Talents from Abroad.
Foreign Managers and Productivity in the United Kingdom.

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Abstract

In this paper, we test the contribution of foreign management to firms' competitiveness. We use a novel dataset on the careers of 165,084 manager employed by 13,106 companies in the United Kingdom in 2009-2017. We find that domestic manufacturing firms become on average 4.9% more productive and about 23.3% more capital intensive after hiring foreign managers. In particular, we find that previous industry-specific experience by foreign managers is the primary driver of productivity gains in domestic firms. We do not find any significant impact on foreign-owned firms after hiring foreign managers. Our identification strategy combines matching techniques, difference-in-difference, and pre-recruitment trends to challenge reverse causality. Results are robust across different specifications and to sample composition effects. Eventually, our findings pinpoint how limits to the global mobility of managerial talents risk hampering the competitiveness of domestic industries.

Introduction

- Foreign employment in the UK has risen from 3.54% to 11.33% for the period 1997-2009 (ONS, 2019).
- Worker's mobility facilitates knowledge transfer among firms (Bahar and Rapoport, 2018).
- Different managerial practices can explain part of the productivity gap across both firms and countries (Bloom et al., 2019; Bruhn et al., 2018; Bloom et al., 2016; Bloom et al., 2012; Bloom and Van Reenen, 2010, 2007; Bertrand and Schoar, 2003).
- The recruitment of managers lead to higher export performance (Meinen et al., 2018; Mion et al., 2016; Mion and Opromolla, 2014).
- We argue that an evaluation of firms' productivity gains should logically precede any increase in exporting activity.
- We assess the impact of newly hired foreign managers in firms' competitiveness.

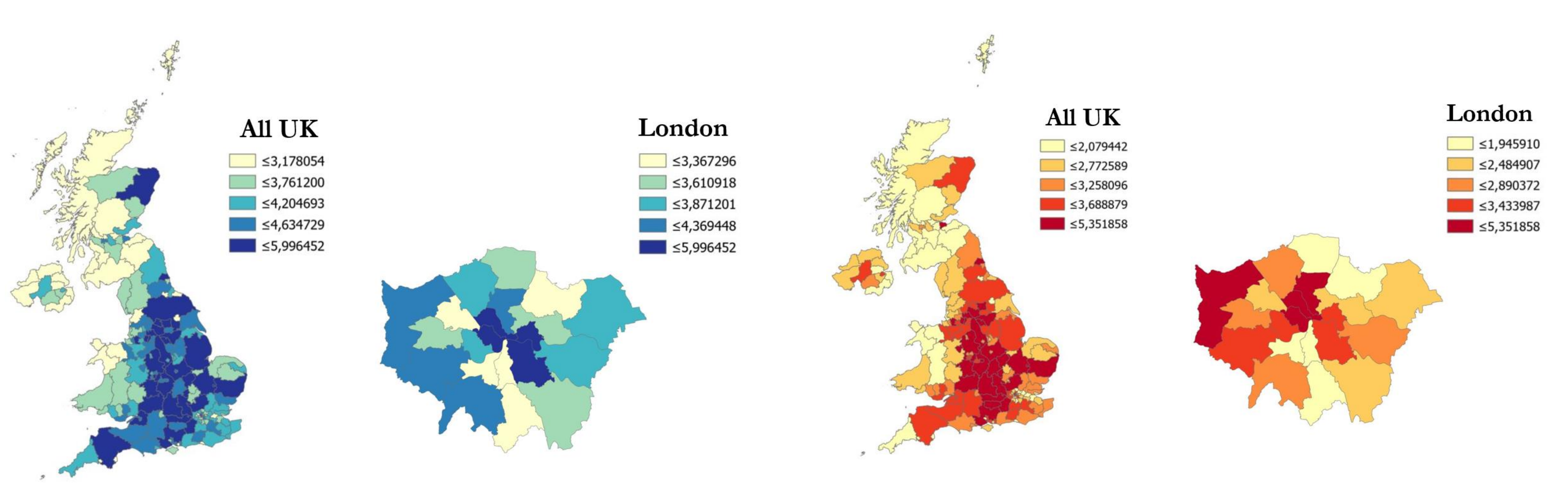

Figure 1. Geographic coverage. All firms (regions in blue) and firms with foreign managers (regions in red). Numbers are reported in logarithmic scale

Data and preliminary results

- **Source**: Orbis, compiled by the Bureau Van-Dijk. Information on 13,106 firms operating in the United Kingdom for the period 2009-2017, matched with 165,084 managers.
- Our proxy for competitiveness is the total factor productivity (TFP) estimated using the method by Ackerberg, Caves and Frazer (2015).
- 16.43% managers have a foreign nationality.

