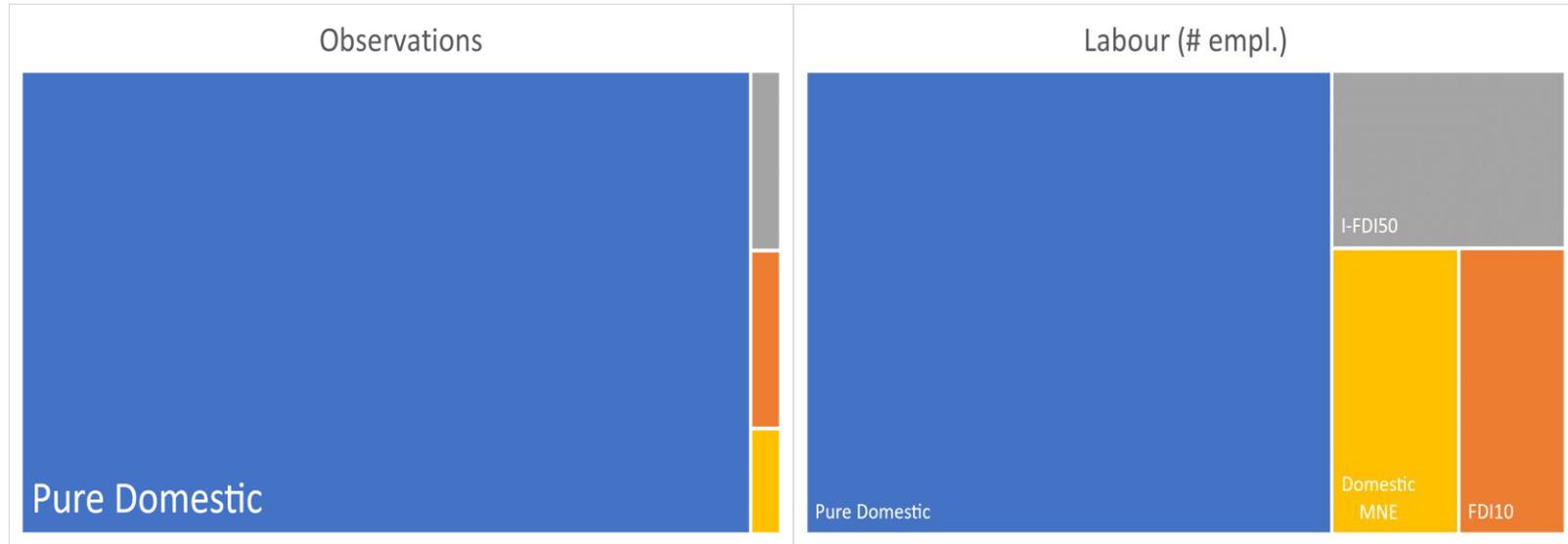# Indirect vs direct foreign ownership: a primer
