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Koch, Michael; Macedoni, Luca; Odintsova, Angelina

Working Paper Shocks to Firm Organization – The Case of Foreign Acquisitions

CESifo Working Paper, No. 11525

Provided in Cooperation with: Ifo Institute – Leibniz Institute for Economic Research at the University of Munich

Suggested Citation: Koch, Michael; Macedoni, Luca; Odintsova, Angelina (2024) : Shocks to Firm Organization – The Case of Foreign Acquisitions, CESifo Working Paper, No. 11525, CESifo GmbH, Munich

This Version is available at: https://hdl.handle.net/10419/308421

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Michael Koch, Luca Macedoni, Angelina Odintsova



Impressum:

CESifo Working Papers ISSN 2364-1428 (electronic version) Publisher and distributor: Munich Society for the Promotion of Economic Research - CESifo GmbH The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute Poschingerstr. 5, 81679 Munich, Germany Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de Editor: Clemens Fuest https://www.cesifo.org/en/wp An electronic version of the paper may be downloaded • from the SSRN website: www.SSRN.com

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Shocks to Firm Organization – The Case of Foreign Acquisitions

Abstract

This paper studies how foreign acquisitions affect firms' internal labor organization, particularly occupational switching. This focus is inspired by new stylized facts we document using linked employer-employee data from Denmark: while the total number of occupations and hierarchical layers in firms remains stable, a significant share of firms simultaneously add and drop occupations and layers each year. Applying a dynamic two-way fixed effects matching estimator, we find that foreign acquisitions lead to significant reorganization within firms: though the number of layers or occupations remains unchanged, firms exhibit substantial occupational churning among existing workers, especially among higher-paid employees.

JEL-Codes: D220, D240, F230, G340.

Keywords: occupation switching, firm organization, foreign acquisitions.

Michael Koch Department of Economics Aarhus University / Denmark mkoch@econ.au.dk Luca Macedoni Department of Economics, Management, and Quantitative Methods, University of Milan Milan / Italy luca.macedoni@unimi.it

Angelina Odintsova Department of Economics and Business Economics Aarhus University / Denmark ang.od@econ.au.dk

November 25, 2024

We are grateful to Jonas Maibom, John Morrow, Ray Riezman, and Chad Syverson, as well as seminar participants at Aarhus University, conference participants at the European Trade Study Group conference in Athens, and summer course participants at the Norwegian School of Economics for helpful comment and suggestions. Financial support from the Carlsberg Foundation is gratefully acknowledged.

1 Introduction

The literature on firms' organization has seen a remarkable surge in recent years, uncovering how various economic shocks influence the number of distinct occupations and hierarchical layers within firms (Garicano and Rossi-Hansberg, 2006; Caliendo and Rossi-Hansberg, 2012; Caliendo et al., 2015; Bastos et al., 2018; Sforza, 2020; Friedrich, 2022; Barba Navaretti et al., 2024). Yet, a crucial aspect remains underexplored: the dynamic switching of layers and occupations. This switch, characterized by the addition and removal of distinct occupations, often simultaneously, alters the occupational mix within firms, independent of the total number of occupations. In this paper, we leverage detailed panel data on Danish firms spanning from 2002 to 2018 to examine the effects of foreign acquisitions on firms' occupational mix. Given that the organization of workers is a key factor in determining a firm's growth and productivity, understanding the determinants that shape the occupational mix can offer significant insights into firms' competitiveness.

To highlight the importance of occupation switching, we present novel stylized facts about changes in the occupation mix of Danish firms. On average, the number of distinct occupations - defined at the 3-digit ISCO level - within a firm remains relatively stable over time. However, this apparent stability conceals significant churning. On average across years, around 39% of firms add or drop occupations from one year to the next, while 26% of firms do both simultaneously. On average, the share of new occupations relative to the total number of occupations within the firm is 20% and the share of dropped occupations is 26%. A similar pattern is observed with hierarchical layers, i.e., workers and different layers of management, where approximately 11-12% of firms add and drop layers annually, while the number of layers within firms remains stable.

Foreign acquisitions provide an ideal scenario for studying how firms adjust their occupation mix. A foreign acquisition is a significant shock that affects the entire firm and, especially, its organizational structure, as foreign owners often introduce new management practices (Bloom and Van Reenen, 2011; Bastos et al., 2018). Therefore, this shock is well-suited for examining organizational changes within firms. Our paper investigates how foreign acquisitions of Danish firms impact their organization, by examining their effects on the range and mix of occupations.

Our empirical analysis uses a dynamic two-way fixed effect matching estimator, i.e.,

we run event-study regressions on a matched sample of firms, in order to identify the causal effect of foreign acquisitions on the organization of firms. For the matching, we first estimate the predicted probability of a firm being acquired by foreign investors based on several time-varying firm characteristics, and then match firms within the same industry, year, and size-groups. On the matched sample, we run a dynamic two-way fixed effects estimator, which also allows us to investigate the existence of possible pre-trends.

Similar to the results in the literature, firms that experience a foreign acquisition tend to become larger in terms of employment, revenues, and productivity. Surprisingly, the number of layers and occupations remain unchanged after the acquisition. These are traditional ways the literature has measured changes in a firm's organization (Caliendo et al., 2015; Bastos et al., 2018; Friedrich, 2022; Barba Navaretti et al., 2024). However, these measures miss an important aspect of organization, namely the occupation switching. In fact, we document that firms that experience a foreign acquisition tend to churn occupations more: they add and drop significantly more occupations than similar firms that remain domestic. We demonstrate that our results remain robust when using occupation definitions at different levels of aggregation, thereby addressing concerns about potential misreporting of narrowly defined occupations.

How do firms fill new occupations, and what happens to workers in discontinued ones? To address these questions, we examine the effects of foreign acquisitions on worker hiring and job terminations. Our analysis shows that foreign acquisitions do not significantly impact job terminations. However, we find that foreign firms tend to hire a small number of new employees in the first year following an acquisition. These results suggest that occupational churning is primarily achieved through the reallocation of existing workers across different occupations, rather than by hiring new workers to fill new roles and terminating those in occupations that are phased out.

We further investigate the specific occupations that are either eliminated or introduced following a foreign acquisition. Our analysis reveals that foreign acquisition lead predominantly to horizontal switching, namely the addition and removal of occupations within the same organizational layer or among similarly paid jobs, specifically highpaying roles. However, the timing and hierarchical levels involved in this churning vary. Notably, foreign acquisitions reduce the number of occupations in both worker and managerial layers in each year following the acquisition. However, new occupations are added in the first year for high-paying worker roles and in the third year for managerial positions. We also explore whether workers transition between layers following a foreign acquisition but find no evidence to support this. Finally, we rule out that the change in occupation mix is driven by changes in the firms' export and import product mix, suggesting that differences in managerial practices are the main driver of our results.

Related Literature. Our paper contributes to the literature on firm organization and its effects on firm performance. Caroli and Van Reenen (2001) find that organizational changes lead to lower demand for unskilled workers and higher productivity gains in firms with greater skill endowments. Using French data, Caliendo et al. (2015) find that in firms that grow by adding hierarchical layers, wages of employees in preexisting layers fall, and these firms tend to hire less experienced workers at the bottom of the hierarchy. Bastos et al. (2018) with Portuguese data and Friedrich (2022) with Danish data both find that wage inequality increases with the growth of the number of layers. Additionally, using Portuguese data, Caliendo et al. (2020) study the relationship between organization and productivity. Finally, Barba Navaretti et al. (2024) examine the effect of the introduction of technical barriers to trade on the organization of firms. These studies measure the organizational structure of firms with the total number of hierarchical layers and occupations. Our paper demonstrates that these measures overlook significant switching of both occupations and layers, and that changes in firms' ownership lead to a shift in the occupational mix.

Our paper also contributes to the literature on the effects of foreign acquisitions. It is well-documented that foreign acquisitions often positively impact a firm's productivity, as new owners bring in new knowledge and technologies, extend networks of customers and suppliers, implement new management practices, and intensify worker training (Bloom and Van Reenen, 2011; Conyon et al., 2002; Guadalupe et al., 2012; Bastos et al., 2018; Koch and Smolka, 2019). However, there is also a risk for workers since new management might adjust the workforce by focusing on other tasks or upgrading their skills. Girma and Görg (2007) find that the effect of acquisitions on wages depends on the origin of the owner. Conversely, a cross-country analysis by Hijzen et al. (2013) finds that separation rates fall after acquisitions and average wages increase due to the creation of high-wage jobs. Our analysis complements these studies, as we find that foreign acquisitions mainly influence occupational switching by reshuffling workers from eliminated occupations to new ones within the same hierarchical level.

Our paper is closely related to the work by Bastos et al. (2018), who study the effects of foreign acquisitions on the organization of Portuguese firms. We build on their methodology by complementing their matching approach with an event-study design, examining the effects of foreign acquisitions on several measures of firms' organization. While we similarly find that foreign acquisitions increase the scale of firms, contrary to their findings, we do not observe that changes in ownership affect firm's number of layers. In fact, in our sample, acquired firms tend to add and drop layers (and occupations) simultaneously.

The rest of the paper is organized as follows. In Section 2, we introduce the reader to our data sources, while we present novel facts on occupation churning in Section 3. Section 4 presents our empirical strategy, and we present results in Section 5. Section 6 concludes the paper.

2 Data

Our analysis builds on register data provided by Statistics Denmark. Worker information is obtained from the IDA register, which includes individual wages, worker characteristics, and occupation codes. The occupation classification follows the ISCO nomenclature and was updated in 2010 from ISCO88 to ISCO08. We use the crosswalk provided by Humlum (2022) to harmonize occupational codes across years. In our data, we distinguish between 144 so-called minor groups and 34 sub-major groups at the 3-digit and 2-digit occupational level, respectively.¹

Workers are assigned to four hierarchical layers based on their 3-digit occupation codes following Caliendo et al. (2015) and Friedrich (2022). These layers are groups of employees with similar knowledge and level of authority, and performing similar tasks. Layers ranked higher have a higher level of authority, more problem-solving skills, and, therefore, higher wages (Caliendo et al., 2015).² Layer 0 contains occupations at the worker level, which include, for example, "Machinery mechanics and fitters" (ISCO 723)

¹ We drop workers with missing information on occupation codes and wages and restrict the sample to workers between the age of 25 to 60. Moreover, we exclude military workers.

² We use the mapping of occupations to layers as in Table A.1 in the Online Appendix to Friedrich (2022).

and "Secretaries and keyboard-operating clerks" (ISCO 411). Layers 1, 2, and 3 contain managerial occupations at different levels in firms' hierarchy. For example, "Customs, tax and related government associate professionals" (ISCO 344) and "Architects, engineers and related professionals" (ISCO 214) are in layer 1, "Business professionals" (ISCO 241) and "Legal professionals" (ISCO 242) in layer 2, and "General managers" (ISCO 131) and "Directors and chief executives" (ISCO 121) in layer 3.

The FIRM register provides basic employer information, such as revenues, value added, and industry classification. We limit our sample to private-sector firms, excluding those in agriculture, mining, public, and household sectors.³ The FATI register provides the origin country of the ultimate owner of all foreign-owned firms in Denmark for the years 2002 to 2018. A foreign-owned firm is defined as a firm located in Denmark where 50 percent or more of its equity capital belongs to foreign investors.

In order to study the effects of changes from domestic to foreign ownership within the same firm, we exclude firms that were initially foreign-owned, thereby focusing on those that were domestically-owned in the first year of observation. To have a "clean" event, we exclude firms that experienced multiple ownership changes over time. This includes changes from foreign back to domestic ownership, and changes in the nationality of the foreign ultimate owner. This involves 10% of foreign-owned firms and it can occur, for example, if a Danish firm is acquired by a Swedish enterprise, and subsequently the Swedish enterprise is acquired by a French firm. After dropping those firms and combining the information with the linked employer-employee data obtained from the FIRM and IDA registers, we have 1645 foreign acquisitions.