Preliminary correlations indicate that:

i. Foreign firms are more productive than domestic firms.
ii. Firms with foreign managers in their team are more productive.
iii. Domestic firms with foreign managers are more productive while the premium disappears in the case of foreign firms.
iv. Foreign firms are not significantly more productive than domestic firms with foreign managers. In that case, we challenge the hypothesis that foreign managers can transfer knowledge to a domestic firm and, thus, allow them to catch up with foreign or domestic competitors.

Empirical strategy and results

We build on previous studies that test productivity gains as a consequence of foreign acquisitions (Bircan, 2019; Arnold and Javorcik, 2009; Javorcik and Poelhekke, 2017):

$$\log(TFP)_{ijrt} = \beta_0 + \beta_1 T_{ijr} \times Post_t + \beta_2 X_{ijrt} + \gamma_j + \delta_t + \zeta_r + \sum_k \eta_k \times \delta_t + \varepsilon_{ijrt}$$

TFP: Total factor productivity of a firm *i* in a sector *j* and region *r* at time *t*
$\mathrm{T_{ijr}}$: A binary showing that a firm recruited the first foreign manager
$\mathrm{Post_t}$: A binary showing the years after recruitment.
$\mathrm{X_{ijrt}}$: firm-level controls (size, age, capital intensity, wage bill, skill intensity, foreign ownership) and regional employment density.
$\sum_k \eta_k \times \delta_t$: pre-recruitment features (age, size and 2-digit industry) interacted with a time trend.
γ_j, δ_t, ζ_r: 2-digit industry, year and NUTS-3 regional fixed effects respectively (we also consider industry-per-year fixed effects)

We present results for domestically-owned and foreign owned firms separately.

- We estimate the equation considering exclusively the group of firms that hired foreign managers for the first time in our period of analysis (Table 1, Panel A).
- We apply a propensity score matching procedure to select a control group of firms that have never hired foreign managers in our period of analysis considering pre-recruitment explanatory variables. Results on the diff-in-diff on the matched sample are depicted in Table 1 (Panel B).
- We challenge the hypothesis that market-specific experience can explain productivity gains. To this end, we repeat the baseline model, separating firms that recruit foreign managers that previously worked in a company whose core activity is the same or different from the one of the latest recruiting firm in the UK. We find that TFP gains in domestic firms are mainly explained by previous market-specific experience (Table 1, Panel C).
- We also go beyond TFP to check other dimensions that may be affected by the recruitment of foreign managers (sales, fixed assets, employment, intermediate inputs and capital intensity).
- **Robustness checks**: we obtain estimates after following (i) alternative TFP specifications, (ii) a placebo test, focusing on firms (iii) across different regions (all country excluding Greater London, urban and non-urban regions) and (iv) on firms recruiting managers with a passport from the United States or any other part of the world.

Table 1: TFP and foreign managers

	Panel A: TFP and foreign managers – ATT		**Panel B: TFP and foreign managers - ATE**		**Panel C: TFP, foreign managers and market experience - ATE**	
	Domestic firms	Foreign firms	Domestic firms	Foreign firms	Domestic firms	Foreign firms
Dep. Variable	(log) TFP	(log) TFP	(log) TFP	(log) TFP	(log) TFP	(log) TFP
Hired x Post	.071***	.009	.048**	.009	.021*	.004
	(.025)	(.013)	(.023)	(.019)	(.010)	(.023)
Hired x Market x Post					.080***	.021
					(.034)	(.023)
R-squared	.943	.954	.950	.968	.951	.968
Obs.	4,562	19,370	16,696	8,060	16,696	8,060
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes
Region effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry x Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry & age & size trends	Yes	Yes	Yes	Yes	Yes	Yes

Note: The table reports estimates for the ATT (Panel A), the ATE on a sample matched after a propensity score matching (Panel B) and the ATE when the treatment is split considering companies that recruited foreign managers with and without specific market experience. Coefficients are in log units. Errors are clustered by 2-digit industries in parentheses. Firm-level controls include age, employment, capital intensity, average wage bill, skill intensity, regional employment density and, for Panel A, foreign subsidiary status.
*, ** and *** stand for p < 0.1, p < 0.05 and p < 0.01, respectively.