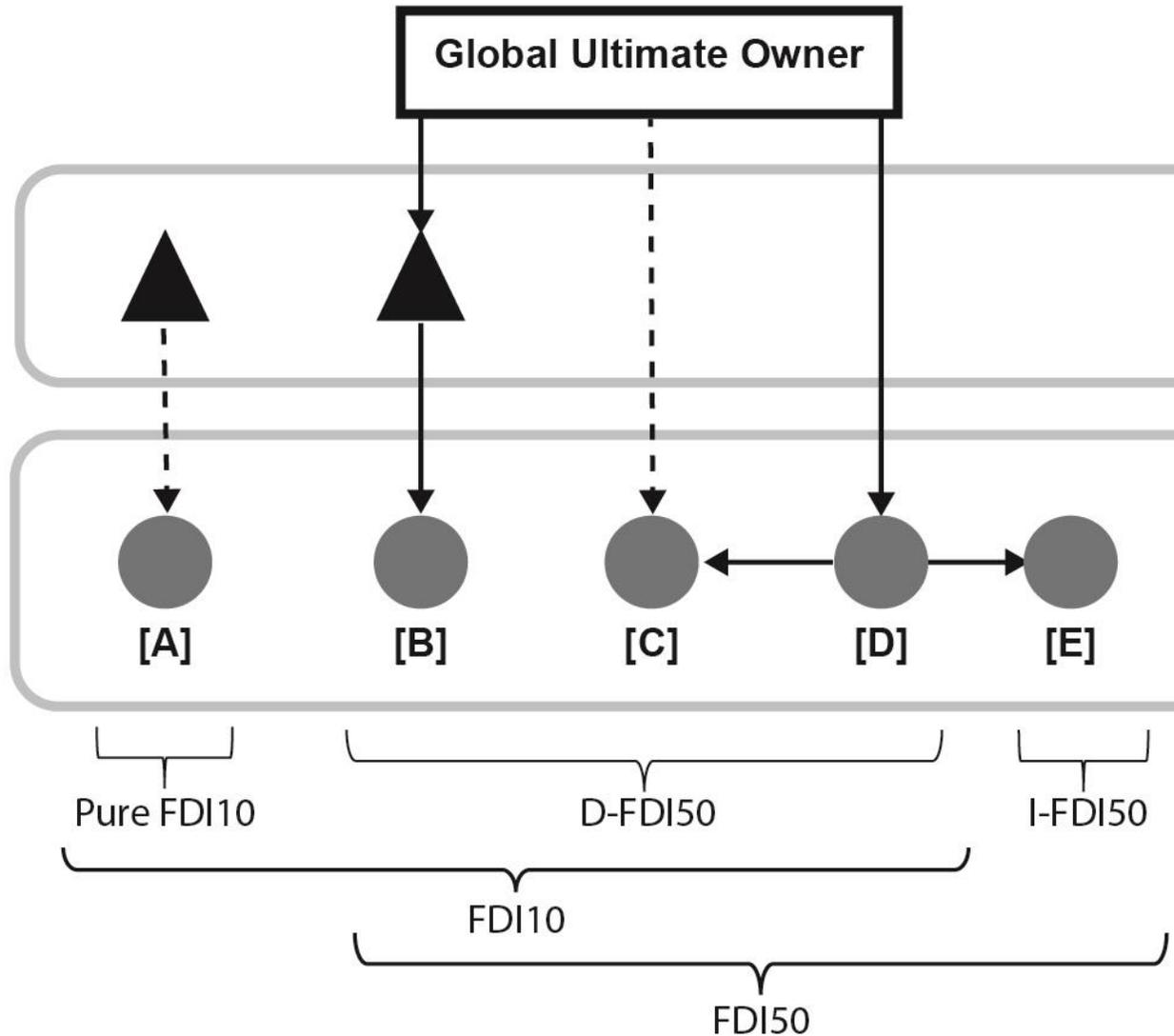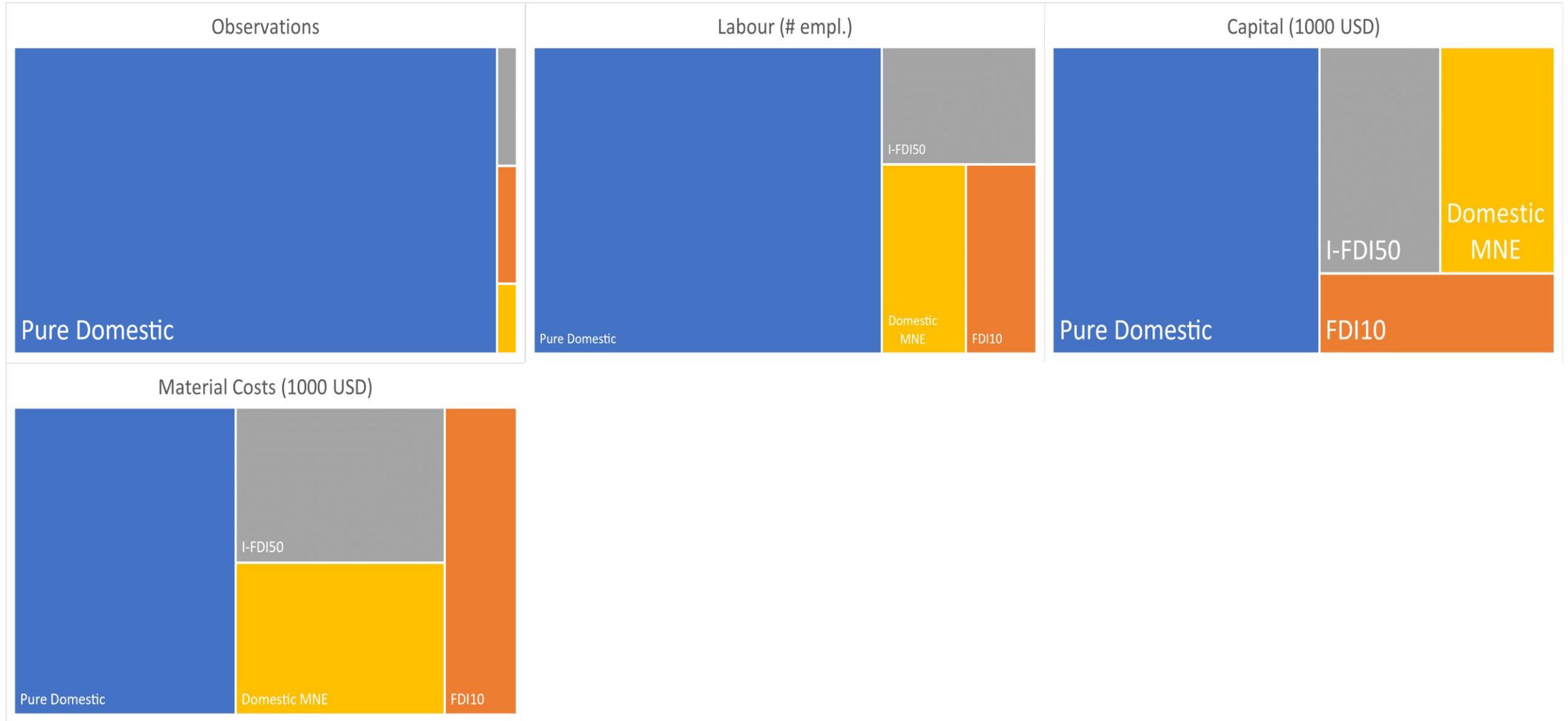