Using an event window of 7 years in our event study (see below), we focus on acquisitions during the years 2005 to 2015, thus allowing us to inspect firms for at least three years prior to and following the acquisition. Restricting foreign acquisition to the years 2005 to 2015 reduces the sample to 1103 foreign acquisitions. Finally, removing acquired firms with missing information required for the matching (see below), we end up with our sample of 1064 firms that were acquired once by foreign investors during the period of analysis.

Appendix Figures A1a and A1b illustrate how the foreign acquisitions are distributed

³ We harmonize industry information in the FIRM register to the two digit NACE rev. 2 classification, and aggregate them to 15 broad industries as listed in Table 2 below.

across industries and years, respectively. While acquisitions are evenly distributed across most industries, the wholesale and retail trade industry accounts for more than a third of all acquisitions. Across years, we note a spike in 2009 - during the great recession - and a drop in 2010. The year 2015 stands out, with 384 acquisitions. However, as we will show in our empirical analysis, our results are not driven by the particular industry or year and are robust to the exclusion of the wholesale and retail trade industry and acquisitions in the year 2015.

Appendix Table A1 provides summary statistics for the final sample of firms as described above. The table shows that acquired firms are typically larger, e.g., in terms of revenues, employment, or the number of distinct occupations.

3 Stylized Facts on Occupation Switching

In this section, we introduce novel stylized facts that highlight the significant role of occupation switching as an indicator of changes in a firm's organization. To measure this switching, we generate indicator variables that take a value of one if a firm adds a new layer or occupation, or drops a layer or occupation from one year to the next.⁴ Besides measuring the likelihood of adding or dropping layers or occupations, we also examine the number of newly added or dropped occupations.⁵

Table 1 reveals that, on average, firms maintain slightly more than three distinct 3-digit occupations, with minimal variation across the years. However, these averages mask significant occupation switching within firms, as shown by the remaining columns in Table 1. Many firms either introduce new occupations, discontinue existing ones, or engage in both actions simultaneously. On average, about 39% of firms alter their occupational structure from one year to the next by either adding or dropping occupations, while 26% do both. These patterns remain consistent over time, with a slight uptick observed during the years surrounding the financial crisis. This increase aligns with the fact that Denmark's unemployment rate more than doubled between 2008 and 2010.

Next, we define occupation creation (destruction) as the number of occupations in-

⁴ As these measures require yearly observations, firms with missing data for one or more years between two data points are excluded.

⁵ Since the number of layers is inherently limited to a maximum of four, we focus only on indicator variables for adding or dropping layers and do not consider the number of added or dropped layers.

Number of 3-dgt	Share of firms	Share of firms	Share of firms
occupations	add occupation	drop occupation	doing both
3.583	-	-	-
3.253	0.552	0.497	0.432
3.303	0.399	0.375	0.247
3.413	0.436	0.432	0.292
3.488	0.469	0.461	0.331
3.593	0.459	0.448	0.317
3.595	0.569	0.555	0.448
3.383	0.414	0.448	0.284
3.349	0.575	0.555	0.461
3.350	0.353	0.344	0.203
3.286	0.329	0.345	0.194
3.254	0.330	0.341	0.193
3.183	0.395	0.409	0.271
3.134	0.326	0.329	0.193
3.127	0.313	0.298	0.170
3.138	0.303	0.299	0.166
3.322	0.344	0.362	0.205
3.331	0.392	0.388	0.263
	Number of 3-dgt occupations 3.583 3.253 3.303 3.413 3.488 3.593 3.595 3.383 3.349 3.350 3.286 3.254 3.183 3.134 3.127 3.138 3.322 3.331	Number of 3-dgt occupationsShare of firms add occupation3.583-3.2530.5523.3030.3993.4130.4363.4880.4693.5930.4593.5950.5693.3830.4143.3490.5753.3500.3533.2860.3293.1830.3953.1340.3263.1340.3263.1380.3033.3310.392	Number of 3-dgt occupationsShare of firms add occupationShare of firms drop occupation3.5833.2530.5520.4973.3030.3990.3753.4130.4360.4323.4880.4690.4613.5930.4590.4483.5950.5690.5553.3830.4140.4483.3490.5750.5553.3500.3530.3443.2860.3290.3453.2540.3300.3413.1830.3950.4093.1340.3260.3293.1380.3030.2983.1380.3030.2993.3210.3920.388

Table 1: Occupation Churning at the Firm Level

Notes: The table is based on the full sample of firm-year observations over the period 2002 - 2018, where all firms are domestic owned in their first year in the sample and are potentially acquired during the years 2005 - 2015.

troduced (dropped) at time *t* divided by the total number of distinct occupations in *t*. By relating the number of added or dropped occupations to the overall number of distinct occupations within a firm, we control for the fact that the count of occupations at a firm increases with firm employment (Becker et al., 2019). Furthermore, we define the sum of the two as *gross churning* and the difference between the two as *net churning*.⁶ As illustrated at the bottom of Table 2, net churning in the whole economy is close to zero (-6.6%) and is much lower than the 45.8% gross churning, which is based on 19.6% occupation creation and 26.2% occupation destruction. These high churning rates are observed across all sectors ranging from the low of 37% in Electricity, gas, water, and construction, to a high of 62% in Accommodation and food service.

Finally, Table 3 provides further evidence on the importance of occupation churning and offers first insights into similarities and differences among domestic and acquired

⁶ These are standard measures for churning used, for example, in Davis and Haltiwanger (1992) for jobs and in Iacovone and Javorcik (2010) for products.

Occupation	Occupation	Gross churning	Net Churning
Creation (1)	Destruction (2)	(1) + (2)	(1) - (2)
0.227	0.294	0.521	-0.066
0.197	0.261	0.458	-0.064
0.216	0.284	0.501	-0.068
0.218	0.291	0.509	-0.074
0.195	0.254	0.450	-0.059
0.209	0.271	0.480	-0.062
0.210	0.278	0.488	-0.068
0.152	0.218	0.370	-0.065
0.194	0.254	0.448	-0.059
0.223	0.297	0.520	-0.074
0.259	0.356	0.616	-0.097
0.229	0.303	0.532	-0.074
0.230	0.288	0.519	-0.058
0.192	0.250	0.442	-0.058
0.244	0.332	0.576	-0.088
0.196	0.262	0.458	-0.066
	Occupation Creation (1) 0.227 0.197 0.216 0.218 0.195 0.209 0.210 0.152 0.194 0.223 0.259 0.229 0.229 0.230 0.192 0.244 0.196	Occupation Creation (1)Occupation Destruction (2)0.2270.2940.1970.2610.2160.2840.2180.2910.1950.2540.2090.2710.2100.2780.1520.2180.1940.2540.2230.2970.2590.3560.2290.3030.2300.2880.1920.2500.2440.3320.1960.262	Occupation Creation (1)Occupation Destruction (2)Gross churning $(1) + (2)$ 0.227 0.294 0.521 0.197 0.261 0.458 0.216 0.284 0.501 0.218 0.291 0.509 0.195 0.254 0.450 0.209 0.271 0.480 0.210 0.278 0.488 0.152 0.218 0.370 0.194 0.254 0.448 0.223 0.297 0.520 0.259 0.336 0.616 0.229 0.303 0.532 0.230 0.288 0.519 0.192 0.250 0.442 0.244 0.332 0.576 0.196 0.262 0.458

Table 2: Occupation Churning by Sector

Notes: The table is based on the full sample of firm-year observations over the period 2002 - 2018. All firms are domestic owned in their first year in the sample and are potentially acquired during the years 2005 - 2015. Occupation creation (destruction) is defined as the number of occupations introduced (dropped) at time *t* divided by the total number of distinct occupations in *t* within a firm. Gross churning is defined as the sum of occupation creation and destruction. Net churning is defined as the difference between occupation creation and destruction.

firms. First, the average change in the number of layers and occupations for a typical firm is nearly zero. This patterns can be observed for both, domestic (column 1) and acquired firms (column 2). However, this does not suggest that firms' organizational structures remain stable over time. On the contrary, we observe considerable churning in layers, and, even more pronounced, for occupations, for both domestic and acquired firms.

On average, there is a 12% probability that a firm will add a new layer and an 11% probability that a firm will drop a layer. The probability that a firm will add or drop an occupation is higher, at 39%. On average, firms add 0.73 occupations and drop 0.7 occupations per year. These figures are significant, given that the average firm has 3.3 occupations. Table 3 shows that foreign-owned firms have a broader range of occupations and a higher rate of occupational switching, with a 57% likelihood of adding or dropping occupations and an average adjustment of 1.5 occupations per year.

Next, we investigate whether these differences in occupation churning are solely driven by size disparities between domestic and acquired firms, or if they result from changes in ownership and the subsequent management practices following a change in

	Always Domestic	Acquired Firms	All Firms
	(1)	(2)	(3)
Net change in number of layers	0.015	0.028	0.016
	(0.478)	(0.626)	(0.480)
Net change in number of 3-dgt occupations	0.030	0.045	0.030
	(1.311)	(2.306)	(1.332)
Number of added 3-dgt occupations	0.734	1.509	0.746
	(1.337)	(2.183)	(1.358)
Number of dropped 3-dgt occupations	0.704	1.464	0.716
	(1.310)	(2.190)	(1.332)
Indic.: add layer	0.123	0.178	0.124
	(0.329)	(0.383)	(0.330)
Indic.: drop layer	0.112	0.160	0.113
	(0.316)	(0.367)	(0.317)
Indic.: add 3-dgt occupation	0.389	0.573	0.392
	(0.488)	(0.495)	(0.488)
Indic.: drop 3-dgt occupation	0.385	0.565	0.388
	(0.487)	(0.496)	(0.487)
Observations	683683	11034	694717

Table 3: Occupation Switching

Notes: The table reports means and standard deviations (in parentheses) for the full sample of firm-year observations over the period 2002 - 2018. All firms are domestic owned in their first year in the sample and are potentially acquired during the years 2005 - 2015. A firm is foreign owned if the ultimate owner holds at least 50% of the firms equity capital. Column (1) refers to firms that did not change ownership during the sample period, column (2) refers to firms that changed foreign ownership status only once during the sample period, column (3) refers to all firms. Layers are defined by assigning individuals to four hierarchical layers based on their 3-digit occupation codes, following Caliendo et al. (2015) and Friedrich (2022).

ownership.

4 Empirical Strategy

In our empirical analysis, we combine an event-study design with propensity score matching to compare changes over time in firm performance and firm organization across acquired and non-acquired firms.

4.1 Matching Domestic and Acquired Firms

A well-established fact in the literature on foreign acquisitions is that foreign investors typically "cherry pick" larger and better performing firms (see Arnold and Javorcik, 2009; Guadalupe et al., 2012; Koch and Smolka, 2019, among others). The inclusion of firm fixed

effects in the regression accounts for time-invariant characteristics influencing acquisition but fails to capture time-varying unobservable factors that may also influence a foreign investor's selection decision (Blonigen et al., 2014). The literature therefore uses a propensity score estimation, that either reweighs observations according to their likelihood of acquisitions (Guadalupe et al., 2012; Koch and Smolka, 2019) or, more recently, by using matching methods (Bastos et al., 2018).

To estimate the predicted probability of a firm being acquired by foreign investors, we estimate a logit model of the treatment indicator (i.e., an actual acquisition) on the following time-varying characteristics (all measured one year prior to the acquisition): log of and growth in revenues, value added per worker, wage bill, employment, and the number of plants, layers, and 3-digit occupations within a firm. Appendix Table A2 reports the results from the multivariate logit specification and confirms that foreign investors tend to target larger (especially in terms of revenues, the wage bill, and the number of plants and layers) and more productive firms (measured by value added per worker).

