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Abstract

This paper explores the influence of experience in foreign-owned firms on worker mobility, with a focus on Swedish companies acquired by foreign multinationals. We posit that international experience, by imparting knowledge about foreign operations, enhances an employee's appeal to multinational enterprises (MNEs). By matching acquired firms with comparable control firms and utilizing a stacked difference-in-differences estimation methodology, we observe a significant impact of foreign acquisitions on job mobility. Our results indicate that foreign acquisitions raise the likelihood of a job switch to an MNE by approximately 4 percentage points, while concurrently decreasing the probability of a switch to a local firm by around 5 percentage points. Additional analyses reveal that the positive effect on mobility to MNEs is driven by learning opportunities stemming from increased trade linkages within multinational production networks and the implementation of advanced technologies subsequent to an acquisition. Furthermore, the post-acquisition wage growth rate is found to be significantly higher for workers transitioning to MNEs compared to those remaining at the acquired firms, suggesting a steeper wage growth trajectory for employees moving to MNEs.

Keywords: Multinational firms; Foreign acquisitions; Job mobility; International experience
JEL Codes: F16; F66; J60

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1 Introduction

The labor market is a dynamic and vibrant landscape, teeming with movement as workers navigate between firms. Job mobility serves as a critical catalyst for wage growth and higher lifetime earnings (Topel and Ward, 1992; Rubinstein and Weiss, 2006; Altonji, Smith, and Vidangos, 2013). Increased wages often accompany job transitions when workers move from low-productivity to high-productivity firms or from low-paying to high-paying firms (Haltiwanger, Hyatt, and McEntarfer, 2018; Abowd, McKinney, and Zhao, 2018; Moscarini and Postel-Vinay, 2018). Thus, for many workers, job mobility plays an essential role in the process of building a rewarding career.

In this paper we study job mobility following the event of a domestic firm acquired by a foreign multinational enterprise. Multinational enterprises (MNEs) play a dominating role in global production and trade. To carry out international business, MNEs heavily depend on employees who are skilled in areas like advanced technology, international logistics and supply chain management, foreign laws and regulations, and international marketing and finance. As a result, employees at MNEs have unique opportunities to acquire and hone their skills in these domains. Thus, we expect workers at the acquired firm to gain international skills after the acquisition. We explore how the newly gained international experience shapes the mobility path of workers and examine the wage implications of such mobility. We are especially interested in whether foreign acquisitions lead to more upward mobility i.e., moving toward more rewarding positions in other MNEs that place a high value on those skills.

Our paper departs from the vast literature that focuses on the effect of foreign acquisitions on employment and wages in the acquired firms, e.g., McGuckin and Nguyen (2001), Heyman, Sjöholm, and Gustavsson Tingvall (2007, 2011), Huttunen (2007), Lehto and Böckerman (2008), Bandick and Görg (2010), Ouimet and Zarutskie (2020), among others. To our knowledge, this paper is the first one that looks at the impact of foreign acquisitions on the career paths of workers. Our focus on job mobility following foreign acquisitions has important implications for foreign investment

policies. If foreign acquisitions lead to more upward mobility and higher wage growth, then policies that facilitate acquisitions can potentially bring broad benefits to the labor market.[1] Another broad benefit from foreign investment is technology spillovers from MNEs to other firms. And worker mobility has been viewed as an important channel for technology spillovers (e.g. Görg and Strobl, 2005; Balsvik, 2011; Poole, 2013). However, because worker mobility is treated as exogenous in those studies, it remains unclear whether technology spillovers stem from the knowledge and skills that workers have gained from working at MNEs, or simply because workers hired by MNEs are already more skilled. Our study can shed light on whether there is a causal effect of multinational experience on worker mobility.

Unraveling the causal effect of multinational employment on mobility is challenging. A primary complication arises from self-selection: more qualified workers tend to gravitate towards better firms, which often are MNEs. Thus, comparing workers already employed in MNEs with those at local firms might bias our results, overstating the influence of multinational experience on mobility. To deal with this endogeneity problem, we use foreign acquisitions as an internationalization shock and compare the mobility of workers at local firms that are eventually acquired by foreign investors and the mobility of workers at local firms that are never acquired. Our empirical investigation of job mobility hinges upon matched worker-firm data from Sweden, spanning from 1996 to 2015. Central to identifying the causal effect on mobility of working for a multinational firm are foreign acquisitions of Swedish local firms that took place between 1998 and 2013. These events offer a window into the dynamics of labor movement, allowing us to trace the trajectories of both firms and workers before and after an acquisition.

But, there's another layer of complexity: acquisitions are not random events. The choice of a firm for acquisition depends on various characteristics of the target firm. To control for the non-random feature of acquisitions and to deal with the selection problem, we employ propensity score

[1]We make this point explicitly in Davidson, Heyman, Matusz, Sjöholm, and Zhu (2020) where we develop a job ladder model in which globally engaged firms value workers with international experience since they have skills that help reduce trade costs. Globalization leads to more trade, making it easier for workers to gain international experience, and thereby move up the job ladder more quickly.

matching. This approach enables us to form a control group of Swedish local firms ("control firms") that closely mirrored the characteristics of the acquired firms ("treated firms") one year prior to the acquisition. We then follow the mobility of both the workers who were employed at treated firms in the year when an acquisition happened ("treated workers") and the workers at control firms ("control workers") over the same period. Because foreign acquisitions take place in different years, we utilize a stacked difference-in-differences method to estimate the effect of foreign acquisitions on job mobility. Specifically, we compare the mobility difference between treated and control workers both before and after acquisitions, taking into account firm and worker characteristics observed at the time of acquisition, along with year fixed effects and industry fixed effects. These controls account for the impact of firm and worker heterogeneity, business cycles, and industry-specific demand and supply shocks on mobility.

Our empirical analysis uncovers a rich set of new findings about worker mobility between firms. Our estimates indicate that compared with control workers, treated workers are more likely to transition to other MNEs after acquisition and less likely to move to local firms (i.e., Swedish owned firms with no foreign affiliates). We observe an approximate 4-percentage-point increase in mobility to other MNEs following an acquisition, implying that out of 100 treated workers, four more workers would move to other MNEs as a result of treatment. Importantly, we discern a temporal pattern in this mobility effect: the surge in mobility does not materialize until the third year after treatment and continues to rise until the sixth year when it stabilizes at 7 percentage points. This pattern suggests that employees at acquired firms need time to develop skills that enhance their mobility within the MNE landscape. We also find the effect to be particularly pronounced for movement to MNEs from the same source country as the acquiring firm. In contrast, our estimates reveal a negative impact of foreign acquisition on mobility to local firms, with a decrease of around 5 percentage points. Furthermore, our analysis reveals no significant impact of foreign acquisition on mobility to high-wage firms, suggesting that international experience does not universally enhance mobility to high-wage firms. Rather, the effect appears to be confined to MNEs, which place a

higher value on specific skills required by international business practices.

Therefore, we find that foreign acquisitions have a significant effect on the mobility path of treated workers and the mobility patterns reflect the impact of international experience accumulated by those workers. To further investigate the mechanisms through which foreign acquisitions affect job mobility, we exploit information on source countries of foreign acquirers and examine changes in firm-level trade flows and impacts of access to advanced technology and high-quality management practices. Foreign acquisitions can help integrate the acquired firms into multinational production networks and spur changes in trade, technology, and management practices. As acquired firms experience those post-acquisition changes, workers at acquired firms will have the opportunities to gain new skills, and the skills may be highly demanded by other multinationals and the most useful within specific multinational networks. This helps explain why compared with control workers, treated workers have higher mobility to other MNEs, and why the increase in mobility is the strongest for movement to MNEs from the same source country.

We have the following findings. First, compared with control firms, acquired firms see a significant increase in the total amount of imports (but not exports) and the share of trade with the source country of foreign investors after acquisitions, which provides direct evidence for the integration of acquired firms into multinational production networks of foreign acquirers. In addition, at the firms that see stronger trade linkages with the source country of foreign acquirers, workers tend to have higher mobility to other multinationals originating from the same source country. For instance, at firms acquired by German investors, there is a significant increase of trade shares with Germany after acquisition compared to control firms (5.3 percentage points) and a significant increase in mobility of workers to other German-owned MNEs after acquisition compared to control workers (9.1 percentage points). We also see both strong trade linkages among Nordic countries and high mobility among firms with owners from Nordic countries. The same patterns hold for the EU as a whole. These results suggest that workers at firms acquired by Nordic countries, Germany, or the EU countries as a whole may gain more market-specific international skills after acquisitions, thus

increasing the chance of moving to other multinationals with owners from the same source country (market) as that of the foreign acquirers.

Second, we find that mobility to MNEs is significantly higher for workers at firms acquired by high-tech countries, but there is no significant effect for workers at firms acquired by low-tech countries. The result suggests that workers may gain more skills at firms acquired by technologically advanced countries and thus have a better chance of moving to other MNEs. Third, we find that foreign acquisitions have significant positive effects on mobility to MNEs, no matter whether the source countries of foreign acquirers have high- or low-quality management practices. However, the positive effect is smaller for acquisitions by countries with high-quality management practices, indicating that workers at those acquired firms may have fewer incentives to move to other MNEs.

Overall, we find strong evidence for the impact of acquisitions on job mobility through trade and technology. When acquired firms increase the import of new intermediates and adopt new technologies, all types of workers may have the opportunity to gain new skills. On the other hand, occupations requiring a high level of skills, such as managerial and professional roles, typically involve more international operations - including global supply chains, logistics, and dealing with foreign legal systems - in comparison to lower-skilled occupations such as clerks and operators. Consequently, we expect that foreign acquisitions would have a more pronounced effect on job mobility to MNEs for these high-skilled occupations. Our findings confirm our expectation in that compared with control workers, treated workers in high-skilled occupations experience a larger increase in mobility to MNEs in all years following acquisitions, while treated workers in low-skilled occupations see a smaller increase in mobility to MNEs. However, movements to local firms by different occupations appear to be insignificantly different between treated workers and control workers.

As noted above, job mobility has important implications for wage growth and lifetime earnings. To address this issue, we study the wage growth of treated workers by comparing movers and stayers in the years before and after an acquisition, conditional on observed firm and worker characteristics

in the year of the acquisition and both year and industry fixed effects. Our findings indicate that pre-acquisition wage growth rates are similar for movers and stayers. However, a significant divergence appears post-acquisition: movers experience markedly higher wage growth than stayers. For example, compared with stayers, workers who moved to another MNE in the third year post-acquisition have a higher cumulative wage growth rate by about 9 percentage points, where the base year is one year prior to acquisition. This difference in wage growth increases steadily to 11 percentage points in the 9th year post-acquisition, which translates into a difference of 1 percentage point in the annualized wage growth rate. Further, we find a more modest post-acquisition wage growth premium for movers to local firms: compared with stayers, movers to local firms have a higher cumulative wage growth rate by around 6 percentage points in the 9th year after acquisitions, which implies a difference of a half percentage point in the annualized wage growth rate. Extra wage gains enjoyed by movers and the temporal pattern of post-acquisition wage growth provides further evidence that it takes time for workers to gain international skills and the newly gained skills not only lead to higher mobility to MNEs, but also contribute to higher wage growth after moving to other firms.

To summarize, our results suggest that foreign acquisitions provide unique opportunities for treated workers to gain international experience, making it easier for them, especially those in highly skilled occupations, to move to other MNEs and push them onto a steeper wage growth trajectory. The overall effect underscores the role foreign acquisitions play in shaping career trajectories and wage growth dynamics, particularly within the MNE context.

1.1 Literature

Our paper contributes to several strands of literature on globalization and labor markets. First, the literature on job mobility and job ladders reveals systematic patterns of worker movements between firms of different productivity levels and wage premiums and provides evidence for wage gains as workers move up the job ladder. Topel and Ward (1992) find that job change is a critical component

of workers' movement toward a stable employment relationship of mature careers. Wage gains at job changes account for at least a third of early-career wage growth. Abowd et al. (2018) show that working for high-paying firms leads to higher earnings and increases the probability of upward mobility. Haltiwanger, Hyatt, Kahn, and McEntarfer (2018) provide strong evidence of a firm wage ladder that is highly procyclical. Haltiwanger et al. (2018) find that even though more educated workers are more likely to work with more productive firms, job-to-job moves disproportionately reallocate less educated workers up the job ladder (from low-productivity to high-productivity). Our paper contributes to this strand of literature by looking at job ladders based on the global engagement of firms, specifically, worker movements from local firms to MNEs. Our study highlights the role of international experience in facilitating worker transition to more rewarding jobs within MNEs. On the other hand, we find no evidence for higher mobility from treated firms to high-wage firms, suggesting that the skills earned at foreign acquired firms are more valuable to other MNEs rather than to high-wage firms in general. Furthermore, we find that compared with workers who remained at acquired firms, movers enjoy extra wage gains post-acquisition, and the gains are larger for movers to MNEs and smaller for movers to local firms.

Second, the literature on human capital, job search, and wage dynamics shows that human capital accumulation and job search are two of the main driving forces of observed earnings/experience profile (e.g. Rubinstein and Weiss (2006), Altonji et al. (2013), and Bagger, Fontaine, Postel-Vinay, and Robin (2014)). In this literature work experience and tenure are often used to proxy the accumulation of specific human capital. One approach to testing the specific human capital model uses plant closure as an exogenous shock and examines (un)employment and wages dynamics of workers following plant closure (e.g. Ruhm, 1991; Jacobson, LaLonde, and Sullivan, 1993; Kletzer, 1998; Couch and Placzek, 2010). Our approach of studying the career paths of workers following foreign acquisition is a novelty of the paper. To identify the causal effect of foreign acquisition on mobility, we use a stacked difference-in-differences method, combined with propensity score matching. We find that human capital in the form of international skills that are accumulated at one's current

employer can have significant effects on future job mobility and subsequent wage growth. The revealed pattern of mobility also suggests that to some degree international skills are specific to certain markets, and thus most transferable to the firms that operate in similar markets. Thus, our paper contributes to this literature by uncovering the interplay of human capital and job mobility in shaping wage growth trajectories.