Discussion

- Positive impact of newly hired foreign managers on domestic firms.
- Main results, from the diff-in-diff after propensity score matching suggest 4.9% (log units: .048) rise in TFP. In both cases we find no significant evidence on productivity gains for foreign firms. In that case, we argue that foreign headquarters already had the opportunity to realign managerial practices in subsidiaries at the time of takeovers.
- TFP gains in domestic firms are mainly explained by previous market-specific experience. Previous market experience entails an on-field training that may be particularly appealing to recruiters.
- Additional findings indicate significant changes in sales, intermediate inputs and capital intensity, as well as weakly significant increases in fixed assets.
- Main results are robust under alternative TFP estimations, placebo tests and sample composition effects.

Conclusions

- Recruiting highly-skilled workers allows firms to have access to a broader pool of skills than those available in the domestic market.
- Previous industry-specific experience is a key mechanism that drives the impact of foreign recruitments on firms' competitiveness.
- No significant productivity gains by foreign-owned firms after hiring foreign managers.
- Upcoming barriers to the circulation of highly skilled workers, including managerial talents, hampers domestic manufacturing industries' competitiveness.

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References

1. Ackerberg, D. A., Caves, K., Frazer, G., 2015. Identification properties of recent production function estimators. Econometrica 83 (6), 2411–2451.
2. Arnold, J. M., Javorcik, B. S., 2009. Gifted kids or pushy parents? foreign direct investment and plant productivity in Indonesia. Journal of International Economics
3. 79 (1), 42 – 53.
4. Bertrand, M., Schoar, A., 2003. Managing with Style: The Effect of Managers on Firm Policies*. The Quarterly Journal of Economics 118 (4), 1169–1208.
5. Bahar, D., Rapoport, H., 2018. Migration, knowledge diffusion and the comparative advantage of nations. The Economic Journal 128 (612), F273–F305.
6. Bircan, C., 2019. Ownership structure and productivity of multinationals. Journal of International Economics 116, 125 – 143.
7. Bloom, N., Brynjolfsson, E., Foster, L., Jarmin, R., Patnaik, M., Saporta-Eksten, I., Van Reenen, J., 2019. What drives differences in management practices? American Economic Review 109 (5), 1648–83.
8. Bloom, N., Eifert, B., Mahajan, A., McKenzie, D., Roberts, J., 2012. Does Management Matter? Evidence from India. The Quarterly Journal of Economics 128 (1), 1–51.
9. Bloom, N., Sadun, R., Van Reenen, J., 2016. Management as a technology? Working Paper 22327, National Bureau of Economic Research.
10. Bloom, N., Van Reenen, J., 2007. Measuring and Explaining Management Practices Across Firms and Countries. The Quarterly Journal of Economics 122 (4), 1351– 1408.
11. Bloom, N., Van Reenen, J., 2010. Why do management practices differ across firms and countries? Journal of Economic Perspectives 24 (1), 203–24.
12. Javorcik, B., Poelhekke, S., 2017. Former Foreign Affiliates: Cast Out and Outperformed? Journal of the European Economic Association 15 (3), 501–539.
13. Meinen, P., Parrotta, P., Sala, D., Yalcin, E., 2018. Managers as Knowledge Carriers - Explaining Firms' Internationalization Success with Manager Mobility. Cesifo working paper series, CESifo Group Munich.
14. Mion, G., Opromolla, L. D., 2014. Managers' mobility, trade performance, and wages. Journal of International Economics 94 (1), 85 – 101.
15. Mion, G., Opromolla, L. D., Sforza, A., 2016. The Diffusion of Knowledge via Managers' Mobility. CESifo Working Paper Series 6256, CESifo Group Munich.
16. ONS, 2019. Labor Market Overview: May 2019. Report, Office for National Statistics.