Using the propensity scores, we assign to each acquired firm the 3 nearest neighbors (i.e., 3:1 matching) within one of the same broad 15-industries, in the same year, and in the same size-group.⁷ As for the size-group, we classify firms into five different groups according to the number of employees: (i) less than 5, (ii) 5 to 9, (iii) 10 to 19, (iv) 20 to 49, and (v), 50 or more workers. Foreign acquisitions are evenly distributed across these different groups, with 196, 199, 215, 221, and 233 acquisitions in size-groups (i), (ii), (iii), (iv), and (v), respectively. Matching acquired firms to similar firms within the same size-group, aims to control for differences in the way small and large firms respond to changes in management practices following a foreign acquisitions. However, in a robustness check, we show that firms respond similarly regardless of their size.

Appendix Tables A3 and A4 present detailed statistics on matching quality and bias reduction, providing evidence that the matching method effectively minimizes differences between non-acquired and acquired firms. Additionally, Appendix Table A5 offers summary statistics for our regression sample, which comprises the matched firms. A comparison between columns (1) and (2) reveals only minor differences between domestic and acquired firms, in contrast to the more pronounced differences observed in Tables A1 and 3 for the full sample. While changes in ownership may influence firm

⁷ We also perform nearest neighbor matching (1:1), as a robustness check.

characteristics, some differences persist, as the matching process is designed to eliminate heterogeneity across firms in the year prior to acquisition, but not in the years following the acquisition.

4.2 Event-Study Design

We use our matched sample as derived in the previous subsection to study the dynamic effects of foreign acquisitions by relying on a dynamic two-way fixed effects estimator, also called event-study regressions. Specifically, we estimate the following specification:

$$Outcome_{it} = \alpha_i + \beta_{st} + \gamma_{<-3} \mathbf{1} [t - \operatorname{Acquisition} \operatorname{Yr}_i < -3] + \sum_{\tau = -3, \neq 0}^{+3} \mu_{\tau} \mathbf{1} [t - \operatorname{Acquisition} \operatorname{Yr}_i = \tau] \gamma_{>+3} \mathbf{1} [t - \operatorname{Acquisition} \operatorname{Yr}_i > +3] + \varepsilon_{it}.$$
(1)

The length of the event window is seven years: the event year, i.e., the year of the acquisition, and the three years prior and after the acquisition. Accordingly, we define the relative year indicator variable $\mathbf{1} [t - \text{AcquisitionYr}_i = \tau]$, group (i.e., "bin") all years which are more than 3 years before and after the acquisition with the dummy variable defined as $\mathbf{1} [t - \text{AcquisitionYr}_i < -3]$ ($\mathbf{1} [t - \text{AcquisitionYr}_i > +3]$), and take the year of the acquisition ($\tau = 0$) as the omitted base category. In the following figures and regression tables, we present μ_{τ} , enabling us to analyze the impact of the acquisition over time and assess whether any pretrends persist despite the matching approach.

We estimate Eq. (1) by ordinary least squares (OLS) including firm and industryyear fixed effects. The firm fixed effects α_i control for unobserved firm heterogeneity to study the within-firm adjustments following the acquisition, while the industry-year fixed effects β_{st} control for any time trends and industry shocks at the 2-digit NACE level.

A recent literature shows that when applying the two-way fixed effects regressions with leads and lags of the treatment, the coefficient on a given lead or lag can be contaminated by effects from other periods, due to variation in the treatment timing across units. For such staggered designs with a binary treatment, alternative methods have been proposed (Borusyak et al., 2024; Callaway and Sant'Anna, 2021; Sun and Abraham, 2021). As we show below, we obtain similar results when they are based on the estimator proposed by Sun and Abraham (2021). We use the never-treated groups as controls, and thus these results are identical to those proposed by Callaway and Sant'Anna (2021) with the same control group (De Chaisemartin and d'Haultfoeuille, 2023).

5 **Results**

In the following, we present our main results graphically, while delegating the full set of coefficient estimates in the regression tables in the Appendix (see figure notes for the corresponding Appendix Tables). In the event-study plots, we focus on the event window (i.e., the three years before and after the acquisition) and illustrate coefficient estimates together with 95% confidence intervals, while the coefficients of the "binned" distant years are included in the appendix tables. As standard in the literature, we cluster standard errors at the firm level.

Figure 1a shows that firms grow in the years following a foreign acquisition in terms of revenues (approximately 15-20%), employment (5%), and value added per worker (10-15%). The estimated coefficients for the three years following the acquisitions are all positive and statistically significant, while the coefficients for the pre-acquisition period are small and statistically not different from zero, with the exception of the coefficient on employment 3 years prior to the acquisition, which is negative and statistically significant.

Figure 1b shows that foreign acquisitions do not affect standard measures of organizational structure, such as the number of layers or the number of distinct 3-digit occupations. Both the coefficient on the years before and after the acquisition are small and statistically insignificant. This is in contrast with the results of Bastos et al. (2018), who use data from Portugal, and find that foreign acquisitions increase the number of layers.

However, firms might change their occupation mix, and this reorganization is not well-captured by looking solely at the number of layers or distinct occupations. In Figure 2, we show that foreign acquisitions indeed lead to a reorganization of the existing workforce. Specifically, in Figure 2a, we show that firms following an acquisition have a tendency to add new and drop pre-existing occupations from their list of distinct occupations. The likelihood of adding and dropping occupations at the 3-digit level, increases by around 10% in the years following the change in ownership, while we do not detect any pre-trends.





Notes: These figures plot coefficient estimates over the event window from estimating Eq. (1), along with 95% confidence intervals, to show the impact of foreign acquisitions on (a) (log) employment, (log) revenues, and (log) value added per worker; and (b) (log) number of layers and (log) number of occupations. Detailed regression output is presented in Appendix Table A6.

A potential concern is that these findings may reflect a reassessment of job characteristics by the new owner—something the previous owner may not have regularly done—leading to changes in listed occupations due to a reevaluation rather than actual job role changes. For instance, workers within the sub-major group 41, "Office clerks," might be reclassified, with those previously identified as "Library, mail and related clerks" (ISCO 414) now being labeled as "Secretaries and keyboard-operating clerks" (ISCO 411). While this may indicate some degree of organizational change, it could also simply represent a reclassification undertaken by the new owner following an acquisition. To account for potential misreporting by the previous owner and to ensure our measures accurately capture changes in labor organization, we also examine the likelihood of firms adding and dropping sub-major occupation groups, specifically 2-digit occupation codes. This can include, e.g., a shift from "General and keyboard clerks" (ISCO 41), which involves work with information and data, to "Customer service clerks" (ISCO 42), which involves work with customers. The results for 2-digit occupations, shown in Figure 2b, display a similar pattern to that observed for 3-digit occupations.

The acquisition of a firm by a foreign investor, might make some layers of management redundant in the existing firm, as the top layer of management is now located abroad. Thus, the re-organization of the existing workforce could be a result of adding or dropping layers, and thereby reassign workers to occupations that are mapped to a different layer. As shown in Figure 2c, acquired firms exhibit a slight increase in the likelihood of adding and removing hierarchical layers. However, as we show below, we also observe substantial occupational churning within existing layers (see Table A18).

Do firms fill new occupations with current or new workers? To answer this, we test for increased worker turnover following a foreign acquisition. Our analysis of hiring and firing probabilities reveals only a slight increase in turnover, with firms showing a statistically significant likelihood of adding and dropping workers solely in the year immediately after acquisition (see Figure 2d). Thus, occupation switching, which occurs every year after the acquisition, is primarily achieved by reshuffling existing workers.

We also employ alternative measures of occupation churning, such as the number of added or dropped occupations relative to the total number of occupations within a firm. As illustrated in Panels e) and f) of Figure 2, firms experience an increase in both the creation and destruction of occupations following an acquisition, observed at both the 3-digit level (Figure 2e) and the 2-digit level (Figure 2f). Therefore, even after accounting for differences in the number of distinct occupations across firms of varying sizes, our findings consistently demonstrate significant occupation churning following a foreign acquisition.

Robustness. See Appendix A.1.4 for a set of sensitivity results to the analysis above.

5.1 A Closer Look at the Reorganization of the Workforce

In this section, we analyze which specific occupations are being added and dropped to better understand the nature of these occupation changes, and if the reallocation is pointed towards certain occupations.

First, we explore whether the churning is driven by high-paying or low-paying occupations. To classify occupation as high- or low-paying, we compute a mean wage for each 3-digit occupation in the first three years (2002-2004), across all individuals and firms. A median wage is then calculated across all occupations, and we categorize occupations with mean wages below the median as low-paying, while those with mean wages above the median are classified as high-paying. Table A17 presents the effects of foreign acquisitions on the addition and removal of high- and low-paying occupations separately. The results indicate that high-paying occupations drive much of the churn, being both added and dropped significantly more often in the three years following an acquisition com-



Figure 2: Foreign acquisitions and firm organization

Notes: These figures plot coefficient estimates over the event window from estimating Eq. (1), along with 95% confidence intervals, to show the impact of foreign acquisitions on (a) the probability of adding and dropping 3-digit occupation(s); (b) the probability of adding and dropping 2-digit occupation(s); (c) the probability of adding and dropping layer(s); (d) the probability of hiring and firing workers; (e) 3-digit occupation creation, 3-digit occupation destruction; and (f) 2-digit occupation creation, 2-digit occupation destruction. Detailed regression output is presented in Appendix Tables A7 and A8.

pared to domestic firms. In contrast, low-paying occupations exhibit a different pattern, as they are predominantly dropped without a corresponding increase in additions. This analysis highlights a pattern of horizontal occupation switching within high-paying jobs, accompanied by vertical shifts, as some low-paying occupations are eliminated without replacement by others of similar pay.⁸

Moreover, we examine the churning of occupations within hierarchical layers. The number of occupations decreases as the hierarchical level increases, with the highest layer, level 3, containing only two occupations. Due to this limitation, we combine layers 1, 2, and 3 into a single group, as they all represent managerial roles. This way, we distinguish between the workers' layer and the managers' layer.⁹

Table A18 reveal a specific restructuring pattern: new owners cut down a few occupations in all layers. They add a few new occupations, but, in the first year, only the high-paying ones in the lowest "worker" level. Those occupations include office workers, service workers, different kinds of construction and process plant workers. Three years after the acquisition, new managerial positions are added as well. Hence, the analysis within layers confirms the previous results that foreign acquisitions predominantly generate horizontal occupation churning. Both workers' and managers' occupations are added and dropped but at different times.

This last result, combined with the fact that workers are reallocated away from discontinued occupations and towards new occupations, may suggest that workers move across layers following an acquisition. To test for this, we track the dynamics of moving across the layers and analyze whether these dynamics in acquired firms are different from the dynamics observed in domestic firms. We generate variables that indicate the number of workers that moved up, down, or stayed the same layer in the hierarchy. Table A20 reveals that the vertical changes in occupations in acquired firms are not significantly different from the trends that are observed in domestic firms. Therefore, firms that get acquired do not experience a different movement of workers in the hierarchy. This confirms that high-wage workers and managers with discontinued occupations are reallocated to

⁸ Horizontal switching refers to the addition and removal of occupations within the same organizational layer or among similarly paid jobs, while vertical switching involves the addition of high-paying occupations and the removal of low-paying ones, or vice versa.

⁹ Table A19 presents the results for each one of the original four hierarchical layers separately, and the significance of managerial churning drops after splitting them into individual layers, while the significance of workers' churning persists.

newly added occupations within the same layer.¹⁰

5.2 Occupation Churning as a Results of Product Churning

Our results revealed a reorganization of the existing workforce in acquired firms due to the assignment of existing workers to different occupations. In a last step to our analysis, we investigate if these adjustments are based on a change in the production towards different imports or exports. Specifically, an acquired firm might adjust the sourcing of imports or change their product mix by exporting different products to different countries, which ultimately leads to a reorganization of the workforce. Indeed, the literature has shown that such adjustments affect the workforce composition. Looking at the import structure of firms, Becker et al. (2013) show that offshoring is changing the onshore composition of tasks and skills, as offshoring firms shift towards more non-routine and more interactive tasks, and towards highly educated workers. For exports, Caliendo and Rossi-Hansberg (2012) showed that trade liberalization is affecting the organization of labor within firms, and Guillou and Treibich (2019) using French data have shown that export diversification is associated with a change in the firm's workforce composition. Thus, if the foreign acquisition churning.