Third, our paper is related to Mion and Opromolla (2014), Mion, Opromolla, and Ottaviano (2022), and Mion, Opromolla, and Sforza (forthcoming). Mion et al. (2022) find that the experience-wage profile is much steeper in internationally active firms (importers, exporters, or multinationals) than in other firms, especially for managers as opposed to blue-collar workers. The higher lifetime wage income for managers stems from the stronger accumulation of experience gained from internationally active firms and from wage increases when switching to other firms. Mion and Opromolla (2014) and Mion et al. (forthcoming) show that export experience acquired by managers in previous firms leads to better export performance in their current firm and a higher wage premium for the manager. They also find that export knowledge is market specific. Our paper confirms these findings in that international experience is market specific and human capital is portable to other firms that operate in the same market. However, our work differs in that we are mainly interested in the role of international experience in shaping the career paths of workers. Our work exploits foreign acquisitions as an internationalization shock and addresses the causality of mobility using ownership changes. We also show that increased mobility after acquisitions plays an important role in steepening the wage growth trajectory for workers who have gained international experience at the acquired firms and later moved to other MNEs.

Lastly, our paper contributes to the literature on foreign acquisitions and labor market outcomes, where most papers study how employment and wages in the acquired firms are affected. For instance, Heyman et al. (2007, 2011) find that foreign takeovers of Swedish firms have a small effect on wages at the target firms. Using plant-level data for the entire US manufacturing sector for 1977-87, McGuckin and Nguyen (2001) find that ownership changes typically increase the number

of jobs and wages and improve the probability of plant survival. Lehto and Böckerman (2008) find negative employment effects of foreign acquisitions for Finnish manufacturing plants, but not in services. Using data on Swedish manufacturing plants, Bandick and Görg (2010) find positive employment growth effects for exporters in vertical takeovers. Ouimet and Zarutskie (2020) present evidence that high-value ("skilled") employees are relatively more likely to be retained following acquisitions with an objective of acquiring and retaining the target firm's employees. Differing from these papers, we are interested in the impact of foreign acquisitions on mobility and the subsequent impact on wage dynamics of workers who moved to other firms. Focusing on movers rather than stayers at the acquired firms sheds new light on the effect of acquisitions on labor market outcomes.

The rest of the paper is organized as follows. Section 2 describes our data and empirical strategy. Section 3 presents empirical results on the effect of acquisition on worker mobility. Section 4 explores the mechanisms of mobility. Section 5 studies the implications for wage growth. Section 6 concludes.

2 Data and empirical strategy

As previously mentioned, our empirical analysis examines how experience from working at a foreign owned firm affects job mobility. Our main concern is a selection effect: workers employed by a foreign multinational firm could differ from workers employed by Swedish local firms. A simple comparison of mobility differences between workers in foreign multinationals and Swedish local firms would lead to biased estimates. We address this possible selection bias by looking at workers who are initially employed in Swedish local firms but where some of them experience an internationalization shock when their firm gets acquired by a foreign owner. That is, we study the impact on job mobility of ownership changes due to foreign acquisitions. Our sample of workers is created in two steps. Firstly, we match acquired firms with similar non-acquired firms. Secondly, we compare all workers employed in the acquired firm at the time of acquisition (treated workers) with all workers employed at the same time in the control firms (control workers). We use our sample of treated and control

workers to examine the effect of foreign acquisitions by applying a stacked difference-in-differences model. A more detailed description of our approach follows below.

2.1 Data

We use two Swedish data sets covering the period 1996-2015 provided by Statistics Sweden. The first is the Swedish firm database containing detailed information on all Swedish private sector firms, including information on foreign and domestic ownership, which we use to identify foreign acquisitions of Swedish firms. The second data set includes detailed information on all Swedish individuals at the age 16 or above, from the Longitudinal Integration Database for Health Insurance and Labor Market Studies (LISA). LISA combines information from different register databases such as tax records and population registers, and includes information on age, gender, education, labor market participation, and wages. For individuals not in the labor force, we know if they are, for instance, in school, unemployed, on sick-leave, taking early retirement, or on maternity leave. Since LISA covers the universe of individuals in Sweden, a person exits our data only by emigration or dying. Unique identification codes allow us to link firms and workers and to follow both over time. We utilize this feature of the data to examine changes in firm ownership and job mobility.

We use acquisitions between 1998 and 2013 to allow us to follow firms and workers at least two years before and after the acquisitions took place. This leaves us with 2,681 acquisitions between 1998 and 2013. Figure 1 shows the distribution of acquisitions over time. The yearly number of foreign acquisitions of domestic firms ranges from 91 in 2013 to 362 in 2001. The number of acquisitions is relatively stable over time with the exception of the dot-com boom in 2000 and 2001. Appendix Table A1 shows the top ten source countries that have the largest number of acquisitions and the largest number of employment in the acquired firms. Norway is the largest source country based on the number of acquisitions, whereas the U.S. is the largest source country in terms of employment.

We restrict our sample to firms that only experience one foreign acquisition and exclude all firms

that go from, for instance, Swedish to foreign ownership and then back to Swedish. Moreover, we include all workers aged 22-62 at the time of acquisitions in our regressions, which means that we can follow them a few years before and after this change of ownership. In the following analysis, we compare workers in firms acquired by foreign owners with workers in firms remaining Swedish owned.

2.2 Empirical model

We use our groups of treated and control firms to deal with selection issues. Treated firms are local firms, i.e. Swedish owned firms without affiliates abroad, that were acquired by foreign multinationals. Control firms are local firms that had similar characteristics to their matched treated firms prior to acquisitions. More details about how we construct the group of control firms are given in the next section. Because foreign acquisitions took place in different years, we use a stacked difference-in-differences model (DiD) where the mobility of workers in the years before and after an acquisition is compared to the mobility of workers in our control firms over the same period.

Specifically, we estimate the following equation for outcome Y of worker i at event time j and in calendar year t:

$$Y_{ijt} = b_0 AFTER_j + b_1 TREATED_i + b_2 DiD_{ij} + X_i + X_{f(i)} + \omega_t + \phi_{s(i)} + \varepsilon_{ijt}, \qquad (1)$$

where the event time j tracks the lags and leads relative to treatment, with $j = 0$ indicating the year of acquisition. We measure mobility as a binary variable, Y_{ijt}, which takes the value one if the worker is moving to another firm and zero otherwise. To examine the pattern of mobility, we run separate regressions where mobility is to MNEs or to local firms. $AFTER_j$ takes the value one in the year of acquisition and all years after, which accounts for conditions that can change over time for every worker, whether treated or not. $TREATED_i$ takes the value one for workers who are employed by firms that are acquired at some point, which accounts for the fixed

differences between workers at the acquired firms and those at the control firms. DiD_{ij} (i.e., $AFTER_j \times TREATED_i$) is our variable of main interest and it takes the value one for treated workers in the year of an acquisition and all subsequent years. That is, it indicates workers at treated firms for the period when the acquisition would matter for mobility. Its coefficient b_2 is the estimate of the causal effect of acquisitions on the mobility of treated workers, which contrasts the post-minus-pre-acquisition change of mobility between treated and control workers. X_i and $X_{f(i)}$ are observable individual- and firm characteristics that may affect mobility, measured at the year of acquisition. Individual characteristics include gender, experience, experience squared, and years of schooling. Firm characteristics include log employment, the share of skilled workers, and capital intensity. ω_t are year fixed effects to control for business cycles and other macroeconomic factors that may affect mobility for all firms. $\phi_{s(i)}$ are industry fixed effects to control for industry-specific shocks that may affect mobility for all firms within an industry. All other factors that may affect worker mobility are captured in the error term ε_{ijt}.

We also estimate an event study version of (1) to examine the dynamic effects of foreign acquisitions on mobility:

$$Y_{ijt} = \Sigma_{j=-4}^{9}\beta_j^0 T_j + b_1 TREATED_i + \Sigma_{j=-4}^{9}\beta_j (T_j \times TREATED_i) + X_i + X_{f(i)} + \omega_t + \phi_{s(i)} + \varepsilon_{ijt}, \quad (2)$$

where T_j are event time fixed effects that capture the over-time change of mobility by all workers, $TREATED_i$ and other explanatory variables are defined as above, and ε_{ijt} is the error term. Our main interest is in the coefficient β_j for the interaction between T_j and $TREATED_i$, which indicates the effect of acquisitions on the mobility of treated workers at event time j. In our estimations, one year before acquisitions ($j = -1$) is omitted as a reference year, and observations for the year of acquisitions are dropped because all variables are fixed (standardized) at the time of acquisitions and we cannot define movers or stayers at that time. We examine the effect of acquisitions on mobility by comparing β_j up to nine years after acquisitions with the years before acquisitions. In addition, because interclass correlations between workers can result in too small standard errors

(Moulton, 1986), we cluster our standard errors at the firm and year level in all estimations.

The DiD estimations examine the causal effect of foreign acquisitions on job mobility under two assumptions: the parallel trends assumption and the stable unit value treatment assumption. The parallel trends assumption requires that workers in treated and control firms have parallel trends in job mobility in the absence of foreign acquisitions. Past shocks (before acquisitions) should have affected treated and control workers in the same way. Failing to account for shocks that affect the two groups of workers differently can bias our estimates. However, counterfactual outcomes, what would have happened with job mobility in the absence of an acquisition, are not observable. Thus, we follow the usual practice and examine the trend in job mobility before acquisitions. Our DiD estimations are unbiased if the parallel trends assumption is not violated. Note that the parallel trends assumption is considerably weaker than assuming random treatment, i.e. that foreign acquisitions of Swedish firms are random.

We want to select control firms as similar as possible to the treated firms, which makes it tempting to choose firms from the same industry and/or region. However, the stable unit value treatment assumption (SUTVA) requires that workers in control firms are not affected by acquisitions of treated firms. Such an effect could be present if, for instance, the control and treated firms are close competitors in small markets with few firms. Then, a foreign acquisition might improve the performance of the treated firms and force control firms to make changes, including changes to the workforce. To satisfy SUTVA, our set of control firms are selected from the population of Swedish firms and are not restricted to firms within the same region or industry as the treated ones, which implies that it is highly unlikely that acquisitions of treated firms affect workers in control firms (Olsson and Tåg, 2018).

We note that in our setting treatment (an acquisition) happens in different years. It is plausible that treatments are heterogeneous over time; for instance, the effect of acquisitions on mobility might depend on business cycles. Moreover, using workers who later work in firms that are treated as control units is another issue that requires special attention (e.g. Callaway and Sant'Anna, 2021;

De Chaisemartin and d'Haultfoeuille, 2020; Goodman-Bacon, 2021; Sun and Abraham, 2021). To deal with staggered treatments, we use a stacked difference-in-differences model combined with matching, as recommended in the recent literature (Baker et al., 2022; Roth et al., 2023). This approach has the advantage in avoiding biases that can appear in two-way fixed effects (TWFE) models. Specifically, the key assumption in a DiD analysis is that, in the absence of treatment, the treatment and control groups would have followed parallel paths. With staggered treatments, this assumption becomes more complex because it has to hold for every possible timing of the treatment. Fixed effects cannot control for this more complicated form of non-parallel trends.

Moreover, fixed effects models in a staggered DiD context tend to average treatment effects over different time periods and groups. However, if the treatment effect varies over time or across units (which is often the case in staggered treatments), this averaging can lead to biased estimates.[2] Essentially, the model incorrectly attributes some of the variation in outcomes to the fixed effects, rather than to the treatment itself. Finally, recent research, notably by Goodman-Bacon (2021), shows that when applying two-way fixed effects in staggered DiD models, some comparisons end up with negative weights in the estimation. These negative weights can lead to counter-intuitive and misleading results.

Thus, we follow the recent literature e.g., Baker, Larcker, and Wang (2022) and control for such heterogeneity bias by taking the following steps. Firstly, we use a stacked regression design to reduce the biases due to heterogeneous treatment effect (Cengiz, Dube, Lindner, and Zipperer, 2019). We start by normalising the time of acquisitions to $j = 0$ which is equivalent to a setting where all acquisitions happen at the same time. We then follow the workers present at $j = 0$ in treatment and control firms. Moreover, we exclude firms from the control group if they are later treated, which could otherwise lead to biased estimates.

[2]For example, Goodman-Bacon (2021) shows that the estimate of a TWFE model is a weighted average of all possible 2x2 DiD-estimates created by the staggered timing of treatment. If treatment effects vary over time, comparing later treated with early treated can produce biased estimates. The reason is that the weights of each of the 2x2 DiD-estimates depend on the sample size of each subsample, so treated towards the middle of the event window will have more weight than units treated earlier or later.

Baker et al. (2022, p. 40) and Roth, Saint' Anna, Bilinski, and Poe (2023) also show that estimates can be largely affected by, again, the inclusion of fixed effects and by control variables. They, therefore, argue that fixed effects are excluded and that results both with and without control variables should be provided to give a better understanding of what is driving the results, a recommendation that we follow in our analysis below.

2.3 Constructing the control group

As stated earlier, the process by which firms are targeted for acquisition is not random. To address this inherent selection bias, we deploy a propensity score matching method to establish a control group composed of local firms, Swedish owned firms without affiliates abroad, that parallel the acquired firms' characteristics one year prior to acquisitions. Specifically, we construct the control group through a one-to-one matching process, done without replacement. Thus, each control firm uniquely corresponds to one treated firm, ensuring an equal number of firms in both the control and treated groups within the same year. The matching process is conducted by employing the nearest neighborhood algorithm. Hence, control firms are selected so that their characteristics are similar to the treated firms one year before the acquisition event.[3] To maintain the integrity of the control group, we exclude any firms that are acquired in subsequent years.