Indirect vs direct foreign ownership: a primer
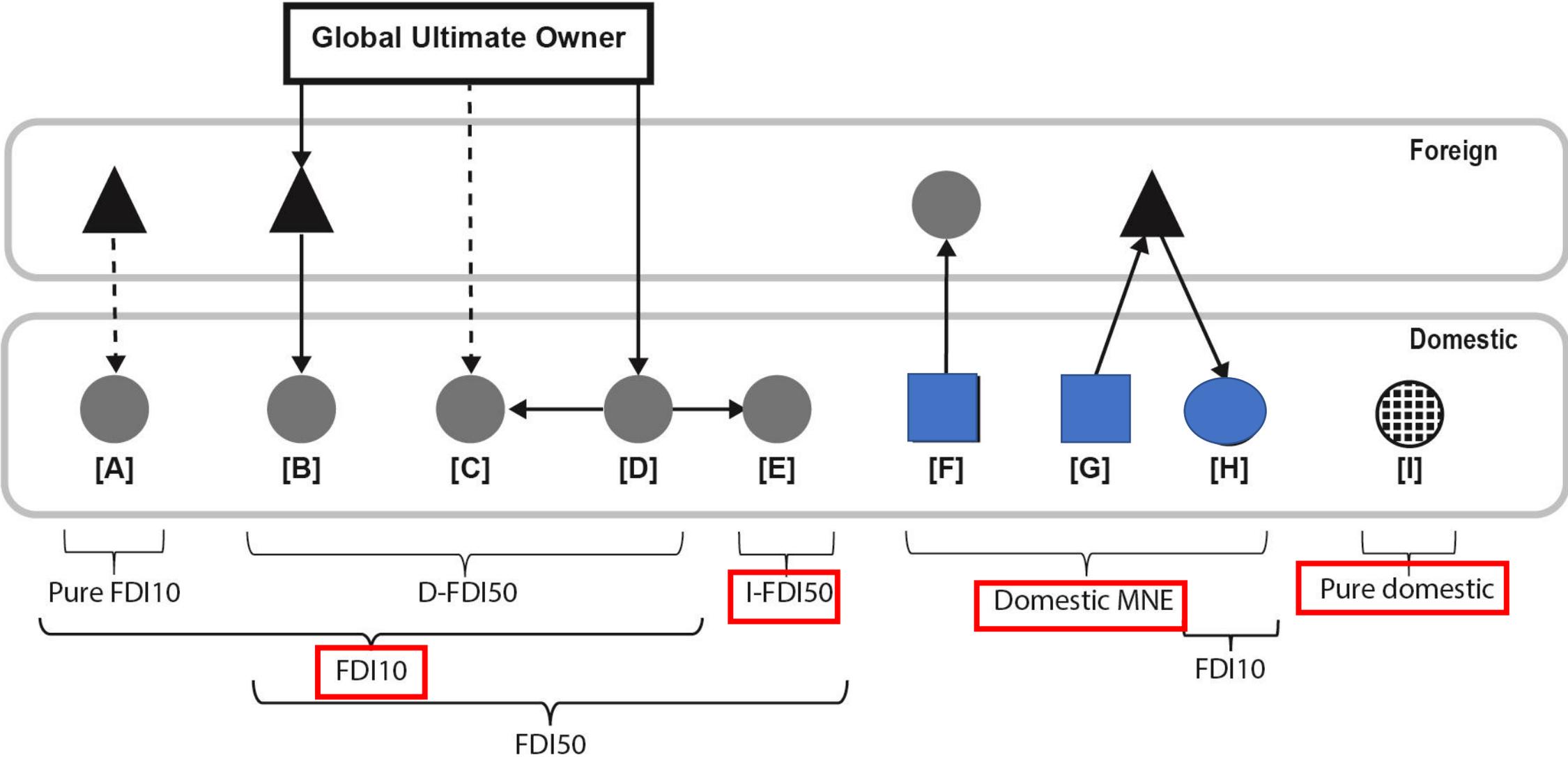