To investigate changes in the import and export structure of firms, we use the UHDI register, to obtain exports and imports at the firm-product-country level. Similar to our occupation variables, we generate indicator variables if firms add or drop exported or imported products. We then follow our estimation strategy and investigate if foreign acquisitions affect the likelihood of firms to add or drop products at different levels of aggregation. In Appendix Tables A22, we show that there are no significant impacts of foreign acquisitions on the imported or exported product mix.¹¹ Put differently, while firms might continuously change their product portfolio (Iacovone and Javorcik, 2010) foreign acquisitions do not alter this behavior.¹²

¹⁰ We examine whether foreign acquisitions influence the distribution of employment across occupations, using measures of asymmetry like the Theil and Herfindahl-Hirschman indices, but find no evidence that acquired firms concentrate employment in specific occupations compared to non-acquired firms (see Appendix Table A21).

¹¹ We obtain similar results, when we define products at the 4- or 2-digit level, and when we look at changes in export or import markets.

¹² We have also investigated adjustments in the *domestic* product mix, by using the VARS register, which

6 Conclusion

We documented novel stylized facts that prove the importance of examining occupation switching within firms. In fact, while the number of different occupations and layers within a firm remains stable over time, firms are constantly adding and dropping occupations and layers in response to various shocks. We examine the effects of one such shocks, namely foreign acquisitions.

Compared to Bastos et al. (2018), our results do not reveal any impact on the number of distinct layers or organization. However, we observe substantial reorganization of existing workers across occupations. Following the change in ownership, acquired firms have a higher likelihood of adding and, at the same time, dropping occupations. While we only find slightly statistically significant effects of adding or dropping layers, and also for hiring and firing workers (which is in line with the only modest employment effects), firms seem to assign existing workers to different occupations. We observe this pattern not only for minor occuapation groups, denoted by 3-digit occupation codes, but also across sub-major groups, i.e., 2-digit occupations.

Our paper reveals significant reorganization of workers across occupations, shedding light on the documented efficiency gains in acquired firms. The alignment between workers' skills and occupational demands is critical for both firm productivity and individual performance. Exploring how foreign acquisitions create opportunities for workers to achieve better skill-occupation matches presents a promising direction for future research.

is the Danish version of PRODCOM. However, in contrast to the trade data, VARS is limited to firms with 10 or more employees in the raw material extraction and manufacturing industries. Thus, we end up with only around 100 acquisitions for this restricted sample of firms, which might explain the insignificance of our results when looking at the domestic product mix.

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A.1 Appendix

A.1.1 Descriptive Statistics

Figure A1 illustrates the distribution of foreign acquisitions across industries and years. Table A1 provides summary statistics for the full sample of firms that satisfy the exclusion criteria.



Figure A1: Foreign Acquisitions in Denmark

Notes: Panel (a) plots the distribution of acquired firms across industries. Panel (b) plots the distribution of acquired firms over time. The sample is based on 1064 firms that started as domestic owned and were acquired once by a foreign investor throughout the years 2005 to 2015.

	Always Domestic	Acquired Firms	All Firms
	(1)	(2)	(3)
(log) Revenues	16.022	17.558	16.046
	(1.465)	(1.589)	(1.479)
Employment	14.501	69.543	15.375
	(111.387)	(571.161)	(132.054)
(log) Value added per worker	12.849	13.254	12.856
	(0.697)	(0.693)	(0.699)
# Layers	1.720	2.605	1.734
	(0.935)	(1.057)	(0.944)
# 3-dgt. occupations	3.270	7.132	3.331
	(3.707)	(6.748)	(3.805)
# 2-dgt. occupations	2.763	5.123	2.800
	(2.363)	(3.710)	(2.409)
Observations	683683	11034	694717

Table A1: Summary Statistics - Full Sample

Notes: The table reports means and standard deviations (in parentheses) for the full sample of firm-year observations over the period 2002 - 2018. All firms are domestic owned in their first year in the sample and are potentially acquired during the years 2005 - 2015. A firm is foreign owned if the ultimate owner holds at least 50% of the firms equity capital. Column (1) refers to firms that did not change ownership during the sample period, column (2) refers to firms that changed foreign ownership status only once during the sample period, column (3) refers to all firms. Layers are defined by assigning individuals to four hierarchical layers based on their 3-digit occupation codes, following Caliendo et al. [2015] and Friedrich [2022]. Monetary variables are in 2015 prices.

A.1.2 Propensity Score Matching

Table A2 reports the results from the multivariate logit specification of the probability of a firm being acquired by foreign investors on different time-varying characteristics. Tables A3 and A4 present detailed statistics on matching quality and bias reduction. Table A5 provides summary statistics for our regression sample, which comprises the matched acquired and domestic firms.

Dependent variable: foreign ownership						
	Coefficient	Marginal effect (at mean of variable)				
(log) revenue	0.11604***	0.00015***				
	(0.03844)	(0.00005)				
Growth revenue	0.00164*	0.00000*				
	(0.00094)	(0.0000)				
(log) value added per worker	0.54787***	0.00072***				
	(0.05085)	(0.00007)				
Growth value added per worker	0.00057	0.00000				
_	(0.00153)	(0.00000)				
(log) wagebill	0.20812***	0.00028***				
	(0.04582)	(0.00006)				
Growth wagebill	0.00526	0.00001				
	(0.01223)	(0.0002)				
Employment	-0.00014	-0.00000				
	(0.00015)	(0.00000)				
Growth employment	0.01426	0.00002				
	(0.01650)	(0.00002)				
# Plants	0.00496*	0.00001*				
	(0.00287)	(0.00000)				
# Layers	0.25418***	0.00034***				
	(0.04287)	(0.00006)				
# 3-dgt. occupations	-0.01320	-0.00002				
	(0.00884)	(0.00001)				
Observations	578522	578522				

Table A2: Propensity Score Estimates

Notes: The table reports the results of propensity score estimation of a multivariate logit specification, estimating the probability of a firm being acquired by foreign investors on different time-varying characteristics. All independent variables defined one year prior to acquisition. Growth variables are defined as the growth between one year prior to the acquisition and the acquisition year. Layers are defined by assigning individuals to four hierarchical layers based on their 3-digit occupation codes, following Caliendo et al. [2015] and Friedrich [2022]. Standard errors in parentheses are clustered at the firm level. *10% level, *5% level, and ***1% level.

Variable	Sample	Mean		% Bias	% Reduction Bias	t-test	p-value
		Treated	Control				
(log) revenues	Unmatched	17.278	16.022	81		27.93	0
	Matched	17.278	17.198	5.1	93.7	1.12	0.261
Growth revenues	Unmatched	1.3672	0.29798	8.1		4.26	0
	Matched	1.3672	0.36956	7.6	6.7	1.91	0.056
(log) value added per worker	Unmatched	13.254	12.849	59.3		18.95	0
	Matched	13.254	13.267	-1.8	96.9	-0.46	0.643
Growth value added per worker	Unmatched	1.2155	0.37873	9.1		3.83	0
	Matched	1.2155	0.42076	8.6	5	2.27	0.024
(log) wagebill	Unmatched	15.364	14.157	79.9		27.88	0
	Matched	15.364	15.258	7	91.2	1.53	0.126
Growth wagebill	Unmatched	0.26252	0.20147	4.6		1.35	0.177
	Matched	0.26252	0.17798	6.4	-38.5	1.65	0.1
Employment	Unmatched	61.136	14.501	11.8		13.41	0
	Matched	61.136	40.448	5.2	55.6	1.18	0.237
Growth employment	Unmatched	0.20207	0.13781	7.7		2.51	0.012
	Matched	0.20207	0.12872	8.8	-14.1	1.93	0.054
# Plants	Unmatched	2.532	1.2823	11.6		10.58	0
	Matched	2.532	1.7876	6.9	40.4	1.55	0.12
# Layers	Unmatched	2.4643	1.7201	73.4		25.93	0
-	Matched	2.4643	2.5244	-5.9	91.9	-1.27	0.205
# 3-digit occupations	Unmatched	6.2509	3.2701	57.1		26.17	0
	Matched	6.2509	6.0545	3.8	93.4	0.74	0.459
Size-group 2 (5-9 employees)	Unmatched	0.18703	0.26138	-17.9		-5.52	0
	Matched	0.18703	0.18703	0	100	0	1
Size-group 3 (10-19 employees)	Unmatched	0.20207	0.21685	-3.6		-1.17	0.242
	Matched	0.20207	0.20207	0	100	0	1
Size-group 4 (20-49 employees)	Unmatched	0.20771	0.1519	14.6		5.07	0
	Matched	0.20771	0.20771	0	100	0	1
Size-group 5 (50 and more employees)	Unmatched	0.21898	0.07143	42.8		18.65	0
	Matched	0.21898	0.21898	0	100	0	1
Acquisition year: 2005	Unmatched	0.05263	0.05881	-2.7		-0.86	0.392
, i i i i i i i i i i i i i i i i i i i	Matched	0.05263	0.05263	0	100	0	1
Acquisition year: 2006	Unmatched	0.04605	0.05932	-5.9		-1.83	0.067
	Matched	0.04605	0.04605	0	100	0	1
Acquisition year: 2007	Unmatched	0.05075	0.05912	-3.7		-1.16	0.247
1	Matched	0.05075	0.05075	0	100	0	1
Acquisition year: 2008	Unmatched	0.04229	0.05961	-7.9	100	-2.38	0.017
	Matched	0.04229	0.04229	0	100	0	1
Acquisition year: 2009	Unmatched	0 15132	0.0593	30.3		12.68	0
ricquisition year 2009	Matched	0.15132	0.15132	0	100	0	1
Acquisition year: 2010	Unmatched	0.01316	0.06063	-25.4	100	-6.49	0
- equivalent year. 2010	Matched	0.01316	0.01316	0	100	0	1
Acquisition year: 2011	Unmatched	0.06203	0.06095	04	100	0.15	1 883
requisition year. 2011	Matched	0.06203	0.06203	0.1	100	0	1
	IVILLA INCA	V/-V///////////	11.11/1/1/1/1	17			

Table A3: Matching statistics: t-test before and after matching

Acquisition year: 2012	Unmatched	0.04323	0.05967	-7.4		-2.26	0.024
	Matched	0.04323	0.04323	0	100	0	1
Acquisition year: 2013	Unmatched	0.05921	0.05921	0		0	1
	Matched	0.05921	0.05921	0	100	0	1
Acquisition year: 2014	Unmatched	0.11842	0.06077	20.3		7.86	0
	Matched	0.11842	0.11842	0	100	0	1
Acquisition year: 2015	Unmatched	0.3609	0.06195	78.6		40.33	0
	Matched	0.3609	0.3609	0	100	0	1
Textiles, paper, chemicals	Unmatched	0.0282	0.02442	2.4		0.8	0.426
	Matched	0.0282	0.0282	0	100	0	1
Rubber, plastic	Unmatched	0.02444	0.01047	10.7		4.47	0
	Matched	0.02444	0.02444	0	100	0	1
Basic metals	Unmatched	0.0235	0.03141	-4.8		-1.48	0.139
	Matched	0.0235	0.0235	0	100	0	1
Computer, electronic	Unmatched	0.03383	0.00859	17.6		8.89	0
	Matched	0.03383	0.03383	0	100	0	1
Machinery and equipment	Unmatched	0.04041	0.01836	13.1		5.35	0
	Matched	0.04041	0.04041	0	100	0	1
Transport equipment	Unmatched	0.03102	0.02557	3.3		1.12	0.261
	Matched	0.03102	0.03102	0	100	0	1
Electricity, Gas, Water	Unmatched	0.04229	0.23909	-59		-15.05	0
	Matched	0.04229	0.04229	0	100	0	1
Wholesale and retail trade	Unmatched	0.36466	0.30826	12		3.98	0
	Matched	0.36466	0.36466	0	100	0	1
Transportation and Storage	Unmatched	0.04793	0.04807	-0.1		-0.02	0.984
	Matched	0.04793	0.04793	0	100	0	1
Accommodation and food service	Unmatched	0.01504	0.04234	-16.4		-4.42	0
	Matched	0.01504	0.01504	0	100	0	1
Broadcasting, Telecommunications	Unmatched	0.04417	0.01314	18.7		8.87	0
	Matched	0.04417	0.04417	0	100	0	1
IT, information service	Unmatched	0.1062	0.0344	28.4		12.82	0
	Matched	0.1062	0.1062	0	100	0	1
Finance, real estate, accounting	Unmatched	0.06485	0.10436	-14.2		-4.21	0
	Matched	0.06485	0.06485	0	100	0	1
Scientific, administrative	Unmatched	0.1062	0.07233	11.9		4.26	0
	Matched	0.1062	0.1062	0	100	0	1

Notes: The table presents detailed statistics on matching quality and bias reduction. All independent variables defined one year prior to acquisition. Growth variables are defined as the growth between one year prior to the acquisition and the acquisition year. Mean values of several independent variables are computed for domestic and acquired firms, both in unmatched and matched sample. T-test and and p-value indicate the statistical significance of the difference in coefficients estimated for domestic and acquired firms, reported both for unmatched and matched samples. % Bias refers to the imbalance between treated and control group, while % Reduction bias gives an estimate of the extent to which the imbalance is reduced after matching, providing the evidence on the quality of the matching procedure.