We use a linear probability model to conduct our matching where the dependent variable takes the value one if a firm is acquired in year t and zero if it is not acquired:

$$acquisition_{ft} = \lambda_1 X_{f,t-1} + \lambda_2 X_{f,t-2} + \lambda_3 X_{f\Delta t-1} + \delta_{s(f)} + \theta_t + \mu_{ft}, \tag{3}$$

where $X_{f,t-1}$ and $X_{f,t-2}$ are vectors of firm characteristics at $t-1$ and $t-2$ that could affect the probability of an acquisition. We include eight different firm characteristics, including profits, sales, value added, the share of low-skilled workers (i.e., those with at most 9 years of compulsory school-

[3]For example, we start with all firms treated in 1998 and find control firms that match their 1997 characteristics. Then we look at all firms treated in 1999 and find control firms that match their 1998 characteristics, and so on. We also make sure that the firms that serve as control firms in say 1998 do not end up as control firms in say 1999.

ing), the share of high-skilled workers (i.e., those with at least undergraduate college education), capital per employee, profit over sales, log firm size (i.e., log employment), as explanatory variables, and also include the changes in the same variables for the two years before the acquisition (vector $X_{f\Delta t-1} = X_{f,t} - X_{f,t-1}$). Finally, we also include industry fixed effects $\delta_{s(f)}$ and year fixed effects θ_t. μ_{ft} is the error term.

The results for our matching are shown in Figure 2 regarding the difference in various variables between treated and control firms, both in the matched sample of firms and in the unmatched sample. A value close to zero means a very small difference while high values indicate large differences. Because acquired (treated) firms tend to be larger with high sales, a skilled labor force, and high productivity in comparison to non-acquired firms, we observe relatively large differences in the unmatched sample. In contrast, matching reduces the difference between acquired and non-acquired firms significantly. Further evidence for the quality of our matching is provided in Table 1 which shows summary statistics on pre-acquisition firm characteristics for the matched sample over the whole period 1998-2013. Again, matching substantially reduces any differences between acquired and non-acquired firms and there are no statistically significant differences in firm characteristics left, with the exceptions of the one-year difference in sales and the share of low-skilled workers. We have also compared worker characteristics between treated and control firms one year before the acquisitions. We find very little difference in age, gender, education, and experience between workers in treated and control firms.[4] To sum up, our matching successfully removes differences in observable firm characteristics between acquired and non-acquired firms prior to acquisitions.

2.4 Descriptive statistics on job mobility and wage growth

Now we present descriptive statistics about job mobility and wage growth for all the workers who are employed at the treated or control firms in the year of acquisition (event time $j = 0$). Figure

[4]The share of women, age, education level, and years of experience are 0.38, 39.02, 3.62, and 20.44, respectively, in treated firms, and are 0.36, 39.30, 3.90, and 20.32, respectively, in control firms. The schooling variable at the worker level ranges from 1 (if the highest level of education is elementary school) to 7 (if the highest level of education is doctoral degree).

3 displays the share of those workers who are employed in the same firm up to five years before the takeover and remaining in the same firm up to five years after the takeover. We see that the magnitude of mobility is notably similar between workers from treated and control firms, and the overall mobility of workers is high. For instance, around 75 percent of the workers in the year of a takeover worked in the same firm one year before ($j = -1$). Five years before the takeover, the figure was only around 25 percent. Similarly, around 77 percent of those workers remained in the same firm after one year and only 35 percent after five years.[5]

Although the overall magnitude of mobility is similar between workers from treated and control firms, the pattern of mobility in terms of destination firm types differs substantially between them. Table 2 looks at the cumulative share of workers who leave for MNEs or for local firms after an acquisition, where all the workers are employed at a treated or control firm in the year of the acquisition. Columns 1-2 show that 4.7 percent of workers in treated firms and 3.7 percent of workers in control firms have moved to an MNE one year after the acquisition ($j = 1$). The cumulative share in treated and control firms increases to 14.2 and 11.8 percent, respectively, up to five years after the acquisition ($j = 5$). Looking at movers to local firms in columns 3 and 4, we see that the cumulative shares up to five years after the acquisition are 19.7 and 21.7 percent, respectively, for workers from treated and control firms who have moved between the first and the fifth years after the acquisition.[6] Columns 5-6 report the number of movers to MNEs relative to the number of movers to local firms, respectively, from treated and control firms. This ratio is about 3:4 for workers from treated firms and 1:2 for workers from control firms up to three or five years post-acquisition. The difference in the ratio between workers at treated vs. control firms ranges from 18 to 30 percentage points. Thus, we find a clear difference in the pattern of transition where a relatively high share of workers from treated firms move to MNEs. In the following analysis, we will present further evidence for this pattern and argue that this difference stems from the

[5] We also calculated the hiring and separation rates. Again, the figures are similar in treated and control firms.

[6] More workers who change employers end up in local firms, which is not surprising considering that this is the largest group of firms.

accumulation of international skills by workers at treated firms after foreign acquisitions.

We also note that foreign acquisitions could bring a new owner who forces workers to move in order to achieve higher efficiency. This would of course be a very different cause of mobility than the learning-based one we have proposed. We find some comfort in Figure 3, which reveals a very similar magnitude of mobility between workers from treated and control firms, implying that in our sample foreign takeovers do not appear to induce more layoffs at treated firms. This aligns well with the observation previously made that foreign acquisitions tend to target better-performing Swedish local firms (i.e., firms with high sales, a skilled labor force, and high productivity), thus reducing the need for downsizing.[7]

Table 3 takes this issue one step further by looking at wage growth separately for stayers, movers to MNEs, and movers to local firms where all the workers are employed at a treated or control firm in the year of acquisition and all wages are relative to the year of acquisition. The figures for movers up to event time $j = 5$ include all workers who have moved between the first and fifth years after an acquisition. Table 3 shows that stayers at treated firms enjoy a 16 percent increase in wages over a five-year period, compared with a six percent increase in control firms over the same period. More importantly, the wage increase is highest for treated workers moving to MNEs, which suggests that workers leaving a firm after an acquisition are not pushed out but rather attracted by higher wages at other MNEs, presumably due to the experience gained from working in an acquired firm.

In sum, the above descriptive statistics suggest that treated workers have higher mobility to MNEs compared with control workers and that treated workers who move to another MNE after acquisitions have the highest wage growth after they move.

[7]The literature that studies the effect of foreign acquisitions on employment has little consensus regarding their effects. For instance, see Lehto and Böckerman (2008), Bandick and Görg (2010) and McGuckin and Nguyen (2001).

3 The effect of acquisitions on job mobility

In this section, we investigate whether the higher mobility to MNEs by treated workers is caused by foreign acquisitions. To this end, we estimate equations (1) and (2) and present the baseline estimates of the effect of acquisitions on job mobility. We then study the robustness of the baseline estimates. Our further investigation examines mobility to MNEs from different source countries.

3.1 The baseline estimates

Table 4 presents the difference-in-difference estimates of equation (1). The estimated coefficient for DiD measures the average treatment effect, which is the mobility difference between workers in treated and control firms for the entire post-acquisition period, compared with the difference for the entire pre-acquisition period. Columns 1 and 2 examine the average effect of treatment (foreign acquisitions) on workers' mobility to MNEs, and columns 3 and 4 to local firms. We include estimations both with and without firm- and worker characteristics. It is clear that the estimated treatment effect remains unchanged with controls for firm- and worker characteristics.

Foreign acquisitions increase the likelihood of moving to another MNE by around 4 percentage points, which implies that out of 100 treated workers, 4 more workers would move to MNEs due to the treatment. In contrast, there is a large negative effect of acquisitions on the likelihood of moving to local firms. More precisely, workers in firms that are acquired by foreign owners are around 5 percentage points less likely to move to a local firm, compared with workers who work in Swedish local firms which are never foreign acquired.

Looking at the control variables, we see that females are less likely than males to move to other firms, which holds for both transitions to MNEs and to local firms. Experience is measured as the time since finishing the highest level of education and is therefore highly correlated with age. The coefficients on Experience suggest that older experienced workers are less likely to move to other firms. Highly educated workers (with more years of schooling) are more likely to move to

MNEs and less likely to move to local firms, but the point estimates are small. Finally, the firm characteristics suggest that workers in large and skill-intensive firms are more likely to move to MNEs and less likely to move to local firms.

In Figure 4 we look at the dynamic effect of foreign acquisitions on mobility to MNEs (panel A) and to local firms (panel B). This figure shows the stacked difference-in-differences estimates of β_j's using equation (2), relative to one year prior to foreign acquisitions, and with 95% confidence intervals. Panel A displays that the point estimates in the pre-treatment period are not statistically different from zero, implying that the treatment and control groups have a similar trend over the four years before foreign acquisitions occur. In addition, the first two years after acquisitions do not see any significant treatment effect. Interestingly, the effect of acquisitions on mobility starts to increase in the third year and continues to rise until the sixth year when it stabilizes at 7 percentage points, suggesting that treated workers are 7 percentage points more likely than control workers to move to an MNE in the sixth year post-acquisition, compared with the mobility difference between treated and control workers in the first year pre-acquisition. Figure 4, hence, reveals that foreign acquisitions raise mobility to MNEs three years after acquisitions, which supports the hypothesis that it takes time before a worker has gained valuable skills from working in a foreign MNE, skills that increase mobility to other MNEs.

The treatment effect on mobility to local firms is seen in panel B. As above, the pre-treatment estimates are close to zero, suggesting that the parallel trends assumption holds. However, sharply differing from panel A, there is an immediate and negative effect of acquisitions on mobility already in year one when workers in treated firms are around 3 percentage points less likely than workers in control firms to move to a local firm, compared with the mobility difference in the first year pre-acquisition. The negative effect becomes stronger and varies between 5 to 7 percentage points in the following years. However, standard deviations are large and some of the point estimates are statistically insignificant.

We also divide the dynamic effect of acquisitions into six periods. The pre-acquisition periods

include years 3-4 (pre-medium-run) and years 1-2 (pre-short-run) before an acquisition. The post-acquisition periods include years 1-2 (short-run), years 3-4 (medium-run), years 5-6 (long-run), and years 7-9 (longest-run) after an acquisition. In the regressions, the pre-short-run period is omitted as years of comparison. As shown in Appendix Table A2, the treatment effect is very small and statistically insignificant in the short run, but increases to around 5% in the medium run and 7% in the long run, and reaches 8% in the longest run. These estimates confirm the pattern displayed in Figure 4, panel A, suggesting that it takes time for workers to gain international skills, and the effect of acquisitions becomes stronger after workers have gained sufficient experience. In contrast, the effect is negative for movements to local firms. More importantly, the effect is about the same in the short run as in the long run, which is consistent with the idea that movement to local firms is less likely to be driven by international skills accumulated after acquisitions.

3.2 Robustness of the baseline estimates

We continue our analysis with several alternative specifications to examine the robustness of our baseline results. The previous estimations examined the effect of acquisitions on job mobility in the period four years before acquisitions and nine years after. In Appendix Table A3 we have experimented with re-estimating equation (1) using different time periods. For comparison, column 1 lists the baseline estimates from Table 4, columns 2 and 4. The other columns show the results when we have a shorter pre-acquisition period (starting from two or three years before an acquisition) and/or a shorter post-acquisition period (ending with six years after an acquisition). The results are robust: foreign acquisitions increase job mobility to MNEs and decrease job mobility to local firms. The effect on mobility to MNEs remains similar in size to the previously shown results: treatment increases job mobility to MNEs by 3.3-4.7 percentage points. In contrast, foreign acquisitions decrease mobility to local firms by 5.1-6.1 percentage points in the different specifications. Finally, we have also estimated the above various specifications with our event study approach. The results as shown in Appendix Figures A1 and A2 confirm the patterns in Appendix Table A3.

Importantly, those figures also show that the pre-treatment estimates are insignificantly different from zero, and thus the parallel trends assumption likely holds.

We also imposed different restrictions on our sample of workers as another robustness test. Adding restrictions that workers are not allowed to move between control firms or between treated firms gave similar results: foreign acquisitions have a positive effect on mobility to MNEs and the estimated effect is very similar to the ones found above.

The analysis above shows that workers in treated firms are more likely to move to other MNEs. We have argued that this is because MNEs have similar demand for worker skills. An alternative hypothesis would be that workers in treated firms have the ability to move to good firms with high wages, irrespective of these firms' international engagement. Hence, large mobility to MNEs would then be explained by MNEs being good firms that pay relatively high wages. We examine this issue in Appendix Table A4 where destination firms are divided. More specifically, we examine mobility to the ten percent of firms with the highest wages (column 1), to the 20 percent with the highest wages (column 2), and to the 33 percent with the highest wages (column 3). The results show no statistically significant effect of treatment on mobility to high-wage firms. That is, the difference in mobility to high-wage firms between treated and control workers does not change significantly after acquisitions. Hence, we conclude that foreign acquisitions do not increase mobility to good firms in general (i.e., high-paying local firms or MNEs); instead, the effect is restricted to mobility to MNEs that are interested in hiring workers with international experience due to their needs for specific skills.

Finally, we investigate whether our baseline results still hold when unit fixed effects are included. Because our analysis is at the worker level, the unit should be workers. We find that the results are little changed when worker fixed effects are included. See Appendix Table A5, where columns 1 and 4 include worker and firm characteristics measured at the year of acquisition (baseline estimates carried over from Table 4, columns 2 and 4), and columns 2 and 5 include worker fixed effects. We also ran regressions with firm fixed effects included. The results are shown in columns 3 and 6.

We can see that the results with firm fixed effects are also consistent with earlier results, although there is a larger change in the magnitude of the treatment effect. However, for our worker-level analysis, we find it less straightforward to interpret the results with firm fixed effects because we are analyzing job mobility and want to allow workers to switch between firms. More importantly, as discussed above, fixed effects in a stacked DiD model can potentially generate biased estimates.

3.3 The mobility effect by source countries

In the above analysis, worker movements to MNEs include mobility to both foreign and Swedish MNEs. We note that Swedish MNEs and foreign multinationals in Sweden may differ in their demand for specific skills. It is possible that the skills gained by workers at firms acquired by foreign owners would be more valuable to other foreign MNEs. If the effect of foreign acquisitions on mobility to MNEs we observed above is driven by skills gained by treated workers, we would expect a stronger positive effect on mobility to foreign MNEs.