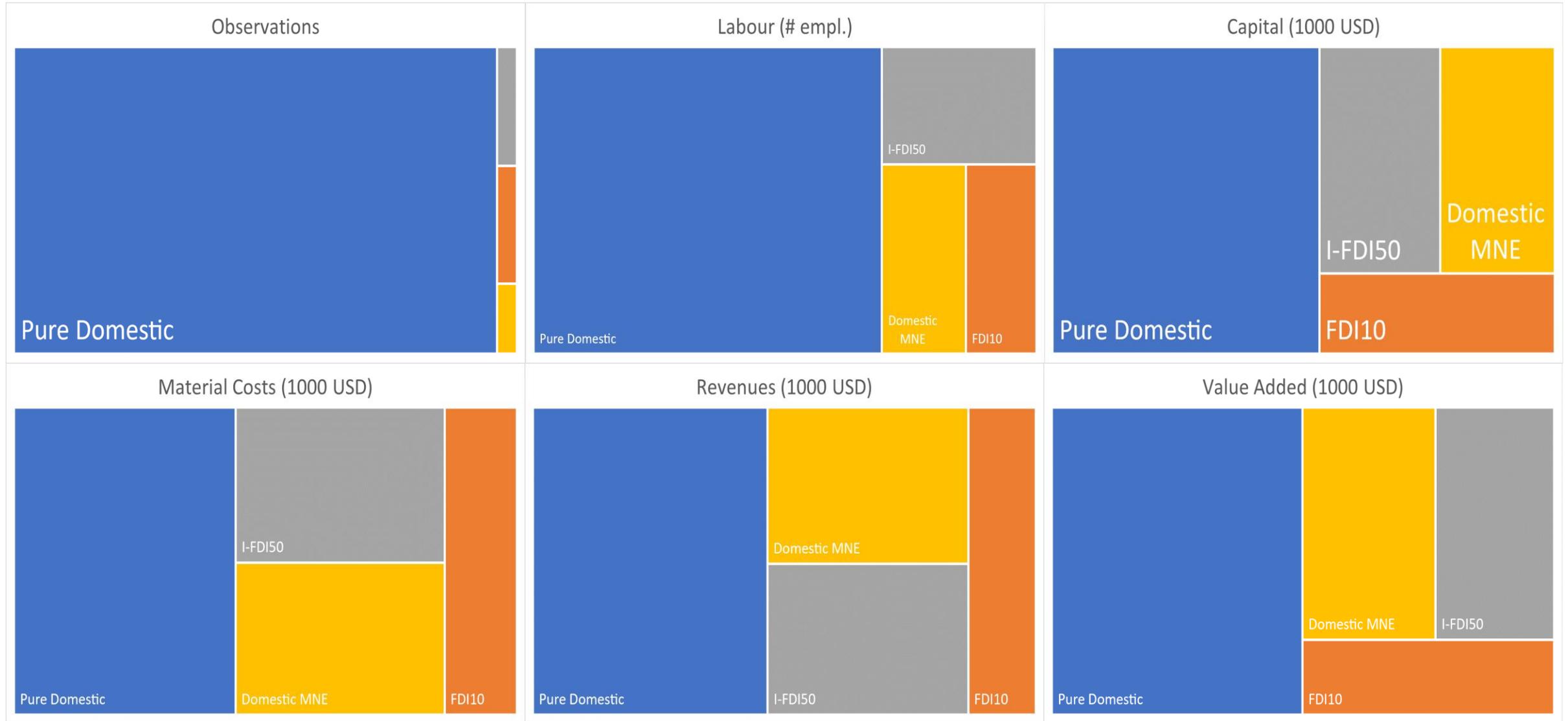# Data illustration using treemaps