Table A4: Matching statistics: Pseudo R² and test of joints significance of regressors

Sample	Pseudo R ²	Chi ²	p-value
Unmatched	0.137	2015.46	0
Matched	0.014	41.89	0.346

Notes: The table reports the results of the tests of the quality of the matching procedure. The Pseudo R2, computed for both unmatched and matched samples, measures how well covariates explain the treatment assignment. The Chi-squared test estimates joint significance of the covariates.

	Always Domestic	Acquired Firms	All Firms
(log) Revenues	17.385	17.558	17.427
	(1.590)	(1.589)	(1.592)
Employment	44.576	69.543	50.702
	(164.192)	(571.161)	(317.006)
(log) Value added per worker	13.192	13.254	13.207
	(0.595)	(0.693)	(0.621)
# Layers	2.565	2.605	2.575
-	(1.074)	(1.057)	(1.070)
# 3-dgt. occupations	6.618	7.132	6.744
	(6.215)	(6.748)	(6.354)
# 2-dgt. occupations	4.872	5.123	4.933
	(3.502)	(3.710)	(3.556)
# Added 3-dgt. occupations	1.138	1.300	1.178
	(1.801)	(1.976)	(1.847)
# Dropped 3-dgt. occupations	1.089	1.248	1.128
	(1.781)	(1.972)	(1.831)
# Hired workers	5.479	7.168	5.893
	(21.098)	(40.047)	(27.017)
# Fired workers	4.783	7.376	5.419
	(20.739)	(58.950)	(34.328)
Indicator: add layer	0.157	0.178	0.162
	(0.364)	(0.383)	(0.368)
Indicator: drop layer	0.136	0.160	0.142
	(0.343)	(0.367)	(0.349)
Indicator: add 3-dgt. occupation	0.498	0.532	0.506
	(0.500)	(0.499)	(0.500)
Indicator: drop 3-dgt. occupation	0.494	0.527	0.502
	(0.500)	(0.499)	(0.500)
Net change in 3-dgt. occupations	0.049	0.052	0.050
	(1.920)	(2.208)	(1.995)
Indicator: hire workers	0.611	0.622	0.614
	(0.488)	(0.485)	(0.487)
Indicator: fire workers	0.587	0.590	0.588
	(0.492)	(0.492)	(0.492)
Observations	33939	11034	44973

Table A5: Summary Statistics - Matched Sample

Notes: The table reports means and standard deviations (in parentheses) for the matched sample of firmyear observations over the period 2002 - 2018. All firms are domestic owned in their first year in the sample and are potentially acquired during the years 2005 - 2015. A firm is foreign owned if the ultimate owner holds at least 50% of the firms equity capital. Column (1) refers to firms that did not change ownership during the sample period, column (2) refers to firms that changed foreign ownership status only once during the sample period, column (3) refers to all firms. Monetary variables are in 2015 prices. Indicators represent a dummy of whether at least one layer/occupation/worker was added/dropped. Layers are defined by assigning individuals to four hierarchical layers based on their 3-digit occupation codes, following Caliendo et al. [2015] and Friedrich [2022].

A.1.3 Detailed Regression Results to Figures from the Main Text

Tables A6, A7, and A8 provide detailed regression results to Figures 1 and 2 from the main text.

			(log) of		
	Employment	Revenues	Value added p. w.	# Layers	# 3-dgt. occ.
	(1)	(2)	(3)	(4)	(5)
<= -4	-0.13036***	-0.06851*	0.01319	-0.02827	-0.06892**
	(0.03849)	(0.03674)	(0.02622)	(0.01851)	(0.02688)
-3	-0.07348**	-0.02871	0.00906	-0.01946	-0.01754
	(0.02976)	(0.03480)	(0.03013)	(0.01653)	(0.02190)
-2	-0.03721	-0.01084	0.05568**	-0.00521	-0.01046
	(0.02384)	(0.03100)	(0.02572)	(0.01414)	(0.01916)
-1	-0.00121	0.02937	0.03352	0.00422	-0.00381
	(0.01932)	(0.02601)	(0.02547)	(0.01127)	(0.01571)
t = 0	-	-	-	-	-
+1	0.03951***	0.15971***	0.11945***	0.00189	0.01011
	(0.01485)	(0.02221)	(0.02371)	(0.01008)	(0.01406)
+2	0.05512***	0.19403***	0.14686***	-0.00718	0.00054
	(0.02109)	(0.02608)	(0.02641)	(0.01265)	(0.01802)
+3	0.07703***	0.21836***	0.14528***	0.01330	0.00740
	(0.02623)	(0.03046)	(0.02662)	(0.01409)	(0.02070)
>=+4	0.04680	0.20122***	0.15501***	-0.03884**	-0.07624***
	(0.03607)	(0.03869)	(0.02718)	(0.01625)	(0.02485)
Firm FE	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y
Observations	44943	44943	44943	44943	44943
R ²	0.8947	0.9083	0.6033	0.6965	0.8197

Table A6: Regression Results referring to Figure 1 from the main text

Notes: The table reports means and standard errors (in parentheses) of the event study estimation of several growth outcomes. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

	Indicator variable for							
	+ Layer	– Layer	+ 3-dgt.	- 3-dgt.	+ 2-dgt.	– 2-dgt.	Hiring	Firing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<= -4	0.00825	0.02008	-0.00228	0.01017	0.01756	0.01841	-0.02071	-0.04251**
	(0.01581)	(0.01418)	(0.02027)	(0.02074)	(0.02015)	(0.02073)	(0.01780)	(0.01804)
-3	0.04205*	0.00676	0.03596	0.04369*	0.03308	0.05655**	0.01294	-0.00952
	(0.02150)	(0.01839)	(0.02435)	(0.02475)	(0.02561)	(0.02417)	(0.02104)	(0.02191)
-2	0.02317	0.00760	0.00313	0.04230*	0.02127	0.03468	0.01606	-0.02012
	(0.01907)	(0.01840)	(0.02288)	(0.02319)	(0.02274)	(0.02379)	(0.01901)	(0.01956)
-1	0.01890	0.00566	0.02420	0.04061*	0.01828	0.02773	0.02529	0.00050
	(0.01939)	(0.01739)	(0.02168)	(0.02207)	(0.02252)	(0.02272)	(0.01962)	(0.01886)
t = 0	-	-	-	-	-	-	-	-
+1	0.04565**	0.05317***	0.09030***	0.11714***	0.08889***	0.11754***	0.05505***	0.04749***
	(0.01846)	(0.01709)	(0.02031)	(0.02009)	(0.02050)	(0.02111)	(0.01812)	(0.01824)
+2	0.00893	0.04614***	0.08145***	0.10969***	0.06529***	0.08835***	0.02433	0.04574**
	(0.01842)	(0.01752)	(0.02144)	(0.02176)	(0.02258)	(0.02211)	(0.01940)	(0.01942)
+3	0.06582***	0.06012***	0.10297***	0.11832***	0.07552***	0.10360***	0.02904	0.02184
	(0.01955)	(0.01801)	(0.02247)	(0.02311)	(0.02311)	(0.02286)	(0.02012)	(0.02013)
>= +4	0.00195	0.04176***	0.01913	0.07547***	0.02104	0.06930***	0.02456	0.02871*
	(0.01509)	(0.01429)	(0.02079)	(0.02063)	(0.01992)	(0.02010)	(0.01717)	(0.01739)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	44943	44943	44943	44943	44943	44943	44943	44943
R ²	0.1467	0.1287	0.2982	0.2842	0.2369	0.2244	0.4787	0.4670

Table A7: Regression Results referring to Panel a) to d) in Figure 2 from the main text

Notes: The table reports means and standard errors (in parentheses) of the event study estimation of outcomes measuring reorganization outcomes. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Occupational classification follows the ISCO-88 nomenclature. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

	3-dgt. O	ccupation	2-dgt. O	ccupation
	Creation	Destruction	Creation	Destruction
	(1)	(2)	(3)	(4)
<= -4	0.00636	0.03314*	0.01350	0.02461
	(0.01041)	(0.01735)	(0.00954)	(0.01566)
-3	0.02275*	0.03916*	0.01795	0.02250
	(0.01312)	(0.02079)	(0.01211)	(0.01885)
-2	0.00860	0.03165	0.01019	0.01966
	(0.01160)	(0.02146)	(0.01080)	(0.02029)
-1	0.01624	0.04954	0.01230	0.03351
	(0.01170)	(0.03248)	(0.01122)	(0.02414)
t = 0	-	-	-	-
+1	0.04621***	0.08753***	0.03931***	0.06076***
	(0.01145)	(0.02283)	(0.01053)	(0.01994)
+2	0.03535***	0.12440***	0.02462**	0.08327***
	(0.01161)	(0.02433)	(0.01089)	(0.02077)
+3	0.03738***	0.11432***	0.02521**	0.08907***
	(0.01135)	(0.02876)	(0.01047)	(0.02463)
>= +4	0.00434	0.10676***	0.00504	0.07962***
	(0.00985)	(0.02268)	(0.00891)	(0.01851)
Firm FE	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y
Observations	44943	44943	44943	44943
R ²	0.2459	0.1614	0.2274	0.1594

Table A8: Regression Results referring to Panel e) and f) Figure 2 from the main text

Notes: The table reports means and standard errors (in parentheses) of the event study estimation of outcomes measuring reorganization outcomes. Each outcome is an indicators of whether in a firm-year observation, at least one occupation was added or dropped. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

A.1.4 Robustness Analysis

Our analysis confirms that the results are robust across various approaches and sample restrictions. In Table A9, we show that our results are robust to alternative measures of occupation churning. Instead of using an indicator variable, we show results when using the log of (1+) added 3-digit (or 2-digit) occupations, dropped 3-digit (or 2-digit) occupations as an alternative depended variable. In Appendix Table A10, we use the total number of added occupations as an alternative outcome variable. We also look at the log of (1+) hired or fired workers, or the number of hired or fired workers in these, and again find only modest effect on worker turnover.

While the main text employs 3:1 matching, Table A11 demonstrates that the findings are robust to using nearest neighbor (1:1) matching. Additionally, our results are consistent even after accounting for the high concentration of foreign acquisitions in the wholesale and retail industry or the year 2015. As evidenced in Tables A12 and A13, excluding either the wholesale and retail sector or acquisitions from 2015 does not alter the outcomes.