Hence, we start by looking at the effect on mobility to Swedish and to foreign MNEs separately. In panel A of Table 5, we re-estimate equation (1) where the dependent variable is a binary variable that takes the value one if the worker is moving to a foreign MNE, and zero otherwise. The table reports the estimated coefficient on DiD, which captures the treatment effect. Similarly, in panel B we re-estimate equation (1) where the dependent variable is a binary variable that takes the value one if the worker is moving to a Swedish MNE, and zero otherwise. As seen from Table 5, treatment increases mobility to foreign MNEs but not to Swedish MNEs. More specifically, column 1 in panel A shows a positive and statistically significant effect on mobility to foreign MNEs, while column 1 in panel B reports a weakly negative effect on mobility to Swedish MNEs. It is possible that foreign MNEs in Sweden might be larger and attract more workers. To account for this possibility, in columns 2 and 3 we look at larger destination firms with above 500 and above 1000 employees, respectively. The results confirm that foreign acquisitions increase mobility to foreign MNEs, but have no, or even a negative, effect on mobility to Swedish MNEs, implying that higher mobility to

foreign MNEs is not due to their larger firm size.

To explore further, in Table 6 we study the impact of foreign acquisitions on mobility separately by source countries of foreign investors. Top investors - ranked by the number of acquisitions - come from Norway, Denmark, the US, the UK, Germany, Finland, and France. We also look at source-country groups: EU-15 countries, Nordic countries (excluding Sweden), tax havens (the Netherlands, Luxembourg, and Switzerland), and English-speaking countries (including the UK, the US, Ireland, Australia and New Zealand). The table reports the estimated coefficient on DiD from equation (1) where the regressions are run separately by source countries. Panel A shows that there tends to be a significantly positive effect of foreign acquisitions on mobility to other MNEs. For example, panel A, column 1 shows that foreign acquisitions by Norway raise the mobility of treated workers to other MNEs by about 10 percentage points. However, there are also exceptions, including Denmark, Germany, Finland, and France.

In panel B we look at mobility to foreign MNEs separately (excluding mobility to Swedish MNEs). The estimated coefficients are not significantly different from those in panel A for most source countries, implying that higher mobility to MNEs largely reflects higher mobility to foreign MNEs and thus confirming the pattern revealed in Table 5.

In panel C we study the movement to foreign MNEs with owners from the same source country as that of foreign acquirers. We find that in all cases the treatment effect is significantly positive on mobility to foreign MNEs from the same source country. Notably, foreign acquisitions by Germany have a strong positive effect on mobility to other German multinationals, enlarging the mobility gap between treated and control workers by 9 percentage points after acquisitions, compared with the difference before acquisitions. Similarly, although foreign acquisitions by Denmark, Finland, and France have no significantly positive effects on mobility to MNEs in general (see panel A), they significantly increase the mobility to other MNEs from the same source country.

Table 7 provides additional evidence for worker movement by source countries of foreign investors separately. In this table, we also separate destination firms based on their country of

ownership. To save space, we only report results for acquisitions by the top four foreign investors. Panel A shows that foreign acquisitions by Norway have positive effects on mobility to MNEs with foreign owners from Denmark or Nordic countries as a group (excluding Sweden), EU-15 countries, and tax havens. However, the largest positive effect is seen for movement to other Norwegian MNEs. A similar pattern is displayed by panel B for foreign acquisitions by Denmark. Panel C shows that foreign acquisitions by the USA have positive effects on mobility to MNEs with foreign owners from most countries. However, the magnitude of the effect is much larger for movement to other US-owned MNEs and to MNEs from English-speaking countries as a group. Panel D shows that foreign acquisitions by the UK have strong positive effects on mobility to firms with owners from the UK (home country), the EU-15 area, Nordic countries, tax havens, the US, and English-speaking countries as a group.

We have also estimated the dynamic effect on mobility by country of ownership for acquired firms and destination firms. To save space, in Figure 5 we report the results for two representative countries: Norway and the USA. All the figures show an insignificant pre-acquisition effect and a significantly positive effect on mobility to the same source country after acquisitions. In the case of Norway, the effect on mobility to other Norwegian firms steadily increases and peaks in the fourth year at 15 percentage points. In the case of the USA, the effect on mobility to other US firms starts to be significantly positive in the fourth year after acquisitions and remains stable at slightly above 10 percentage points. On the other hand, we find no significant effects on mobility to other MNEs with owners different from the source country.

Overall, Tables 6-7 and Figure 5 suggest that compared with control workers, workers at acquired firms are significantly more likely to move to foreign MNEs and MNEs with foreign owners from the same source country in particular.

4 Mechanisms

In the above, we provided strong evidence for the positive effect of foreign acquisitions on upward mobility. We argued that the higher mobility to other MNEs is likely driven by international skills accumulated at the acquired firms and that those new skills increase the appeal of treated workers to other MNEs that demand similar skills. In this section, we explore the channels through which workers may gain international skills after acquisitions.

Existing studies have documented important firm-level changes following acquisitions, including the reorganization of firm operations (Bastos, Monteiro, and Straume, 2018), adoption of advanced technologies (Ma, Ouimet, and Simintzi, 2022; Gardberg, Heyman, and Tåg, 2023), and adoption of new management practices (Bloom and Van Reenen, 2007, 2010; Heyman, Norbäck, and Hammarberg, 2019). It is also well-documented that multinational firms are large importers and exporters and that most of them have extensive global production networks (e.g. Bernard, Jensen, and Schott, 2009).

Therefore, in the following, we consider the role access to multinational production networks, advanced technologies, and high-quality management practices play in determining worker mobility. As acquired firms experience changes to their production and trade, technology, and management practices, workers at acquired firms can gain new skills, making them more attractive to other multinationals, especially within specific multinational production networks. Thus, the probability of moving to other MNEs should increase, with the increase the strongest for movement to MNEs from the same source country.

4.1 Multinational production networks

One possible explanation for the mobility effect uncovered above is that the acquired Swedish firms may be integrated into the multinational production network of foreign acquirers after acquisitions. Consequently, workers at the acquired firms have the opportunity to gain international skills, some

of which may be country/market specific.

To provide preliminary evidence for multinational production networks through international trade, in Table 8 we report the difference-in-difference estimates of the effect of acquisitions on firm-level trade flows based on the following equation:

$$Y_{fjt} = \gamma_0 AFTER_j + \gamma_1 TREATED_f + \gamma_2 DiD_{fj} + X_f + \omega_t + \phi_{s(f)} + \nu_{fjt}, \tag{4}$$

where Y_{fjt} represents the value of firm trade (export and/or import) for firm f at event time j and in calendar year t, $AFTER_j$ takes the value one in the year of an acquisition and all years after, $TREATED_f$ takes the value one for acquired firms, DiD_{fj} (i.e., $AFTER_j \times TREATED_f$) is our variable of main interest and its coefficient captures the effect of acquisitions on firm-level trade flows, X_f are observable firm characteristics that may affect firm trade, measured at the year of an acquisition, ω_t and $\phi_{s(f)}$ are year fixed effects and industry fixed effects, and ν_{fjt} is the error term.

Table 8 shows that the total amount of trade increases significantly at acquired firms after acquisitions. The increase in trade is driven by imports, while the amount of exports is not affected by acquisitions. These patterns suggest that the acquired Swedish firms significantly increase their use of imported intermediates following acquisitions and become integrated into the multinational production networks of foreign acquirers.

To dig deeper, in Table 9 we look at firm-level trade shares separated by source countries of foreign acquirers. Again, we focus on top foreign investors. Panel A shows the difference-in-difference estimates of equation (4) where the dependent variable is the value of firm trade with a specific source country as a share of total firm trade. We find that acquisitions have a significantly positive effect on trade shares for most source countries, that is, acquired firms have significantly adjusted their trade composition by trading more with the source country of foreign investors after acquisitions, compared with control firms.[8] This provides further evidence for the integration of acquired Swedish firms into multinational production networks of foreign acquirers. The increase

[8]Our data do not have information on whether the trade is within multinational firms or at arms-length.

in trade shares is especially strong for foreign acquirers from Nordic countries, Germany, and the EU-15 area. For example, panel A, column 1 shows that firms acquired by Norwegian investors see an increase in the value of trade with Norway as a share of total firm trade by 8.7 percentage points after acquisitions, compared to control firms.

In contrast, panel A, column 10 shows no significant effect of acquisitions on trade shares for investment from tax havens. Note that in the case of acquisitions by tax haven countries, the nationality of foreign investors is unclear – some of the firms might be from Sweden or any other country. In this case, acquisitions could be driven by tax avoidance rather than by building up production networks. Thus, no significant effect on trade shares for source countries as tax havens is consistent with our expectation.

Panels B-E show regressions on trade with countries other than the source country as a share of total firm trade for firms acquired by Norway, Denmark, the USA, and the UK, respectively. In contrast to trade with the source country of foreign acquirers, there is little evidence of increased trade with any other countries after acquisitions. Almost all estimates are statistically insignificant.

The exceptions are trade with Nordic countries for acquisitions by Norway or Denmark and trade with EU-15 countries. This result could partly stem from the fact that Norway and Denmark belong to the Nordic and the EU-15. On the other hand, the result could suggest that acquisitions by Norway or Denmark may lead to the integration of Swedish firms into Nordic production networks, and broadly into EU production networks. There is also weak evidence for increased trade at US-acquired firms with the U.K. and English-speaking countries as a group.

The pattern of trade in Table 9 aligns remarkably well with the pattern of mobility shown in Tables 6-7. Overall, we see that in the firms that experience stronger trade linkages with the source country of foreign acquirers, workers tend to have higher mobility to other multinationals originating from the same source country. For instance, at German-acquired firms, the share of trade with Germany increases significantly after acquisitions compared to control firms (5.3 percentage points in panel A, column 9 of Table 9), and the mobility of workers to other German-owned MNEs

becomes significantly higher after acquisitions compared with control workers (9.1 percentage points in panel C, column 5 of Table 6). We also see both strong trade linkages among Nordic countries and high mobility among Nordic MNEs. The same patterns hold for the groups of EU-15 countries and English-speaking countries. These results suggest that workers at firms acquired by Nordic countries, Germany, the EU-15 country group, or the English-speaking country group may gain market-specific international skills after acquisitions, thus increasing the chance of moving to other multinationals from the same source country (market) as that of the foreign acquirers.

4.2 Technology adoption

Belonging to a multinational network not only facilitates access to additional sources of intermediate inputs but also access to new technologies. Studies by Bastos et al. (2018), Ma et al. (2022), and Gardberg et al. (2023) provide strong evidence for increased technology adoption after acquisitions. Acquisitions by countries with more sophisticated technologies expect to introduce bigger changes to production technology at acquired firms, thus providing more opportunities for workers to enhance their skills and leading to higher mobility to other MNEs that use similar technologies. At the same time, it is also possible that technology adoption shifts the demand for certain job tasks (Nilsson Hakkala, Heyman, and Sjöholm, 2014), leading to more mobility overall. It is worth noting that existing studies have focused on the impact of technology adoption on acquired firms and workers who have remained at the acquired firms. In contrast, our analysis focuses on the effect on job mobility and workers who have chosen to move to other firms.

To study the channel through technology adoption, we match annual industry-country level measures of technology sophistication, i.e., expenses on software and robots, with acquiring firms' industry affiliation and source countries. Annual information on the use of software and database capital, total capital, and employment at the country and industry level is drawn from the EU KLEMS 2019 database for all EU countries, the US, the UK, and Japan. Annual data on industry and country level robot stocks come from the IFR Robot Database. Data on robots contain

information on robot installations by industry, country, and applications that all major industrial robot suppliers report to the IFR, which are further combined with information from national robot associations. The IFR robot data are available for a restricted set of industries because industries with a very low prevalence of robots are excluded from the IFR database.

Our annual industry-country level measures of technology sophistication include (1) software capital to total capital, (2) software capital per employee, (3) the stock of robots per employee, and (4) the stock of robots per employee at the start of the IFR sample (1997). For each industry, we define high-tech countries as those with technology expenditures per employee above the sample median, and low-tech countries as those below the sample median. So a country can be high-tech in some industries, but low-tech in others, implying that the measures help capture the comparative advantage in advanced technologies across countries.

Then we estimate the effect of acquisitions on job mobility separately by high-tech and low-tech source countries. Table 10 shows that mobility to MNEs is significantly higher for workers at firms acquired by high-tech countries, but there is no significant effect for workers at firms acquired by low-tech countries. The result suggests that workers may gain more skills at firms that are acquired by countries with more advanced technologies, thus having higher mobility to other MNEs that use similar advanced technologies.

4.3 Management practices

Studies by Bloom and Van Reenen (2007), Bloom, Lemos, Sadun, Scur, and Van Reenen (2014), and Bloom, Sadun, and Van Reenen (2012, 2016) document significant cross-country differences in the quality of management practices and show that about a quarter of cross-country and within-country TFP gaps can be accounted for by management practices. Like technology, new management practices can be introduced to acquired firms following foreign acquisitions. As shown in Heyman et al. (2019), differences in global management practices across source countries of foreign MNEs are an important determinant of productivity among foreign affiliates in Sweden. While existing

studies focus on the impact of management practices on firm productivity, we are interested in the impact on worker mobility.

To study whether management practices may influence the mobility of workers at acquired firms, we construct an index of the quality of management practices for MNEs with headquarters in the source countries of foreign acquirers in our sample. Specifically, to extract source country differences in management practices among MNEs, we follow Heyman et al. (2019) and use global firm-level data on management practices from the World Management Survey (WMS) to estimate average differences in global management practices for MNEs originating from the source countries that are engaged in foreign acquisitions over our sample period, controlling for host country, year, and industry fixed effects. The WMS is based on randomly drawn samples of mid-size firms in multiple industries. The questionnaire consists of 18 questions regarding management practices in three areas: monitoring, targets, and incentives/people.[9] MNEs include both parent firms and their foreign affiliates. The variation in the quality of management practices in the foreign operations of MNEs stems from the institutions or economic conditions in the source countries of the MNEs, and from the need for overcoming the cultural or geographical distances between the source country and the various host countries in which the MNEs invest.