Data illustration using treemaps

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Empirical Strategy: step 1

Estimate total factor productivity (TFP) of "Pure" domestic firms using the Ackerberg-Caves-Frazer (2015) method.

$$lnY_{it} = \beta_0 + \beta_1 lnL_{it} + \beta_2 lnK_{it} + \beta_3 lnM_{it} + \omega_{it} + \epsilon_{it}$$

where ω_{it} is TFP and is itself estimated in two sub-steps:

a) assume that $\omega_{it} = g_t(\omega_{it-1,} \textcolor{red}{MNE\ presence_{jt-1}})$, and then
b) estimate β_k coefficients using GMM

Empirical Strategy: step 2

Run productivity spillover regressions including the **presence** of all three sets of MNE firms:

$$TFP_{ijct} = \alpha_i + b_1 \boldsymbol{HP}^{FDI10}_{jct} + b_2 \boldsymbol{HP}^{FDI10}_{jct-1}$$
$$+ b_3 \boldsymbol{HP}^{I-FDI50}_{jct} + b_4 \boldsymbol{HP}^{I-FDI50}_{jct-1}$$
$$+ b_5 \boldsymbol{HP}^{MNE50}_{jct} + b_6 \boldsymbol{HP}^{MNE50}_{jct-1}$$
$$+ b_7 D_t + b_8 D_t \times D_j + b_9 D_t \times D_c + \varepsilon_{ijct}$$