Moreover, the results remain unchanged when small firms are excluded from the analysis. Specifically, Table A14 shows similar findings after removing the 196 acquisitions involving firms with fewer than five workers at the time of acquisition. We also examine the robustness of our results by focusing solely on single-plant firms, as multi-plant firms might reallocate workers across different locations within the same company. With approximately 66% of firms in the matched sample being single-plant firms throughout all years they are observed, Appendix Table A15 indicates that the exclusion of multiplant establishments does not affect the overall findings.

Our results remain robust when applying the method proposed by Sun and Abraham [2021] to address issues in a staggered event-study design. As demonstrated in Table A16, the findings are consistent with those obtained using this approach. Additionally, in a separate robustness check, we confirm that binning does not affect the results. Specifically, we observe similar outcomes when including all pre- and post-years in the regression, while still excluding the year of acquisition.

	(log) of 1 +								
	# added 3-dgt.	# dropped 3-dgt	. # added 2-dgt.	# dropped 2-dgt.	# hired workers	# fired workers			
·	(1)	(2)	(3)	(4)	(5)	(6)			
<= -4	-0.01308	-0.00959	0.02171	0.02171	-0.08588**	-0.09007***			
	(0.02721)	(0.02596)	(0.02143)	(0.02143)	(0.03532)	(0.03147)			
-3	0.03793	0.04643	0.04051	0.04051	-0.04074	-0.04996			
	(0.03161)	(0.03025)	(0.02675)	(0.02675)	(0.03740)	(0.03389)			
-2	0.00441	0.04344*	0.02515	0.02515	0.01692	-0.04458			
	(0.02738)	(0.02636)	(0.02305)	(0.02305)	(0.03194)	(0.02884)			
-1	0.03679	0.03395	0.02619	0.02619	0.00929	0.01082			
	(0.02656)	(0.02553)	(0.02344)	(0.02344)	(0.03251)	(0.02631)			
t = 0	-	-	-	-	-	-			
+1	0.09514***	0.13999***	0.08445***	0.08445***	0.04791	0.06502**			
	(0.02443)	(0.02296)	(0.02089)	(0.02089)	(0.02947)	(0.02645)			
+2	0.08430***	0.13799***	0.06225***	0.06225***	0.02131	0.10275***			
	(0.02626)	(0.02533)	(0.02275)	(0.02275)	(0.03302)	(0.02960)			
+3	0.08716***	0.13300***	0.05692**	0.05692**	0.02491	0.08675***			
	(0.02770)	(0.02673)	(0.02303)	(0.02303)	(0.03603)	(0.03288)			
>= +4	-0.02502	0.06689**	-0.00207	-0.00207	0.00137	0.11155***			
	(0.02696)	(0.02686)	(0.02058)	(0.02058)	(0.03429)	(0.03247)			
Firm FE	Y	Y	Y	Y	Y	Y			
Industry×year FE	Y	Y	Y	Y	Y	Y			
Observations	44943	44943	44943	44943	44943	44943			
R ²	0.3738	0.3824	0.2624	0.2624	0.6857	0.6974			

Table A9: Alternative measure for occupation and worker churning (1)

Notes: The table reports means and standard errors (in parentheses) of the event study estimation on alternative outcome variables. Each outcome is log of the number of added or dropped occupations or employees. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

	# added 3-dgt	. # dropped 3-dgt.	# added 2-dgt.	# dropped 2-dgt.	# hired workers	# fired workers
	(1)	(2)	(3)	(4)	(5)	(6)
<= -4	-0.03942	-0.06895	0.05253	0.01773	-2.18379***	-1.89541*
	(0.08415)	(0.07532)	(0.04730)	(0.04233)	(0.72921)	(1.05494)
-3	0.11214	0.12952	0.08985	0.10721**	0.36181	-1.47297
	(0.09836)	(0.09466)	(0.05996)	(0.05296)	(1.16168)	(1.17398)
-2	0.00641	0.06946	0.04978	0.05137	0.52611	0.06621
	(0.08034)	(0.07287)	(0.05047)	(0.04793)	(0.82101)	(0.51826)
-1	0.11219	0.05772	0.05694	0.07940	-0.52866	-0.47071
	(0.08434)	(0.07765)	(0.05223)	(0.04933)	(0.60341)	(0.61974)
t = 0	-	-	-	-	-	-
+1	0.19068***	0.32678***	0.14661***	0.20636***	-0.60322	-0.80686
	(0.06867)	(0.06535)	(0.04494)	(0.04453)	(0.63829)	(1.14860)
+2	0.14484*	0.35969***	0.10886**	0.19880***	-0.87041	0.36107
	(0.07648)	(0.07257)	(0.04892)	(0.04832)	(0.68047)	(0.72003)
+3	0.13005	0.30011***	0.08809*	0.22034***	-1.16218	0.24019
	(0.08205)	(0.07710)	(0.05049)	(0.04921)	(0.79096)	(0.72130)
>= +4	-0.14895*	0.10063	-0.03255	0.11841***	-1.86344	0.16509
	(0.08511)	(0.08398)	(0.04566)	(0.04461)	(1.17260)	(0.87360)
Firm FE	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y
Observations	44943	44943	44943	44943	44943	44943
R ²	0.3596	0.3900	0.2498	0.2507	0.6712	0.7735

Table A10: Alternative measure for occupation and worker churning (2)

Notes: The table reports means and standard errors (in parentheses) of the event study estimation on alternative outcome variables. Each outcome is the number of added or dropped occupations or employees. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

		(log) of		Indicator variable for			
	Employment	# Layer	# 3-dgt.	+ 3-dgt.	— 3-dgt.	Hiring	Firing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<= -4	-0.12947***	-0.03801*	-0.07457***	-0.00707	0.01332	-0.02006	-0.04241**
	(0.04105)	(0.01966)	(0.02856)	(0.02131)	(0.02195)	(0.01877)	(0.01890)
-3	-0.07603**	-0.02387	-0.02157	0.03511	0.04834*	0.01801	-0.00683
	(0.03125)	(0.01709)	(0.02323)	(0.02534)	(0.02547)	(0.02164)	(0.02243)
-2	-0.04115	-0.01035	-0.01106	0.00621	0.04328*	0.01833	-0.02247
	(0.02507)	(0.01473)	(0.02024)	(0.02371)	(0.02386)	(0.01937)	(0.02004)
-1	0.00190	0.00490	-0.00194	0.03012	0.04678**	0.03488*	0.00107
	(0.02020)	(0.01174)	(0.01635)	(0.02219)	(0.02263)	(0.02004)	(0.01920)
t = 0	-	-	-	-	-	-	-
+1	0.04117***	0.00216	0.01286	0.09319***	0.11779***	0.06248***	0.05378***
	(0.01555)	(0.01049)	(0.01468)	(0.02088)	(0.02054)	(0.01859)	(0.01854)
+2	0.05383**	-0.00641	0.00378	0.08373***	0.11301***	0.02905	0.05214***
	(0.02205)	(0.01314)	(0.01869)	(0.02221)	(0.02242)	(0.01992)	(0.02003)
+3	0.07143**	0.01306	0.00646	0.10213***	0.11999***	0.03363	0.02956
	(0.02774)	(0.01483)	(0.02175)	(0.02309)	(0.02375)	(0.02077)	(0.02065)
>= +4	0.03454	-0.04083**	-0.08184***	0.02076	0.07683***	0.02664	0.03121*
	(0.03825)	(0.01760)	(0.02649)	(0.02193)	(0.02158)	(0.01826)	(0.01826)
Firm FE	Y	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y	Y
Observations	23949	23949	23949	23949	23949	23949	23949
R ²	0.8967	0.6946	0.8192	0.3141	0.2960	0.4869	0.4754

Table A11: Robustness Analysis A – 1:1 Match

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 1:1 nearest neighbor ("perfect") propensity score matching. Columns (1) - (3) provide the estimated for outcomes measured in log, while columns (4) - (7) are indicators of whether at least one instance of adding or dropping happened. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

		(log) of			Indicator v	ariable for	
	Employment	# Layer	# 3-dgt.	+ 3-dgt.	— 3-dgt.	Hiring	Firing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<= -4	-0.15259***	-0.02314	-0.06170*	-0.01686	-0.00266	-0.04076*	-0.02576
	(0.04931)	(0.02374)	(0.03440)	(0.02605)	(0.02675)	(0.02226)	(0.02254)
-3	-0.11725***	-0.02913	-0.03346	-0.01836	-0.01241	0.00374	-0.01277
	(0.03871)	(0.02150)	(0.02804)	(0.03052)	(0.03143)	(0.02639)	(0.02708)
-2	-0.08166***	-0.01723	-0.02532	-0.05687*	-0.03254	-0.02221	-0.05876**
	(0.03046)	(0.01805)	(0.02508)	(0.02914)	(0.02900)	(0.02474)	(0.02529)
-1	-0.00098	0.00052	0.00551	0.01987	0.01010	0.01946	0.00686
	(0.02392)	(0.01487)	(0.02003)	(0.02746)	(0.02783)	(0.02539)	(0.02446)
t = 0	-	-	-	-	-	-	-
+1	0.04160**	0.00727	0.00701	0.04673*	0.10788***	0.02957	0.05299**
	(0.01949)	(0.01286)	(0.01814)	(0.02610)	(0.02590)	(0.02282)	(0.02316)
+2	0.05962**	-0.00819	-0.00224	0.04333	0.08938***	0.00940	0.06799***
	(0.02755)	(0.01645)	(0.02295)	(0.02687)	(0.02764)	(0.02428)	(0.02437)
+3	0.07081**	0.00758	-0.01116	0.05009*	0.09955***	0.00448	0.03375
	(0.03524)	(0.01859)	(0.02695)	(0.02800)	(0.02901)	(0.02560)	(0.02510)
>= +4	0.06126	-0.04033*	-0.06119*	-0.01339	0.05338**	-0.00310	0.03424
	(0.04665)	(0.02095)	(0.03181)	(0.02670)	(0.02688)	(0.02230)	(0.02154)
Firm FE	Y	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y	Y
Observations	28912	28912	28912	28912	28912	28912	28912
R ²	0.8998	0.6949	0.8312	0.3148	0.2992	0.4993	0.4844

Table A12: Robustness Analysis B – Excluding Wholesalers and Retail Sector

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching, excluding Wholesale and Retail Sector. Columns (1) - (3) provide the estimated for outcomes measured in log, while columns (4) - (7) are indicators of whether at least one instance of adding or dropping happened. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

		(log) of		Indicator variable for			
	Employment	# Layer	# 3-dgt.	+ 3-dgt.	— 3-dgt.	Hiring	Firing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<= -4	-0.11523**	-0.03875*	-0.05308	0.04882*	0.02157	-0.00800	-0.04225*
	(0.04715)	(0.02199)	(0.03305)	(0.02579)	(0.02534)	(0.02227)	(0.02218)
-3	-0.05148	-0.01195	0.00402	0.08401***	0.04052	0.03114	0.00612
	(0.03795)	(0.02043)	(0.02746)	(0.02939)	(0.02908)	(0.02539)	(0.02654)
-2	-0.01051	0.00355	0.00670	0.03283	0.05297*	0.04947**	-0.00638
	(0.03012)	(0.01724)	(0.02375)	(0.02780)	(0.02732)	(0.02292)	(0.02379)
-1	0.03306	0.01510	0.01600	0.05188**	0.04793*	0.04482*	0.02194
	(0.02497)	(0.01393)	(0.02005)	(0.02613)	(0.02698)	(0.02401)	(0.02260)
t = 0	-	-	-	-	-	-	-
+1	0.04005**	-0.00339	0.00370	0.10397***	0.11046***	0.07839***	0.04588**
	(0.01901)	(0.01233)	(0.01784)	(0.02420)	(0.02387)	(0.02246)	(0.02243)
+2	0.06247**	-0.01386	0.00079	0.09432***	0.10176***	0.03918	0.04583*
	(0.02642)	(0.01492)	(0.02226)	(0.02510)	(0.02561)	(0.02425)	(0.02370)
+3	0.07393**	0.00009	-0.00671	0.10809***	0.09656***	0.04234*	0.02443
	(0.03234)	(0.01711)	(0.02514)	(0.02695)	(0.02734)	(0.02521)	(0.02422)
>= +4	0.03462	-0.05471***	-0.09778***	0.02246	0.05364**	0.02427	0.01314
	(0.04170)	(0.01863)	(0.02867)	(0.02367)	(0.02321)	(0.02045)	(0.02044)
Firm FE	Y	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y	Y
Observations	44542	44542	44542	44542	44542	44542	44542
\mathbb{R}^2	0.8943	0.6961	0.8194	0.2987	0.2847	0.4793	0.4684