We construct two measures of the quality of management practices based on two different sets of firms included in the estimation of management practice differences across source countries: *Management1* is based on all multinational firms in the WMS, and *Management2* excludes parent firms, i.e., the part of the MNEs located in the source country. Source countries with high-quality management practices are those with a measure above the sample median or above the 75th percentile of the measure. Source countries with low-quality management practices are those with a measure below the sample median or below the 25th percentile of the measure.

[9]Monitoring focuses on how well companies observe their internal activities and how well they use this information for continuous improvement. Targets investigate whether companies establish correct targets, track correct outcomes, and take correct actions if the targets and outcomes are inconsistent. Incentives/people considers whether organizations promote and reward employees based on performance and prioritized hiring while attempting to retain their best workers.

Table 11 shows that foreign acquisitions have significantly positive effects on mobility to MNEs (panel A) and to foreign MNEs (panel B), no matter whether the source countries of foreign acquirers have high- or low-quality management practices. However, the positive effect turns out to be smaller for acquisitions by countries with high-quality management practices. One possible explanation for this result is that firms acquired by countries with high-quality management practices see larger productivity gains (see Heyman et al., 2019) and provide more incentives for the best workers to stay (better management practices), thus attenuating the incentive to move to other MNEs.

4.4 Worker occupations

In the above, we found strong evidence for the impact of acquisitions on job mobility through trade and technology. When acquired firms reorganize their production and adopt new technologies and management practices after acquisitions, all types of workers may gain new skills and have an incentive to move to other firms to get better pay. On the other hand, we expect that the organization of new trade linkages and the adoption of new technologies have stronger effects on managers and professionals because they are more involved in the process of decision making. Thus, the experience of working in an acquired firm might for instance be of higher value for more skilled occupations compared with less skilled occupations (Mion et al., 2022), suggesting that workers in skilled occupations would have higher mobility to other MNEs that value international experience more.

We look at this in more detail in Figure 6 where we examine mobility separately for high-skilled occupations (managers, professionals, technicians) and low-skilled occupations (operators and clerks). The results show that for both high- and low-skilled occupations, there is no significant pre-acquisition difference between treated and control workers. However, all types of workers see higher mobility to MNEs after acquisitions.[10] Mobility starts to pick up three years after ac-

[10]Mion et al. (2022) find that blue-collar workers get a wage increase when they move to a new firm from firms where they have gained international experience, which suggests that low-skilled occupations learn valuable skills in

quisition and peaks in the 5th and 6th years post-acquisition. The effect seems slightly stronger for high-skilled occupations than for low-skilled occupations. In all the years after the acquisition, high-skilled occupations have higher mobility to other MNEs compared to low-skilled occupations, although the differences are rather small. For example, in the 5th and 6th years post-acquisition, managers, professionals and technicans in treated firms are 6.9 and 8.3 percentage points, respectively, more likely to move to MNEs, compared with those in control firms. The corresponding figures for clerks and operators are 6.1 and 6.4 percentage points respectively. Hence, movements to MNEs from treated firms are somewhat more common among managers and professionals than among operators and clerks. On the other hand, for both high- and low-skilled occupations, movements to local firms appear to be insignificantly different between treated and control workers.

Occupations are closely linked to education levels. Managers, professionals and technicians require a higher level of education, compared to operators and clerks. Thus, we further examine mobility separately for low-, middle-, and high-education groups. The low-education group includes workers with at most 9 years of compulsory schooling. The middle-education group includes workers with 2-4 years of upper secondary school education. And the high-education group includes workers with at least undergraduate college education. We find that the treatment effect on mobility to MNEs is significantly positive for all education groups. As shown in Appendix Figure A3, for all education groups, it takes several years for the treatment effect to turn significantly positive. It also appears that workers in the low-education group take a little longer to gain skills and move to other MNEs. On the other hand, the treatment effect on mobility to local firms is negative for all education groups and the effect becomes statistically insignificant after several years post-acquisition.

In sum, the above analysis has provided strong evidence that foreign acquisitions increase job mobility to other MNEs, especially to MNEs with the same country of ownership. This effect of foreign acquisitions appears to work through the linkages of trade in multinational production

internationalized firms.

networks and the adoption of advanced technologies. At the same time, workers gain new skills and some of the skills may be specific to a particular multinational network, leading to higher mobility to other MNEs, and MNEs from the same source country of foreign acquirers in particular. Furthermore, we find that the effect seems slightly stronger for workers in high-skilled occupations because those workers are typically more involved in international operations and thus gain more skills after acquisitions.

5 Implications for wage growth

We continue our analysis by examining the implications of internationalization and mobility for wage growth. If workers gain new skills after acquisitions, their movement to other firms should be motivated by higher wages. Wage growth associated with employment-to-employment transition has important implications for lifetime earnings (Topel and Ward, 1992; Rubinstein and Weiss, 2006; Altonji et al., 2013).

We start by examining whether foreign acquisitions have any effect on average wages. We estimate equation (2) by replacing the dependent variable with log wages. We find that the estimated coefficients on the interactions between event time fixed effects and the treatment indicator are statistically insignificant for all years.[11] Thus, we find no effect of foreign acquisitions on average wages at the acquired firms after an acquisition, which is consistent with the previous finding of a small or no wage premium in MNEs once one controls for firm and worker characteristics (e.g. Heyman et al., 2007). The result also implies that the post-acquisition wage growth for stayers is not significantly different between treated and control firms.

We next examine the wage effect of moving from acquired firms to other MNEs. We would expect to see a positive wage effect if working for MNEs allows workers to gain skills that enable them to move to better jobs. No positive wage effect would make us suspect that mobility is caused by a push rather than a pull effect, in other words, workers are forced to leave after an acquisition.

[11] The results are available upon request.

A positive wage effect also provides support for the hypothesis that international experience gained from working at the acquired firm can help workers climb job ladders and move onto a higher wage growth trajectory.

To estimate the effect of acquisitions and mobility on wages, we look at the sample of all workers that are employed in treated firms at the time of acquisition and compare movers with stayers in acquired firms (treated firms). Specifically, we estimate the following wage equation:

$$w_{ijt} = a_0 AFTER_j + a_1 Mover_{ij} + a_2 AFTER_j \times Mover_{ij} + X_i + X_{f(i)} + \omega_t + \phi_{s(i)} + v_{ijt}, \quad (5)$$

where w_{ijt} is the log wage of worker i at event time j and in calendar year t; $AFTER_j$ indicates the year of an acquisition and all subsequent years; $Mover_{ij}$ is equal to one if worker i is at another firm in event year j, and zero otherwise; X_i and $X_{f(i)}$ represent observed worker and firm characteristics, respectively, in the year of acquisition; ω_t are year fixed effects that capture macroeconomic factors that may affect wage growth for all workers; $\phi_{s(i)}$ are industry fixed effects that capture wage differences across industries; and v_{ijt} is the error term. Because movers to MNEs may differ from movers to local firms, we run separate regressions for these two types of movers. Stayers are always the comparison group.

Our main interest is in the coefficient a_2, which represents the wage gains associated with moving to another firm after acquisitions, compared with those before acquisitions. With stayers as the comparison group, we interpret these gains as the extra wage growth by movers compared to what workers would have earned had they chosen to stay at the acquired firms after acquisitions.

We also look at the dynamic wage effect by modifying equation (5) as follows:

$$w_{ijt} = \Sigma_{j=-4}^{9} \alpha_j^0 T_j + a_1 Mover_{ij} + \Sigma_{j=-4}^{9} \alpha_j (T_j \times Mover_{ij}) + X_i + X_{f(i)} + \omega_t + \phi_{s(i)} + v_{ijt}, \quad (6)$$

where T_j represents event time dummies with the year before an acquisition $j = -1$ omitted as the reference year, α_j^0 captures the wage growth by stayers at event time j relative to $j = -1$, and α_j

represents the additional wage growth by movers, compared with stayers at event time j. All the other explanatory variables are defined as above.

Table 12 shows the estimates of equation (5). The first two columns compare wage growth by movers to MNEs with wage growth by stayers in treated firms. In column 2 where control variables are included, the post-acquisition difference in wage growth between movers to MNEs and stayers is around 12.9 percentage points higher than the pre-acquisition difference. Moreover, the coefficient of movers is negative, suggesting that movers could be relatively underpaid in the original firm which is why they have an incentive to move after gaining skills. Table 12 also shows that experienced and highly educated workers get higher wages and females lower wages. Finally, large firms pay low wages, and capital-intensive firms with a skilled labor force pay high wages.

Columns 3-4 report the results for movers to local firms, compared with stayers in acquired firms. We observe additional wage gains by movers to local firms after acquisitions, which is consistent with the finding by Balsvik (2011) that as workers with MNE experience move to local firms, they generate knowledge externalities to local firms and earn higher wages after moving. It also reflects the indirect impact of foreign multinationals on wages and employment at local domestic owned firms (Setzler and Tintelnot, 2021). However, we also note that the magnitude of wage gains is smaller than that for movers to MNEs, which provides support to the conjecture that international experience gained at the acquired firms is more valuable for other MNEs.

Figure 7 displays the estimates of α_j in equation (6). Panel A shows that before acquisitions, the wage growth is not significantly different between movers to MNEs and stayers. However, one year after acquisitions, the additional wage growth by movers to MNEs is about 10 percentage points and the effect is rather stable at this level up until 9 years after acquisitions. Hence, the figure suggests that wages increased quite substantially for workers who leave their jobs in acquired firms and move to MNEs.

Panel B shows the estimates of α_j for movers to local firms. We find that one year after acquisitions, the wage growth for movers to local firms is 11 percentage points higher than that for

stayers. But this wage growth gap between movers to local firms and stayers starts to shrink over time and stabilizes at around 6 percentage points.

To illustrate the different wage growth trajectories for stayers, movers to MNEs, and movers to local firms, in Figure 8 we plot the wage growth rates for these three groups of treated workers, using the estimates of α_j^0 for stayers and $\alpha_j^0 + \alpha_j$ for movers, with $j = -1$ as the base year. As in Figure 7, the difference in wage growth between stayers and movers is small before acquisitions. However, after acquisitions, movers and stayers are on divergent wage growth paths. Overall, wage growth is the fastest for movers to MNEs and the slowest for stayers. For instance, in the 9th year after the acquisition, the cumulative wage growth rate is 30 percent for movers to MNEs and 24 percent for movers to local firms. On the other hand, stayers have the lowest wage growth rate, at 19 percent over the same period. With $j = -1$ as the base year, these cumulative wage rates translate into an annualized wage growth rate of 3 percent for movers to MNEs, 2.4 percent for movers to local firms, and 2 percent for stayers over a 10-year period. The persistent disparity in annualized wage growth rates implies divergent lifetime earnings for the three different types of workers after acquisitions.

Interestingly, starting from the fourth year post-acquisition, the wage growth trajectory for movers to MNEs becomes steadily steeper while that for movers to local firms becomes flatter. This also corresponds to the period when foreign acquisitions have a significantly positive effect on mobility to MNEs and an insignificant effect on mobility to local firms (see Figure 4). These patterns of wage growth and job mobility are consistent with our argument that it takes time for workers to gain international skills and the new skills gained through acquisitions can lead to both higher mobility to MNEs and higher wage growth when moving to other MNEs.

In sum, we find that foreign acquisitions increase the probability of moving to MNEs and raise the wage growth rate substantially for movers to MNEs. On the other hand, acquisitions reduce the probability of moving to local firms and raise the wage growth for movers to local firms at a more modest rate. Therefore, acquisitions appear to shift the career path more toward MNEs and

push workers onto a much steeper wage growth trajectory.

6 Concluding remarks

We leveraged the foreign acquisitions of Swedish firms as a lens to examine the internationalization shock, and subsequently, its causal effect on job mobility. In doing so, we highlighted the potential for employees within these acquired firms to gain valuable international experience post-acquisition. In an attempt to account for the nonrandom nature of acquisitions, we paired the foreign acquired firms with never-acquired Swedish local firms using one-to-one propensity score matching. These Swedish owned firms served as our control group.

We employed a stacked difference-in-differences estimation methodology, facilitating a comparison of mobility in the treated and control firms both before and after the acquisitions. Our findings suggest that international experience, accrued in the wake of foreign acquisitions, bolsters the likelihood of employees transitioning to another MNE by approximately 4 percentage points. Conversely, it diminishes the probability of shifting to local firms by about 5 percentage points.

Interestingly, we observed that the impact of acquisitions on mobility does not occur immediately but instead unfolds gradually. It becomes significant in the third year following an acquisition and stabilizes thereafter. This supports the assertion that workers require time to cultivate international skills which enhance their employability and facilitate transitions to more lucrative positions.

Furthermore, we analyzed the influence of acquisitions on wage growth for those who moved to new jobs. Compared with stayers at acquired firms, movers to other MNEs saw a steeper wage growth trajectory: the annualized wage growth rate is about 2 percent for stayers and 3 percent for movers to MNEs over the post-acquisition period. On the contrary, movers to local firms experienced a more modest wage growth, compared with those who remained at the acquired firms.

In light of our findings, we argue that foreign acquisitions not only have a transformational effect on the acquired firm's operations but also on the career trajectories and earnings potential of

their employees. These impacts of acquisitions on job mobility and wage growth have been largely overlooked in the existing literature, underscoring the significance of our study.

Our results also have potential policy implications. If the acquisition of domestic firms by foreign multinationals increases job mobility and wage growth, then policies that facilitate these acquisitions could have broader benefits for the labor market. Furthermore, our study sheds light on the timing of these effects. With the significant impact on mobility occurring from the third year post-acquisition, there is clear evidence of a 'learning period' for employees to adapt and develop skills in an international business context. This finding could guide future research into how and when workers derive the most benefits from international exposure.

In conclusion, our study not only advances our understanding of the implications of foreign acquisitions for job mobility and wage growth, but it also sets the stage for further investigations into the timing, mechanisms, and broader implications of these effects. We hope our research will inspire further inquiry into these important aspects of international economics and labor mobility.