Focus on long-term effects, i.e., $b_5 + b_6$, and on comparisons among the different sets of MNEs.
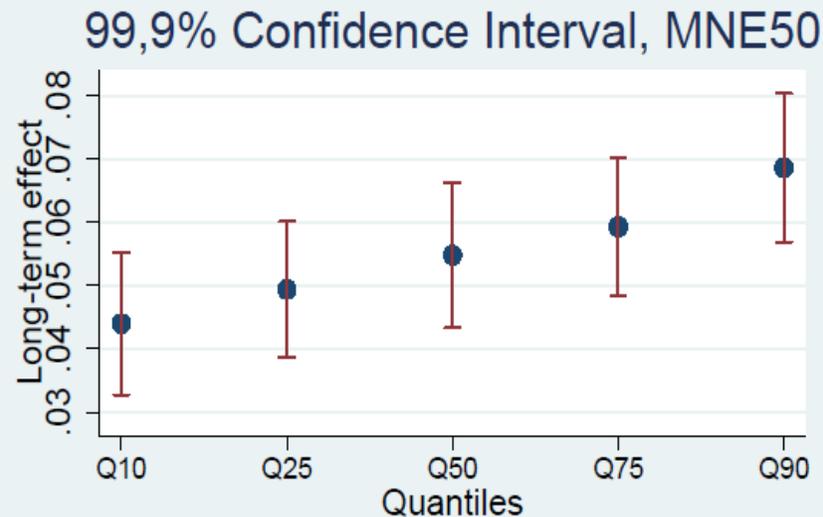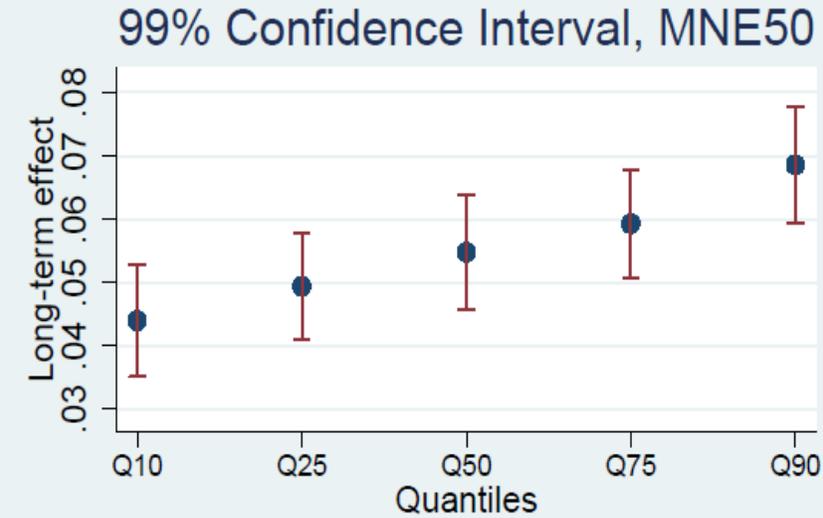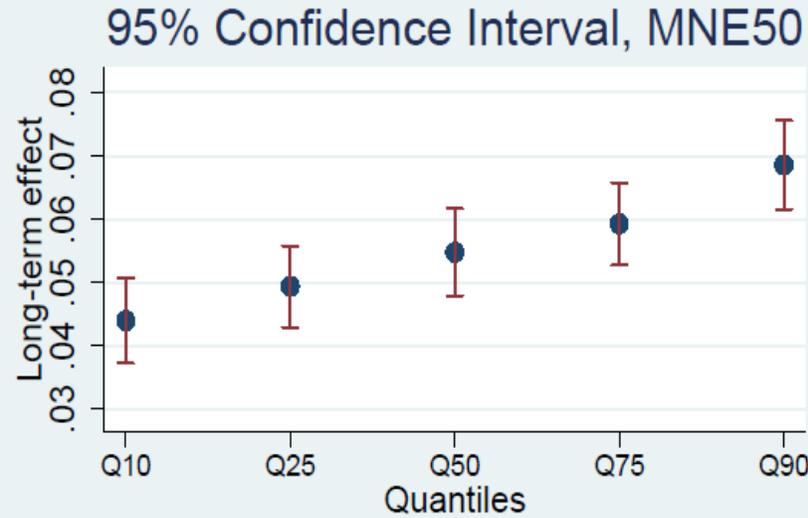
Results in brief

Domestic MNEs and Foreign MNEs (especially the I-FDI50 MNEs) have a similar (size/significance) positive spillover effect on 'pure' domestic firms within the same industry.