Table A13: Robustness Analysis C – Excluding Acquisitions in 2015

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching, excluding all acquisitions that happened in 2015. Columns (1) - (3) provide the estimated for outcomes measured in log, while columns (4) - (7) are indicators of whether at least one instance of adding or dropping happened. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

		(log) of			Indicator va	riable for	
	Employment	# Layer	# 3-dgt.	+ 3-dgt.	— 3-dgt.	Hiring	Firing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<= -4	-0.14496***	-0.03904**	-0.07031***	0.00651	0.01399	-0.01792	-0.03889**
	(0.03839)	(0.01875)	(0.02691)	(0.02231)	(0.02273)	(0.01869)	(0.01937)
-3	-0.07516***	-0.02374	-0.01390	0.03346	0.03495	0.01115	0.00343
	(0.02904)	(0.01678)	(0.02205)	(0.02664)	(0.02728)	(0.02231)	(0.02378)
-2	-0.04213*	-0.01504	-0.01010	-0.00392	0.04053	0.02687	-0.01471
	(0.02336)	(0.01472)	(0.01981)	(0.02498)	(0.02535)	(0.02058)	(0.02156)
-1	-0.02034	-0.00465	-0.00780	0.01730	0.02241	0.01700	0.01170
	(0.01937)	(0.01192)	(0.01659)	(0.02415)	(0.02471)	(0.02130)	(0.02055)
t = 0	-	-	-	-	-	-	-
+1	0.01086	-0.01435	-0.01543	0.06002***	0.09862***	0.03189	0.03920*
	(0.01517)	(0.01090)	(0.01464)	(0.02270)	(0.02303)	(0.02023)	(0.02048)
+2	0.04577**	-0.02425*	-0.02007	0.05180**	0.07521***	0.00702	0.04266**
	(0.02168)	(0.01357)	(0.01928)	(0.02399)	(0.02414)	(0.02143)	(0.02145)
+3	0.08720***	0.00470	0.00180	0.07488***	0.08134***	0.00924	0.02906
	(0.02516)	(0.01439)	(0.02102)	(0.02505)	(0.02579)	(0.02203)	(0.02193)
>= +4	0.04695	-0.05009***	-0.09051***	-0.00454	0.04768**	0.00414	0.02482
	(0.03599)	(0.01690)	(0.02579)	(0.02271)	(0.02247)	(0.01863)	(0.01908)
Firm FE	Y	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y	Y
Observations	39893	39893	39893	39893	39893	39893	39893
<u>R²</u>	0.8870	0.6518	0.7999	0.2935	0.2780	0.4587	0.4496

Table A14: Robustness Analysis D – Excluding Acquired Firms with less than 5 employees

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching, excluding firms with less than 5 employees. Columns (1) - (3) provide the estimated for outcomes measured in log, while columns (4) - (7) are indicators of whether at least one instance of adding or dropping happened. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

		(1)		Tu diastan washinla (su				
		(log) of			Indicator v	ariable for		
	Employment	# Layer	# 3-dgt.	+3-dgt.	– 3-dgt.	Hiring	Firing	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
<=-4	-0.10074**	-0.01041	-0.04582	0.01027	0.01125	-0.01760	-0.04445**	
	(0.04265)	(0.02230)	(0.03117)	(0.02349)	(0.02405)	(0.02120)	(0.02120)	
-3	-0.07343**	-0.01330	-0.02607	0.04408	0.03511	0.00474	-0.02200	
	(0.03404)	(0.01960)	(0.02519)	(0.02818)	(0.02916)	(0.02533)	(0.02610)	
-2	-0.05514**	-0.01277	-0.02477	0.01276	0.02290	0.01530	-0.05032**	
	(0.02726)	(0.01682)	(0.02160)	(0.02687)	(0.02727)	(0.02303)	(0.02342)	
-1	0.00133	0.00702	-0.00398	0.02236	0.02880	0.02840	-0.01164	
	(0.02057)	(0.01285)	(0.01715)	(0.02478)	(0.02550)	(0.02293)	(0.02228)	
t = 0	-	-	-	-	-	-	-	
+1	0.03280*	0.00176	0.00470	0.09045***	0.10863***	0.06028***	0.04758**	
	(0.01696)	(0.01172)	(0.01560)	(0.02298)	(0.02254)	(0.02081)	(0.02116)	
+2	0.04441*	-0.00657	0.00935	0.08896***	0.08961***	0.03777*	0.04831**	
	(0.02416)	(0.01483)	(0.02025)	(0.02445)	(0.02481)	(0.02242)	(0.02259)	
+3	0.06445**	0.01629	0.02566	0.12647***	0.11107***	0.03933*	0.01807	
	(0.02922)	(0.01660)	(0.02317)	(0.02546)	(0.02654)	(0.02358)	(0.02371)	
>= +4	0.02442	-0.03457*	-0.05518**	0.05334**	0.08359***	0.02461	0.01641	
	(0.03812)	(0.01935)	(0.02735)	(0.02385)	(0.02399)	(0.02035)	(0.02023)	
Firm FE	Y	Y	Y	Y	Y	Y	Y	
Industry×year FE	Y	Y	Y	Y	Y	Y	Y	
Observations	36231	36231	36231	36231	36231	36231	36231	
R ²	0.8706	0.6899	0.7955	0.2919	0.2741	0.4497	0.4330	

Table A15: Robustness Analysis E – Single-Plant Firms Only

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching, excluding multiplant firms. Columns (1) - (3) provide the estimated for outcomes measured in log, while columns (4) - (7) are indicators of whether at least one instance of adding or dropping happened. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

		(log) of		Indicator variable for				
	Employment	# Layer	# 3-dgt.	+ 3-dgt.	- 3-dgt.	Hiring	Firing	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
<= -4	-0.12464***	-0.016689	-0.05756**	-0.00774	0.003357	-0.01935	-0.03841**	
	(0.039924)	(0.019431)	(0.028435)	(0.022355)	(0.023121)	(0.019268)	(0.0194)	
-3	-0.06687**	-0.0177	-0.01745	0.035119	0.048743*	0.013978	-0.00898	
	(0.02966)	(0.016641)	(0.022061)	(0.024734)	(0.025364)	(0.021378)	(0.022263)	
-2	-0.03464	-0.00272	-0.0083	0.003965	0.04351**	0.015586	-0.01783	
	(0.023803)	(0.014187)	(0.019209)	(0.023009)	(0.023438)	(0.019131)	(0.019654)	
-1	-0.00404	0.004182	-0.00398	0.021497	0.044379**	0.021119	-9.70E-06	
	(0.01927)	(0.011349)	(0.015761)	(0.021965)	(0.022295)	(0.019786)	(0.019086)	
t = 0	-	-	-	-	-	-	-	
+1	0.042498***	0.003303	0.012142	0.089927***	0.116944***	0.056047***	0.049464**	
	(0.014883)	(0.010122)	(0.014051)	(0.021639)	(0.020367)	(0.018194)	(0.018293)	
+2	0.060251**	-0.00524	0.003175	0.020395***	0.110572***	0.026032	0.049583**	
	(0.021252)	(0.0128)	(0.018076)	(0.022675)	(0.022079)	(0.019542)	(0.019621)	
+3	0.08175***	0.015318	0.01044	0.082794***	0.120151***	0.031206	0.02413	
	(0.026455)	(0.014172)	(0.02078)	(0.104089)	(0.023373)	(0.020146)	(0.020359)	
>= +4	0.049535	-0.04851**	-0.08534***	0.034451	0.08212***	0.031675	0.032747	
	(0.042202	(0.018145)	(0.027914)	(0.022945)	(0.022311)	(0.019896)	(0.020127)	
Firm FE	Y	Y	Y	Y	Y	Y	Y	
Industry×year FE	Y	Y	Y	Y	Y	Y	Y	
Observations	44,973	44,973	44,973	44,973	44,973	44,973	44,973	
\mathbb{R}^2	0.8951	0.6976	0.8204	0.3	0.2858	0.4802	0.4687	

Table A16: Robustness Analysis F – Sun and Abraham [2021] Estimator

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching. The estimation follows Sun and Abraham [2021], accounting for staggered treatment design. Columns (1) - (3) provide the estimated for outcomes measured in log, while columns (4) - (7) are indicators of whether at least one instance of adding or dropping happened. Occupational classification follows the ISCO-88 nomenclature. The event window is seven years, i.e the observed years are the year of the takeover, three years prior and three years after. The more distant years of 4 and more years from the event are binned together. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

A.1.5 A Closer Look at the Reorganization of the Workforce

	High-paying: added	High-paying: dropped	Low-paying: added	Low-paying: dropped
	(1)	(2)	(3)	(4)
<= -4	0.0075	-0.0010	-0.0003	0.0047
	(0.0252)	(0.0247)	(0.0242)	(0.0247)
-3	0.0348	0.0193	-0.0137	0.0175
	(0.0322)	(0.0314)	(0.0283)	(0.0291)
-2	0.0357	0.0474	-0.0357	0.0362
	(0.0277)	(0.0289)	(0.0255)	(0.0256)
-1	0.0369	0.0208	-0.0362	0.0235
	(0.0274)	(0.0279)	(0.0235)	(0.0237)
t = 0	-	-	-	-
+1	0.0630*	0.1360***	0.0579*	0.0586**
	(0.0257)	(0.0249)	(0.0225)	(0.0218)
+2	0.0714**	0.1034***	0.0194	0.0946***
	(0.0276)	(0.0268)	(0.0229)	(0.0249)
+3	0.1255***	0.1073***	0.0113	0.0645*
	(0.0288)	(0.0282)	(0.0251)	(0.0253)
>= +4	0.0526*	0.0927***	-0.0142	0.0639**
	(0.0256)	(0.0241)	(0.0231)	(0.0237)
Firm FE	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y
Observations	20,930	20,930	20,930	20,930
R-squared	0.338	0.341	0.451	0.449

Table A17: Mechanisms – Churning o	of high-paying vs.	low-paying occupations
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Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching. The classification into high- or low-paying jobs is based on the average wage of each 3-digit DISCO occupation in the first three observed years (2002-2004), across all individuals and firms. A median wage across all occupations is calculated. Occupations with the average wage above the median are classified as high-paying; occupations with the average wage below the median are classified as low-paying. Outcomes are dummy variables indicating whether at least one high-paying/low-paying occupation was dropped/added. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

	Laver 0: added	Laver 0: dropped	Lavers 1-3: added	Lavers 1-3: dropped
	(1)	(2)	(3)	(4)
<= -4	0.0037	-0.0004	-0.0043	0.0173
	(0.0254)	(0.0264)	(0.0265)	(0.0256)
-3	0.0459	0.0453	0.0043	0.0059
	(0.0299)	(0.0317)	(0.0333)	(0.0327)
-2	0.0294	0.0314	0.0074	0.0441
	(0.0283)	(0.0281)	(0.0292)	(0.0305)
-1	0.0098	0.0722**	0.0232	0.0137
	(0.0270)	(0.0263)	(0.0277)	(0.0280)
t = 0	-	-	-	-
+1	0.0911***	0.0874***	0.0637*	0.1568***
	(0.0248)	(0.0247)	(0.0268)	(0.0262)
+2	0.0526*	0.1058***	0.0655*	0.1156***
	(0.0263)	(0.0273)	(0.0286)	(0.0282)
+3	0.0647*	0.1387***	0.1141***	0.1308***
	(0.0279)	(0.0283)	(0.0294)	(0.0299)
>= +4	0.0110	0.0979***	0.0291	0.0801**
	(0.0240)	(0.0253)	(0.0261)	(0.0255)
Firm FE	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y
Observations	20,930	20,930	20,930	20,930
R-squared	0.334	0.329	0.294	0.274