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Figures

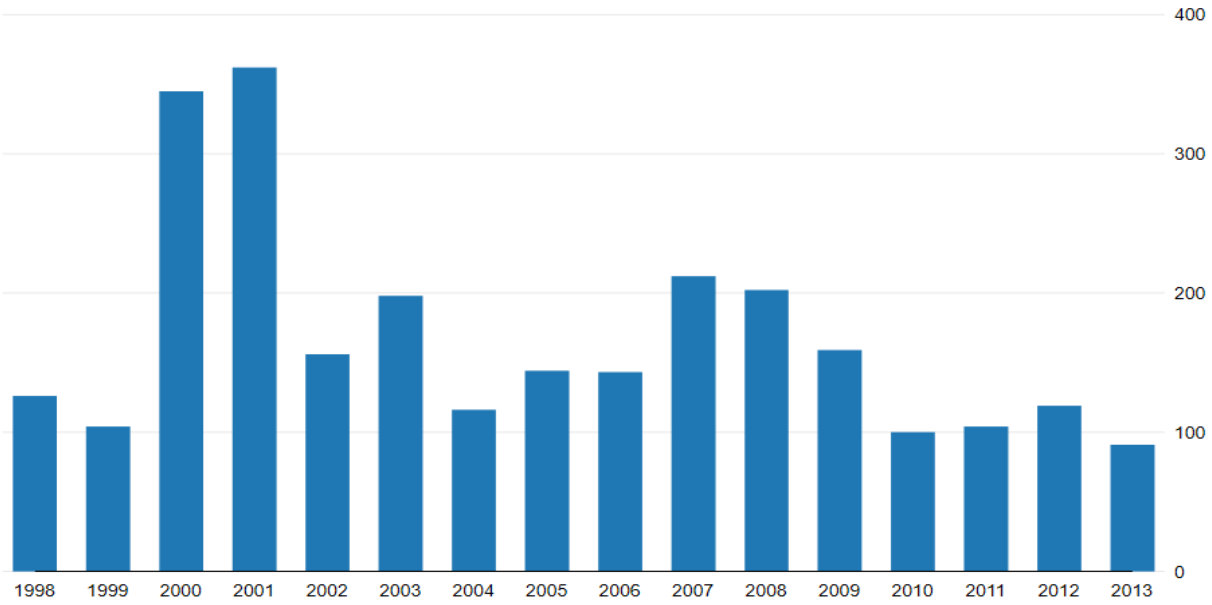


Figure 1: Annual number of foreign acquisitions of Swedish local firms (1998-2013).

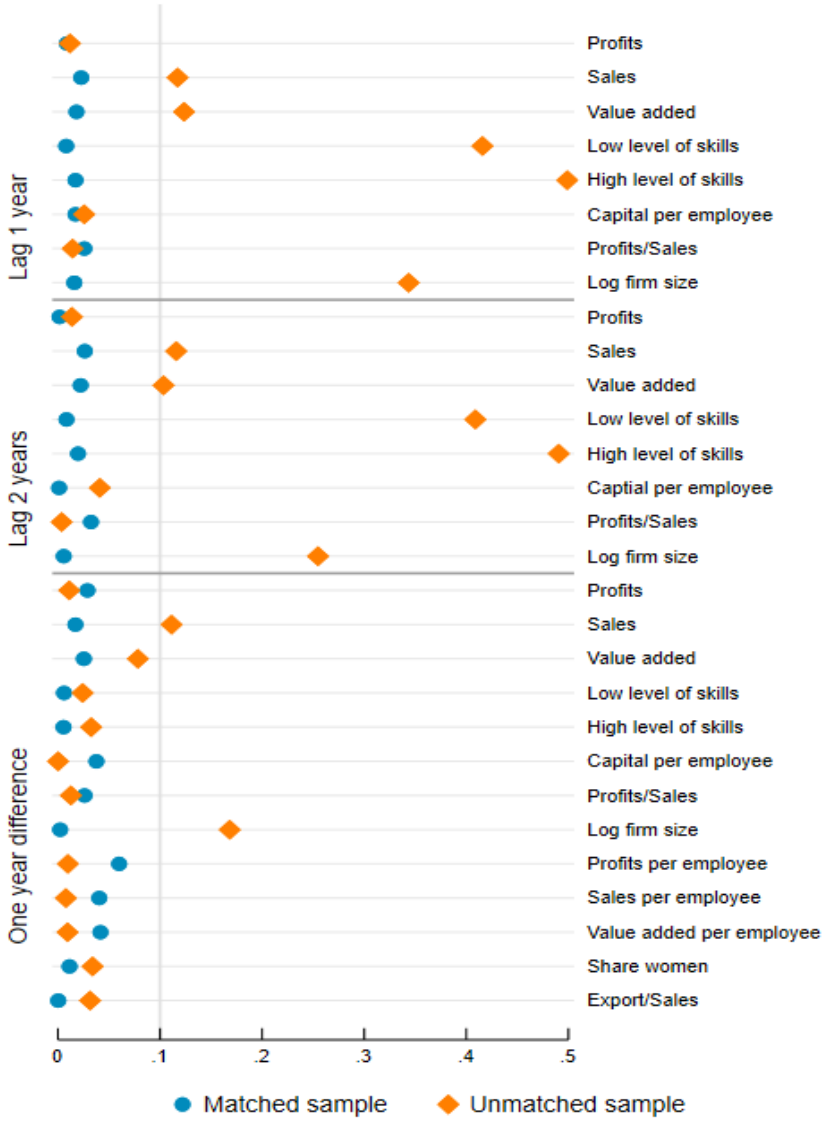


Figure 2: Absolute differences in treated and control firms in matched and unmatched samples.

Note: The X-axis shows the absolute value of the standardized percentage bias for the matched and unmatched firms. This is calculated by storing the means and variances of lags one year, lags two years and one-year differences for treated and control firms in the matched and unmatched samples, with all years pooled. Then the absolute values of standardized percentage bias are calculated according to the formula in Austin (2009). Treated firms are Swedish local firms that are acquired by foreign owners over the period 1998-2013. Control firms are Swedish local firms that are never acquired by foreign owners over the same period. Low-skilled workers are those with at most 9 years of compulsory schooling. High-skilled workers are those with at least undergraduate college education. Log firm size is measured by log employment.

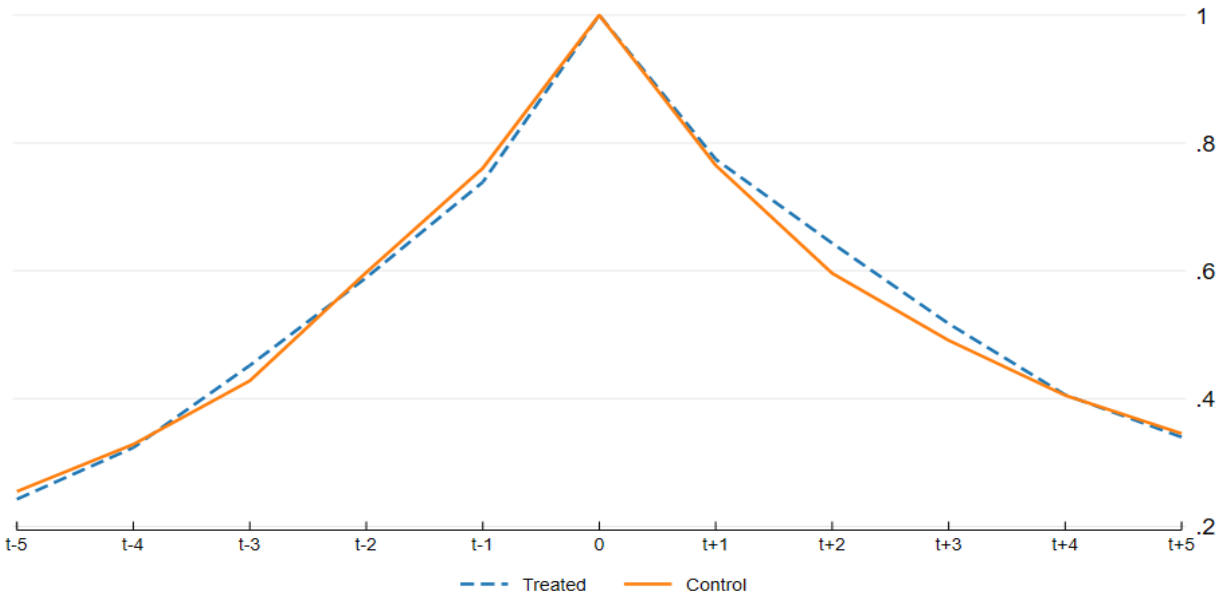
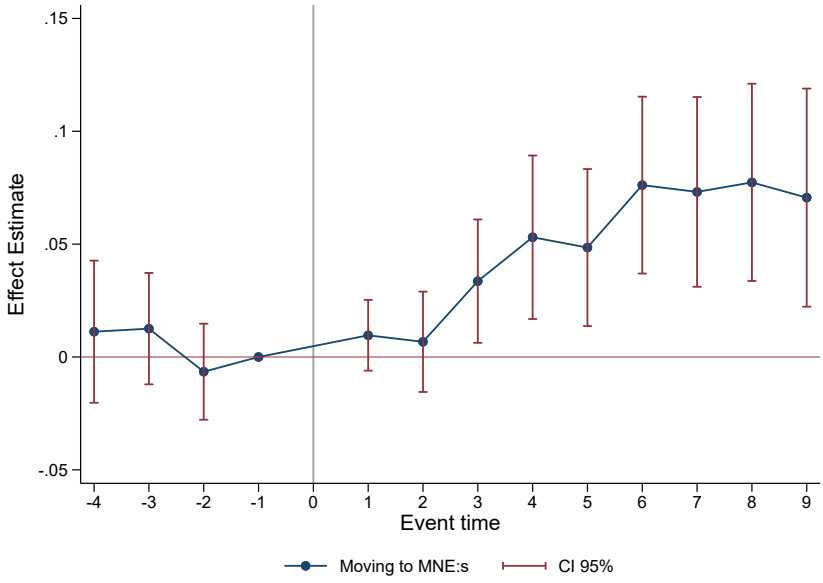


Figure 3: Job mobility in treated and control firms (1998-2013)

Note: This figure displays the descriptive statistics about job mobility for workers who are present at a treated or control firm in the year of an acquisition (event time = 0). It shows the share of those workers who are employed in the same firm up to five years before the acquisition and remaining in the same firm up to five years after the acquisition. For instance, around 75 percent of the workers in the year of a takeover worked in the same firm one year before (event time = −1). Treated firms are Swedish local firms that are acquired by foreign owners over the period 1998-2013. Control firms are Swedish local firms that are never acquired by foreign owners over the same period.

Panel A: Mobility to MNEs.



Panel B: Mobility to local firms.

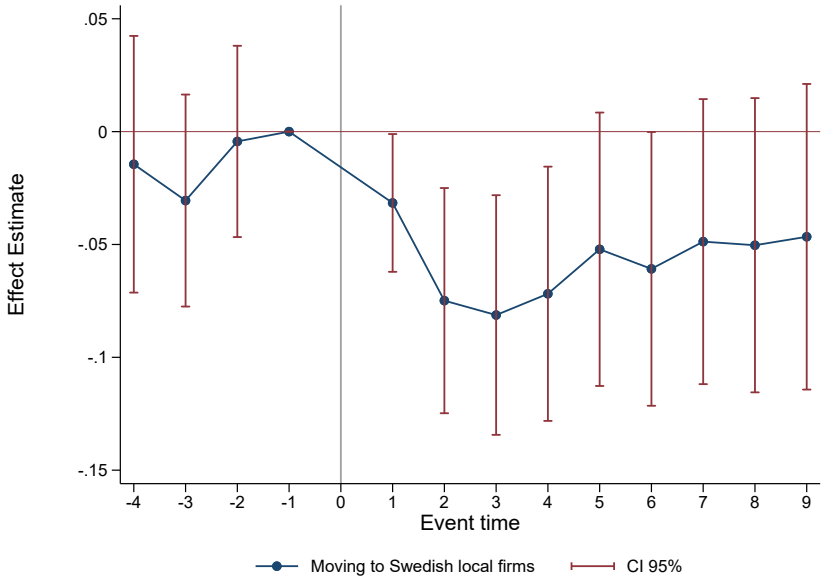
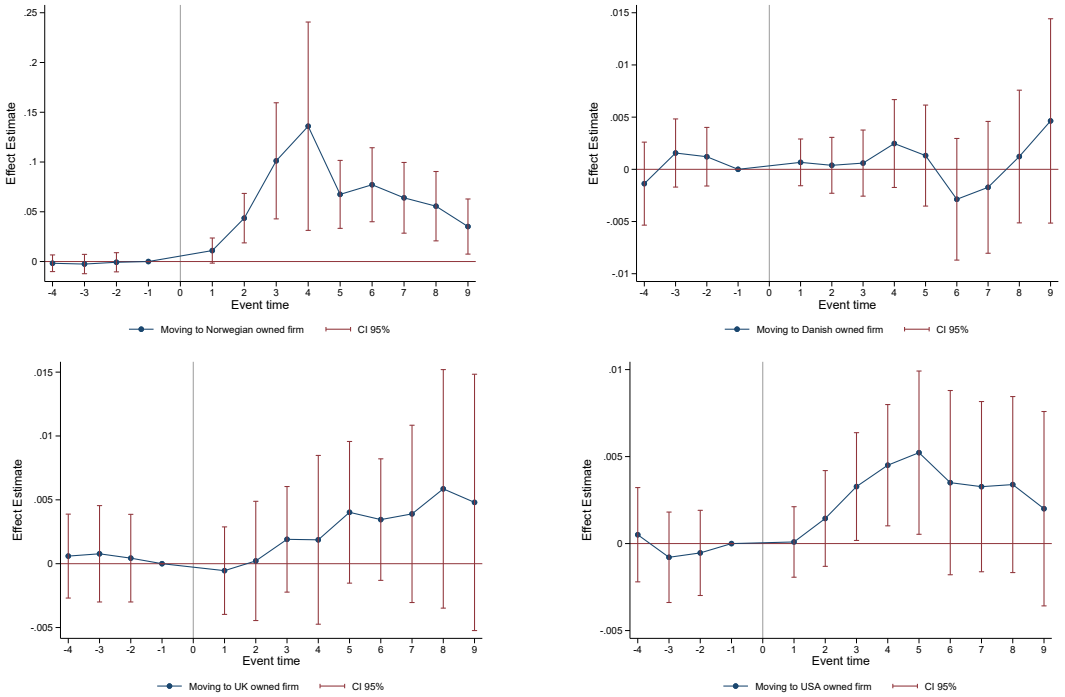


Figure 4: Event study. The effect of foreign acquisitions on job mobility.