1. Control for vertical spillovers: **same results**

2. Control for size of multinationals: **same results**

3. Control for East/West Europe: **same results**

4. Control for heterogeneity among 'pure' domestic firms: **different results**

Quantile regressions

- **Domestic MNEs** benefit more the **most** productive domestic firms within an industry
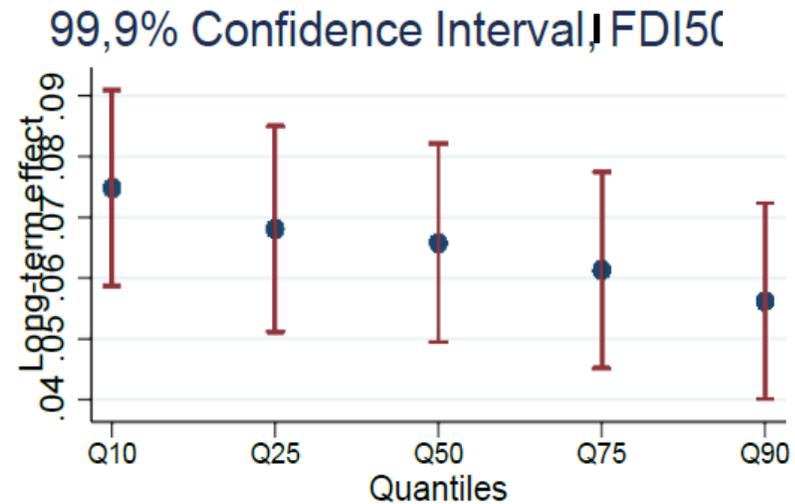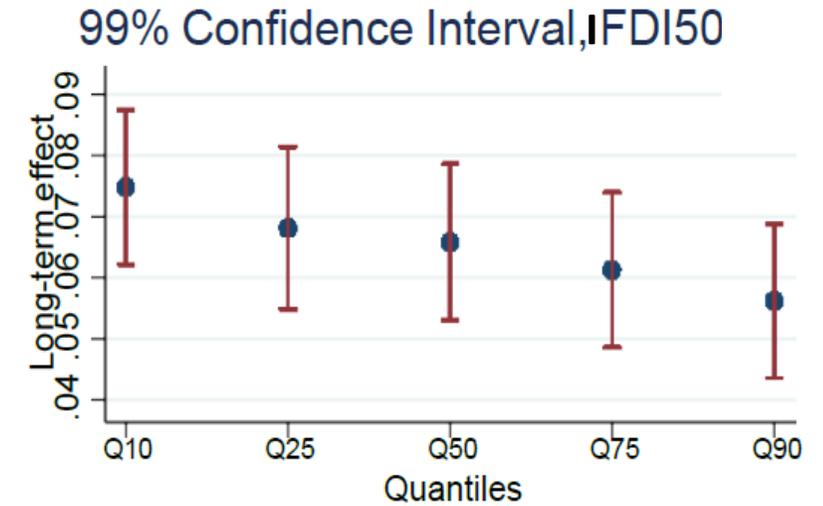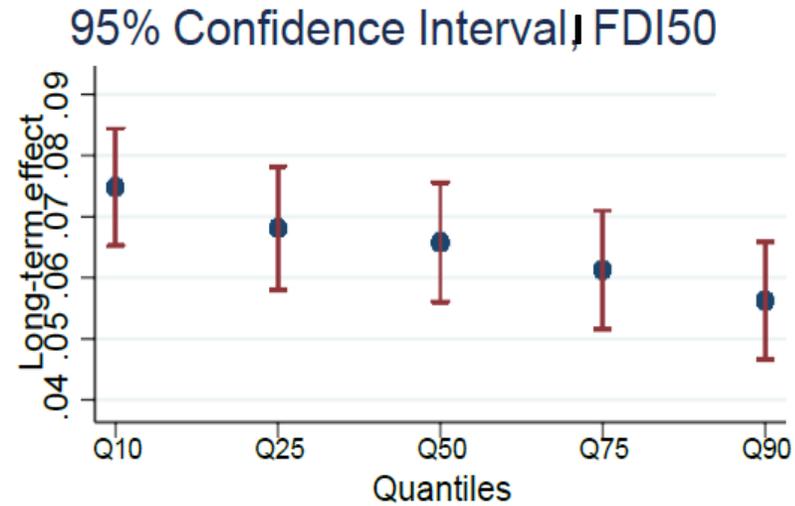

Note: Confidence intervals based on bootstrapped standard errors (200 replications)

Quantile regressions

- **Foreign MNEs** benefit more the **least** productive domestic firms within an industry

Confidence Intervals

Note: Confidence intervals based on bootstrapped standard errors (200 replications)

Why is that?

Going back to the descriptive statistics, it seems that:

- Domestic MNEs are clustered in countries-industries that have highly productive pure domestic firms.

- Foreign firms (and especially I-FDI50 firms) are evenly spread across industries-countries.

(We currently trying to visualise/document this selection story).

Conclusions

When it comes to productivity spillovers, Domestic MNEs are just as important as Foreign MNEs.

→ Attracting inward FDI is just as important as encouraging outward FDI.

The distribution of these productivity spillovers differs, with Foreign MNEs lifting the weakest domestic firms!