Table A18: Mechanisms - Churning of occupations within layers (layer 0 vs. layers 1-3)

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching. Added and dropped occupations are calculated for each layer separately. Layer 0 includes occupations of workers; layers 1, 2, and 3 are grouped into one and contain supervisory and managerial occupations. Outcomes are dummy variables indicating whether at least one worker/managerial occupation was dropped/added. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

	L0: add	L0: drop	L1: add	L1: drop	L2: add	L2: drop	L3: add	L3: drop
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<= -4	0.0037	-0.0004	0.0098	-0.0051	0.0104	0.0300	-0.0306*	0.0141
	(0.0254)	(0.0264)	(0.0252)	(0.0243)	(0.0214)	(0.0200)	(0.0141)	(0.0117)
-3	0.0459	0.0453	-0.0164	0.0079	0.0569*	0.0461	0.0089	-0.0132
	(0.0299)	(0.0317)	(0.0311)	(0.0325)	(0.0279)	(0.0238)	(0.0191)	(0.0136)
-2	0.0294	0.0314	0.0271	0.0260	-0.0095	0.0618**	-0.0266	0.0020
	(0.0283)	(0.0281)	(0.0280)	(0.0283)	(0.0232)	(0.0235)	(0.0144)	(0.0137)
-1	0.0098	0.0722**	0.0423	-0.0066	-0.0032	0.0312	-0.0166	0.0135
	(0.0270)	(0.0263)	(0.0266)	(0.0267)	(0.0237)	(0.0218)	(0.0159)	(0.0132)
t = 0	-	-	-	-	-	-	-	-
+1	0.0911***	0.0874***	0.0473	0.0799**	0.0457*	0.0949***	0.0147	0.0583***
	(0.0248)	(0.0247)	(0.0249)	(0.0256)	(0.0231)	(0.0212)	(0.0166)	(0.0140)
+2	0.0526*	0.1058***	0.0477	0.0545*	0.0361	0.0920***	-0.0021	0.0382**
	(0.0263)	(0.0273)	(0.0268)	(0.0263)	(0.0237)	(0.0224)	(0.0151)	(0.0138)
+3	0.0647*	0.1387***	0.0497	0.0866**	0.0535*	0.0729***	0.0399*	0.0463***
	(0.0279)	(0.0283)	(0.0274)	(0.0275)	(0.0240)	(0.0217)	(0.0173)	(0.0137)
>= +4	0.0110	0.0979***	0.0063	0.0474*	0.0360	0.0845***	-0.0070	0.0352**
	(0.0240)	(0.0253)	(0.0237)	(0.0240)	(0.0207)	(0.0197)	(0.0132)	(0.0109)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	20,930	20,930	20,930	20,930	20,930	20,930	20,930	20,930
R-squared	0.334	0.329	0.269	0.247	0.215	0.198	0.129	0.135

Table A19: Mechanisms - Churning of occupations within each hierarchical layer

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching. Added and dropped occupations are calculated for each hierarchical layer separately. Layer 0 includes occupations of workers; layer 1 includes supervisors, level 2 incledes middle-management; layer 3 includes top management occupations. Outcomes are dummy variables indicating whether at least one occupation was dropped/added within each layer. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

	Moves up Moves down		Stays in the same layer		
	(1)	(2)	(3)		
<= -4	-0.1886	-0.3566	2.1568		
	(0.2097)	(0.2876)	(4.6992)		
-3	0.0945	-0.1837	1.3781		
	(0.2984)	(0.3395)	(2.3015)		
-2	0.2073	0.2363	1.0970		
	(0.1733)	(0.3561)	(1.7735)		
-1	0.1773	-0.1201	1.3684		
	(0.2303)	(0.3014)	(1.2028)		
t = 0	-	-	-		
+1	-0.0809	0.0028	0.0052		
	(0.1731)	(0.3182)	(1.1155)		
+2	0.7972	0.3539	4.1398		
	(0.4141)	(0.4848)	(2.5045)		
+3	0.1150	-0.2117	3.0759		
	(0.1949)	(0.3233)	(2.6789)		
>= +4	-0.0791	-0.4473	-3.8589		
	(0.2892)	(0.3949)	(3.4489)		
Firm FE	Y	Y	Y		
Industry×year FE	Y	Y	Y		
Observations	19,166	19,166	19,166		
R-squared	0.429	0.475	0.970		

Table A20: Mechanisms – Layer dynamic

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching. Outcomes indicate how many workers moved up, down, or stayed the same in the hierarchy from one year to another. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

A.1.5.1 Zooming into the Workforce Concentration

We investigate if the distribution of employment across occupations is affected by foreign acquisitions. Our previous results revealed that acquired firms add and drop occupations at the same time. However, beside this occupation churning, workers might become reallocated and concentrated towards some "important" tasks and occupations. This is crucial, as such specialization of the workforce might help to explain efficiency gains of firms following an acquisition.

To investigate this, we utilize measure of asymmetry applied to our setting. Specifically, we measure skewness of employment across occupations o within a firm i by the Theil index: $\delta_i^{-1} \sum_{oi} (l_{oi}/\bar{l}_i) \ln(l_{oi}/\bar{l}_i)$, where δ_i is the number of occupations, l_{oi} is the number of workers within occupation o, and \bar{l}_i is the mean employment across occupations. As an alternative, we only focus on the skewness among the group of workers (i.e., layer 0), apply the Herfindahl-Hirschman index, or look at the wage-bill distribution across occupations, instead of employment. Detailed regression results are shown in Appendix Table A21. We do not find any evidence that the reallocation of workers in acquired firms might lead to a concentration of employment in specific jobs relative non acquired firms, i.e., acquired firms do not reallocate their workforce towards certain tasks and occupations.

	Theil	Theil Theil (layer 0)		Theil wb	Theil wb (layer 0)	HHI wb
	(1)	(2)	(3)	(4)	(5)	(6)
<= -4	-0.0239	-0.0432*	0.0172	-0.0112	-0.0002	0.0217
	(0.0166)	(0.0174)	(0.0127)	(0.0153)	(0.0003)	(0.0123)
-3	0.0004	0.0037	-0.0021	0.0055	0.0001	-0.0007
	(0.0121)	(0.0129)	(0.0114)	(0.0122)	(0.0003)	(0.0110)
-2	0.0106	0.0050	0.0082	0.0117	0.0000	0.0076
	(0.0103)	(0.0107)	(0.0101)	(0.0105)	(0.0003)	(0.0099)
-1	0.0059	0.0080	0.0117	0.0037	-0.0003	0.0107
	(0.0085)	(0.0089)	(0.0083)	(0.0092)	(0.0003)	(0.0083)
t = 0	-	-	-	-	-	-
+1	0.0137*	0.0095	0.0025	0.0141	-0.0001	0.0014
	(0.0066)	(0.0084)	(0.0078)	(0.0073)	(0.0003)	(0.0076)
+2	0.0017	-0.0028	0.0063	0.0016	0.0002	0.0056
	(0.0098)	(0.0116)	(0.0093)	(0.0099)	(0.0003)	(0.0091)
+3	-0.0008	-0.0050	0.0063	-0.0032	-0.0000	0.0071
	(0.0123)	(0.0142)	(0.0103)	(0.0122)	(0.0003)	(0.0102)
>= +4	-0.0084	-0.0197	0.0314**	-0.0179	0.0003	0.0294**
	(0.0169)	(0.0188)	(0.0115)	(0.0165)	(0.0003)	(0.0113)
Firm FE	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y
Observations	20,930	18,582	20,930	20,930	18,582	20,930
R ²	0.803	0.798	0.676	0.777	0.648	0.689

Table A21: Mechanisms – Employment Concentration

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching. Theil (HHI) measures the skewness of employment across occupations by using the Theil (Herfindahl-Hirschman) index. In columns (4) to (6) measures are based on the skewness of the wagebill across occupations. Columns (1), (3), (4) and (6) look at all occupations within a firm, column (2) and (5) only focus on worker occupations within layer 0. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.

A.1.6 Foreign Acquisitions and Product Churning

Table A22 presents detailed regression results on how foreign acquisitions affect the product mix of imported and exported varieties, as discussed in Sub-section 5.2. Products are defined at the HS-6 digit level and harmonized over time. In columns (1) and (2) ((5) and (6)), the dependent variable is an indictor variables equal to 1, if a firm adds or drops an exported (imported) product from one year to the next respectively. In columns (2), (3), (7) and (8), we look at the number of added or dropped products.

	Add Exp	Drop Exp	# Add Exp	# Drop Exp	Add Imp	Drop Imp	# Add Imp	# Drop Imp
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<= -4	-0.02169	0.00452	0.01104	-0.48725	-0.02579*	-0.01394	0.08963	-0.14426
	(0.01470)	(0.01681)	(0.77242)	(0.63158)	(0.01547)	(0.01771)	(1.17481)	(0.62833)
-3	-0.02219	0.01517	1.55978	-0.18491	-0.00034	-0.01406	-0.24804	-0.66046
	(0.01945)	(0.02256)	(1.43682)	(0.61949)	(0.01530)	(0.01706)	(0.68728)	(1.20816)
-2	0.00052	0.01669	-0.73194	-0.00518	0.00197	-0.00658	-0.12790	-0.21135
	(0.01869)	(0.02102)	(0.89039)	(0.55045)	(0.01547)	(0.01747)	(0.70101)	(0.46925)
-1	-0.00279	0.01115	-0.28915	-0.36642	-0.01782	0.00467	-0.96182*	0.76998*
	(0.01564)	(0.01720)	(0.65295)	(0.55053)	(0.01557)	(0.01588)	(0.55337)	(0.46249)
t = 0	-	-	-	-	-	-	-	-
+1	-0.01969	0.01634	-0.44884	0.55973	-0.01195	-0.01407	0.64911	0.26979
	(0.01809)	(0.01913)	(0.55031)	(0.59735)	(0.01504)	(0.01542)	(0.73745)	(0.45016)
+2	-0.00767	0.01849	-0.55547	0.22259	-0.00451	-0.01218	0.06533	0.87591*
	(0.01559)	(0.01837)	(0.72817)	(0.59853)	(0.01474)	(0.01459)	(0.61280)	(0.48293)
+3	0.01560	0.00306	-0.14836	0.70483	-0.01825	0.00480	0.36002	1.26730**
	(0.01738)	(0.01889)	(0.87204)	(1.19161)	(0.01630)	(0.01556)	(0.71848)	(0.50806)
> = -4	-0.02124	0.01373	-0.25035	0.57458	0.00045	-0.00638	0.61859	1.43685**
	(0.01605)	(0.01748)	(0.84906)	(0.72783)	(0.01544)	(0.01426)	(0.78142)	(0.64380)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry×year FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	15198	15198	15198	15198	18558	18558	18558	18558
R-squared	0.3565	0.3500	0.6934	0.6980	0.3699	0.3609	0.6646	0.7322

Table A22: Foreign Acquisitions and Product Churning

Notes: The table reports means and standard errors (in parentheses) of the event study estimation, using the sample after 3:1 nearest neighbor propensity score matching. Products are defined at the HS-6 digit level and harmonized over time. In columns (1) and (2) ((5) and (6)), the dependent variable is an indictor variables equal to 1, if a firm adds or drops an exported (imported) product from one year to the next respectively. In columns (2), (3), (7) and (8), we look at the number of added or dropped products. Industry classification is based on two digit NACE rev. 2 classification. Standard errors in parentheses are clustered at the firm level. ***, **, * denote significance level at 1%, 5% and 10% respectively.