Note: The figures show the yearly difference-in-difference estimates of β_j using equation (2), relative to one year prior to foreign acquisitions (event time $j = -1$). The vertical bars show the 95% confidence intervals. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (2), see Section 2.2.

Panel A. Acquisitions by Norway.



Panel B. Acquisitions by the USA.

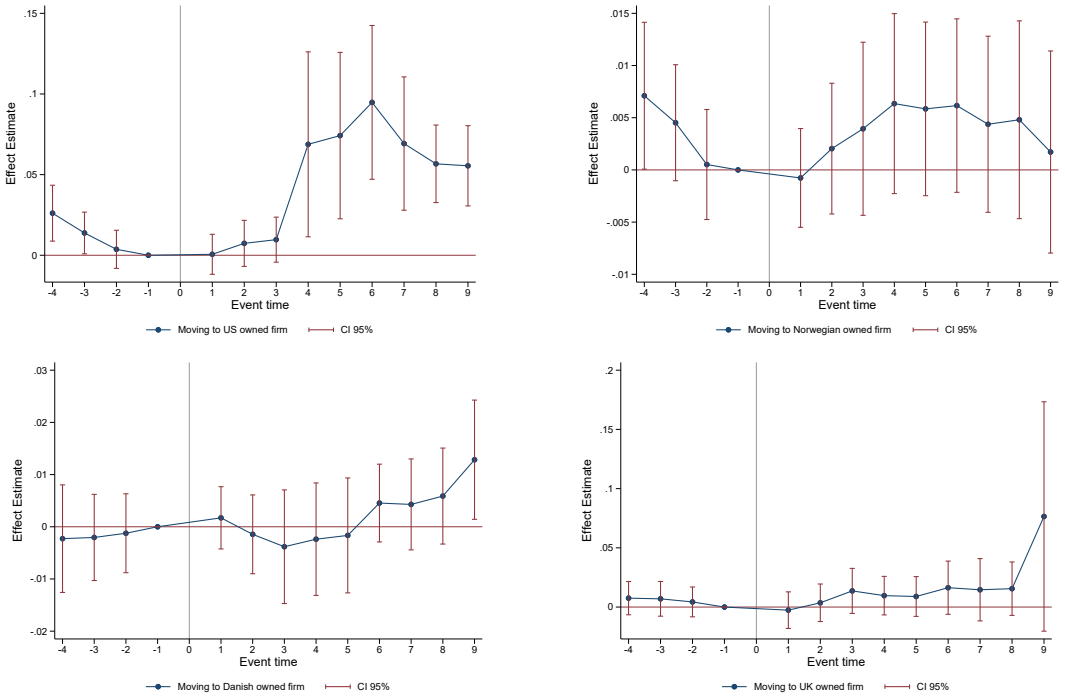
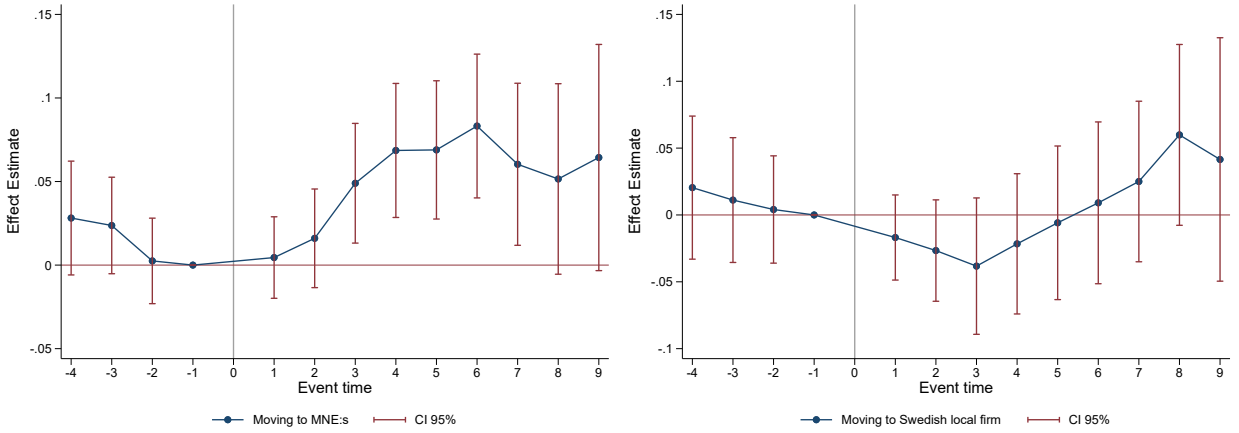


Figure 5: Event Study. The effect of foreign acquisitions on mobility by source countries.

Note: The figures show the yearly difference-in-difference estimates of β_j using equation (2), relative to one year prior to foreign acquisitions (event time $j = -1$). The figures are separated by the source country of foreign acquirers and by worker movements to foreign MNEs with different countries of ownership. Panel A displays results for acquisitions by Norway and Panel B for acquisitions by the USA. The vertical bars show the 95% confidence intervals. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (2), see Section 2.2.

Panel A. Mobility of high-skilled occupations (managers, professionals, technicians)



Panel B. Mobility of low-skilled occupations (clerks and operators)

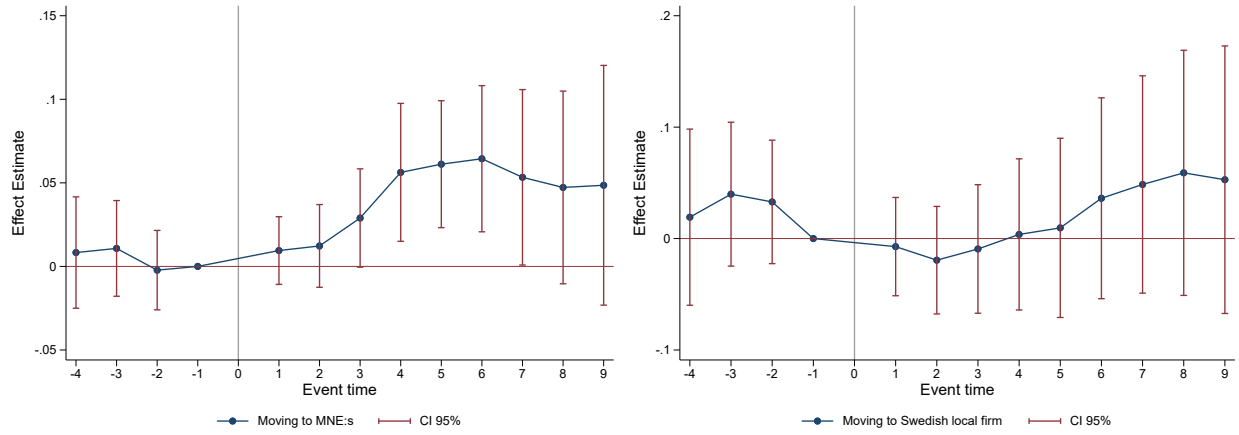
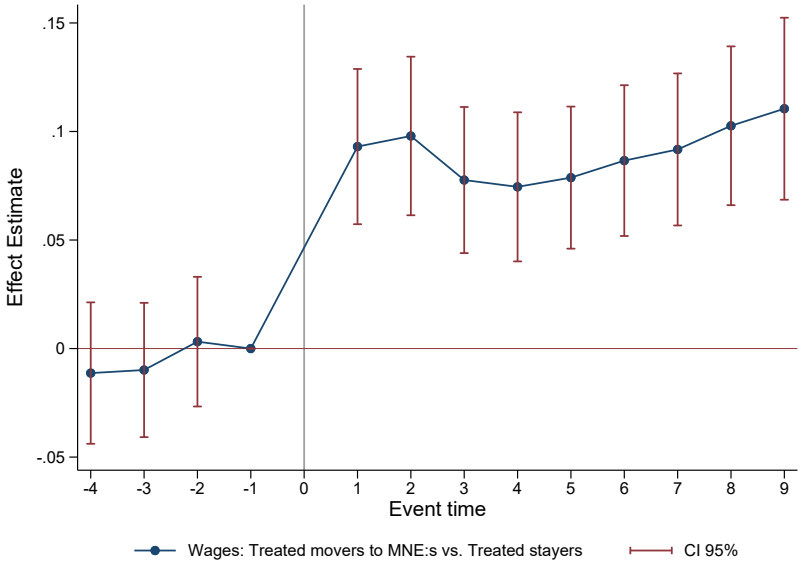


Figure 6: Event study. The effect of foreign acquisitions on job mobility of different occupations.

Note: The figures show the yearly difference-in-difference estimates of β_j using equation (2), relative to one year prior to foreign acquisitions (event time $j = -1$). The figures are separated by high-skilled occupations (panel A) and low-skilled occupations (panel B). The vertical bars show the 95% confidence intervals. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (2), see Section 2.2.

Panel A. Comparison between movers to MNEs with stayers at acquired firms



Panel B. Comparison between movers to local firms with stayers at acquired firms

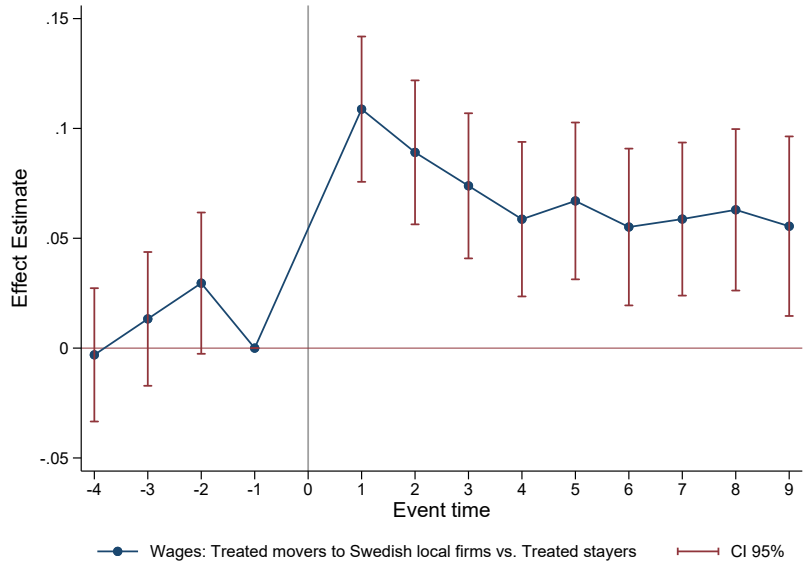


Figure 7: Event study. The wage effect of moving to other firms.

Note: The figures show the yearly difference-in-difference estimates of α_j using equation (6), relative to one year prior to foreign acquisitions (event time $j = -1$). Panel A compares treated movers to MNEs with treated stayers in their wage growth. Panel B compares treated movers to local firms with treated stayers in their wage growth. The treated workers are those who are present in treated firms at the time of foreign acquisitions. The vertical bars show the 95% confidence intervals. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (6), see Section 5.

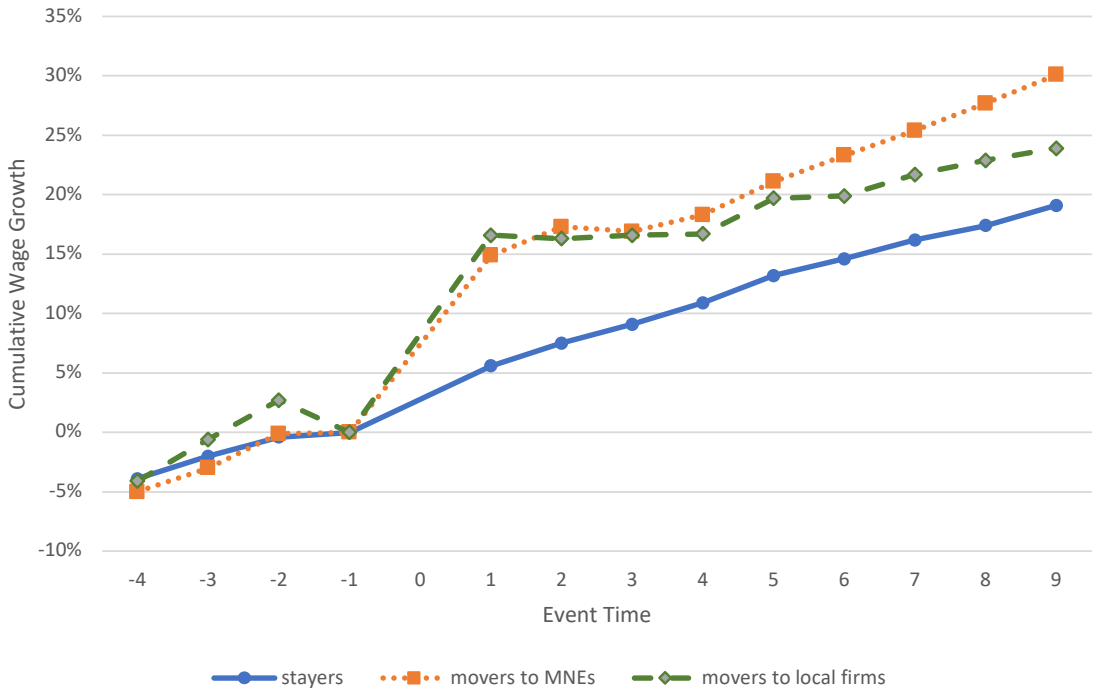


Figure 8: The cumulative wage growth for treated workers.

Note: This figure plots the cumulative wage growth rates for treated workers, with one year prior to foreign acquisitions (event time $j = -1$) as the base year. Treated workers are those who are present in acquired firms at the time of acquisitions. The wage growth rates are computed using the equation (6) estimates of α_j^0 for stayers and $\alpha_j^0 + \alpha_j$ for movers. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (6), see Section 5.

Tables

Table 1: Summary statistics for matched sample (pooled 1998–2013).

	Treated firms	Control firms	Difference in means, t-test	p-value
One year lag				
Capital intensity	0.270	0.307	-0.037	0.861
Log employment	3.347	3.334	0.013	0.254
Profits	4,559	4,277	282	0.394
Profits/Sales	-2.545	0.018	-2.564	0.838
Sales	124,074	124,892	-818	0.523
Share of high-skilled workers	0.354	0.362	-0.008	0.949
Share of low-skilled workers	0.137	0.137	0.001	0.423
Value added	34,836	34,514	323	0.463
Two years lag				
Capital intensity	0.287	0.339	-0.052	0.874
Log employment	3.212	3.205	0.007	0.352
Profits	3,865	10,369	-6,503	0.877
Profits/Sales	-0.159	0.072	-0.231	0.934
Sales	114,555	113,325	1,229	0.463
Share of high-skilled workers	0.350	0.358	-0.008	0.931
Share of low-skilled workers	0.142	0.143	-0.001	0.569
Value added	31,545	31,873	-328	0.541
One year difference				
Capital intensity	0.007	-0.005	0.012	0.229
Log employment	0.083	0.085	-0.002	0.583
Profits	-247	4,361	-4,609	0.904
Profits/Sales	2.527	-0.024	2.550	0.162
Sales	10,534	6,971	3,562	0.035
Share of high-skilled workers	0.003	0.003	0.000	0.443
Share of low-skilled workers	-0.004	-0.005	0.002	0.068
Value added	2,933	3,878	-944	0.729

Note: This table reports the mean statistics of firm characteristics for treated and control firms, with all years pooled. Treated firms are Swedish local firms that are acquired by foreign owners over the period 1998-2013. Control firms are Swedish local firms that are never acquired by foreign owners over the same period. Capital intensity is defined as capital stocks per employee. High-skilled workers are those with at least undergraduate college education. Low-skilled workers are those with at most 9 years of compulsory schooling. Capital stocks, profits, sales, and value added are in 1,000 SEK. See Section 2.3 for the details about how the group of control firms is constructed.

Table 2: The share of workers who leave to different firm types (1998-2013).

	To MNEs		To local firms		To MNEs / To local firms	
	Treated	Control	Treated	Control	Treated	Control
	(1)	(2)	(3)	(4)	(5)	(6)
$j = 1$	0.047	0.037	0.074	0.098	0.641	0.383
$j = 3$	0.113	0.093	0.152	0.209	0.742	0.444
$j = 5$	0.142	0.118	0.197	0.217	0.721	0.545

Note: This table presents the cumulative share of workers who leave for different firm types after an acquisition where all the workers are employed in a treated or control firm at the time of takeover (j=0). Treated firms are Swedish local firms that are acquired by foreign owners over the period 1998-2013. Control firms are Swedish local firms that are never acquired by foreign owners over the same period. Movers at event time j include all workers who have moved to other firms between the first and the jth years after the acquisition. Destination firm types include MNEs (columns 1 and 2) and local firms (columns 3 and 4). MNEs consist of both foreign owned firms and Swedish MNEs. Local firms are Swedish firms with no foreign affiliates. Columns 5 and 6 report the number of movers to MNEs relative to the number of movers to local firms in treated and control firms, respectively.

Table 3: Wage growth for stayers, movers to MNEs, and movers to local firms (in percent).

	Stayers		Movers to MNEs		Movers to local firms	
	Treated	Control	Treated	Control	Treated	Control
	(1)	(2)	(3)	(4)	(5)	(6)
$j = 1$	-1	2	16	15	9	4
$j = 3$	13	6	18	17	10	-4
$j = 5$	16	6	25	17	12	16

Note: This table presents the cumulative wage growth rate separately for stayers, movers to MNEs and movers to local firms where all the workers are employed at a treated or control firm in the year of acquisition (j=0) and all the wages are relative to the year of acquisition. Treated firms are Swedish local firms that are acquired by foreign owners over the period 1998-2013. Control firms are Swedish local firms that are never acquired by foreign owners over the same period. Stayers at event time j are workers who remain employed at the same firm from the year of acquisition to the jth year post-acquisition. Movers at event time j include all the workers who have moved to other firms between the first and the jth years post-acquisition. Destination firm types include MNEs and local firms, where MNEs consist of both foreign owned firms and Swedish MNEs, and local firms are Swedish firms with no foreign affiliates.

Table 4: Estimating the effect of foreign acquisitions on job mobility.

	To MNEs		To local firms	
	(1)	(2)	(3)	(4)
Treated	0.009	0.019***	0.004	-0.015
	(0.006)	(0.005)	(0.011)	(0.01)
After	0.028***	0.023***	0.065***	0.052***
	(0.006)	(0.005)	(0.012)	(0.011)
DiD	0.041***	0.040***	-0.050***	-0.050***
	(0.008)	(0.008)	(0.014)	(0.013)
Female		-0.021***		-0.017***
		(0.002)		(0.002)
Experience		-0.004***		-0.006***
		(0.000)		(0.000)
Experience square		0.000***		0.000***
		(0.000)		(0.000)
Years of schooling		0.002***		-0.007***
		(0.000)		(0.000)
Log employment		0.003**		-0.013***
		(0.001)		(0.002)
Share of high-skilled		0.086***		-0.109***
		(0.009)		(0.012)
Capital intensity		0.000		-0.000
		(0.000)		(0.000)
Observations	2,957,840	2,957,840	2,957,840	2,957,840
R-squared	0.022	0.048	0.021	0.052
Year FE	YES	YES	YES	YES
Industry FE	NO	YES	NO	YES

Note: This table reports results from estimating equation (1). The sample period covers up to four years before an acquisition and up to nine years after the acquisition. The dependent variable takes the value one if workers in a treated or control firm move to MNEs (columns 1-2) or to local firms (columns 3-4), and zero otherwise. $Treated$ takes the value one for workers who are employed by firms that are acquired at some point and the value zero for workers in control firms. $After$ takes the value one in the year of acquisition and all years after. DiD is an interaction between $Treated$ and $After$. Female, Experience, Experience square and Years of schooling are worker characteristics at the year of acquisition. Log employment, Share of high-skilled workers, and Capital intensity are firm characteristics at the year of acquisition. For details on equation (1), see Section 2.2. In parentheses are standard errors clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: The effect of foreign acquisitions on job mobility to foreign and Swedish MNEs.

	All firms	>500 employees	>1000 employees
	(1)	(2)	(3)
	Panel A: Move to Foreign MNEs.		
DiD	0.049***	0.053***	0.046***
	(0.005)	(0.011)	(0.013)
Observations	2,957,840	1,106,095	810,001
R-squared	0.037	0.115	0.142
	Panel B: Move to Swedish MNEs.		
DiD	-0.009*	-0.024*	-0.016
	(0.005)	(0.013)	(0.016)
Observations	2,957,840	1,106,095	810,001
R-squared	0.031	0.124	0.170

Note: This table reports the estimated difference-in-differences coefficients from estimating equation (1) where the dependent variable is the mobility to foreign and Swedish MNEs, respectively, in panels A and B. The sample period covers up to four years before an acquisition and up to nine years after the acquisition. All specifications include controls for firm and worker characteristics, year fixed effects, and industry fixed effects. See Table 4 for the included control variables. In parentheses are standard errors clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: The effect of foreign acquisitions on job mobility to MNEs, separately by the source country of foreign acquirers.

	Norway	Denmark	US	UK	Germany	Finland	France	EU-15	Nordic	Tax havens	English speaking
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Panel A. Move to MNEs.										
DiD	0.104***	-0.001	0.047**	0.067***	-0.012	0.045	-0.001	0.025**	0.059***	0.047***	0.060***
	(0.017)	(0.019)	(0.021)	(0.017)	(0.027)	(0.030)	(0.019)	(0.010)	(0.013)	(0.011)	(0.014)
Observations	362,547	290,227	375,346	307,916	353,823	189,779	111,635	1,656,696	842,553	420,740	697,666
R-squared	0.068	0.050	0.091	0.059	0.081	0.124	0.068	0.044	0.058	0.046	0.070
	Panel B. Move to foreign MNEs.										
DiD	0.105***	0.023	0.059***	0.055***	0.050***	0.110***	0.008	0.046***	0.080***	0.045***	0.055***
	(0.014)	(0.014)	(0.010)	(0.012)	(0.018)	(0.016)	(0.015)	(0.006)	(0.009)	(0.007)	(0.008)
Observations	362,547	290,227	375,346	307,916	353,823	189,779	111,635	1,656,696	842,553	420,740	697,666
R-squared	0.065	0.036	0.056	0.055	0.055	0.097	0.060	0.039	0.052	0.042	0.051
	Panel C. Move to MNEs from the same source country.										
DiD	0.068***	0.019**	0.038***	0.011***	0.091***	0.091***	0.042***	0.043***	0.063***	0.031***	0.029***
	(0.009)	(0.008)	(0.006)	(0.002)	(0.013)	(0.011)	(0.009)	(0.005)	(0.006)	(0.004)	(0.004)
Observations	362,547	290,227	375,346	307,916	353,823	189,779	111,635	1,656,696	842,553	420,740	697,666
R-squared	0.065	0.029	0.038	0.012	0.084	0.116	0.041	0.033	0.051	0.023	0.031

Note: This table reports the estimated difference-in-differences coefficients from estimating equation (1) separately by the source country of foreign acquirers. The sample period covers up to four years before an acquisition and up to nine years after the acquisition. The dependent variable is mobility to MNEs (both Swedish- and foreign-owned) in panel A and mobility to foreign-owned MNEs in panel B. Panel C shows results where the dependent variable is mobility to an MNE from the same country as the source country of foreign acquirers. In column 9, Nordic countries exclude Sweden. In column 10, tax havens include the Netherlands, Luxembourg, and Switzerland. In column 11, English-speaking countries include the UK, the US, Ireland, Australia and New Zealand. All specifications include controls for firm and worker characteristics, year fixed effects, and industry fixed effects. See Table 4 for the included control variables. In parentheses are standard errors clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: The effect of foreign acquisitions on job mobility to foreign MNEs, separately by the source country of top four foreign investors.

Move to:	Norway	Denmark	US	UK	Germany	Finland	France	EU-15	Nordic	Tax havens	English speaking
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					Panel A: Acquisitions by Norway.						
DiD	0.068***	0.003***	0.001	0.001	0.001**	0.002	0.002***	0.035***	0.073***	0.024**	0.002
	(0.009)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.012)	(0.009)	(0.011)	(0.002)
Observations	362,547	362,547	362,547	362,547	362,547	362,547	362,547	362,547	362,547	362,547	362,547
R-squared	0.065	0.004	0.006	0.003	0.004	0.006	0.003	0.031	0.058	0.043	0.008
					Panel B: Acquisitions by Denmark.						
DiD	-0.000	0.019**	0.002	-0.001	0.002	0.006*	-0.006	0.026**	0.026***	0.005**	0.026***
	(0.001)	(0.008)	(0.002)	(0.003)	(0.002)	(0.004)	(0.005)	(0.012)	(0.009)	(0.002)	(0.009)
Observations	290,227	290,227	290,227	290,227	290,227	290,227	290,227	290,227	290,227	290,227	290,227
R-squared	0.003	0.029	0.010	0.009	0.004	0.016	0.015	0.032	0.032	0.007	0.032
					Panel C: Acquisitions by the US.						
DiD	0.003***	0.004***	0.038***	0.003**	0.005***	0.001	0.002**	0.013***	0.009***	-0.003	0.042***
	(0.001)	(0.001)	(0.006)	(0.001)	(0.001)	(0.001)	(0.001)	(0.005)	(0.002)	(0.004)	(0.007)
Observations	375,346	375,346	375,346	375,346	375,346	375,346	375,346	375,346	375,346	375,346	375,346
R-squared	0.004	0.006	0.038	0.007	0.006	0.005	0.004	0.027	0.008	0.027	0.041
					Panel D: Acquisitions by the UK.						
DiD	0.002**	0.009**	0.010***	0.011***	0.004***	-0.002*	-0.001	0.043***	0.010**	0.013**	0.021***
	(0.001)	(0.005)	(0.004)	(0.002)	(0.001)	(0.001)	(0.001)	(0.009)	(0.005)	(0.005)	(0.005)
Observations	307,916	307,916	307,916	307,916	307,916	307,916	307,916	307,916	307,916	307,916	307,916
R-squared	0.006	0.014	0.035	0.012	0.008	0.004	0.006	0.038	0.011	0.017	0.031

Note: This table reports the estimated difference-in-differences coefficients from estimating equation (1) separately by the source country of top four foreign investors and by worker movements to foreign MNEs with different countries of ownership. The sample period covers four years before an acquisition and nine years after the acquisition. Panels A-D display results for acquisitions by Norway, Denmark, the US, and the UK, respectively. In column 9, Nordic countries exclude Sweden. In column 10, tax havens include the Netherlands, Luxembourg, and Switzerland. In column 11, English-speaking countries include the UK, the US, Ireland, Australia and New Zealand. All specifications include controls for firm and worker characteristics, year fixed effects, and industry fixed effects. See Table 4 for the included control variables. In parentheses are standard errors clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 8: The effect of foreign acquisitions on trade at the firm-level.

	Total trade	Export	Import
	(1)	(2)	(3)
DiD	7,454.024**	469.928	6,984.096***
	(3,533.608)	(1,912.571)	(2,673.480)
Observations	57,136	57,136	57,136
R-squared	0.064	0.111	0.028
Control variables	YES	YES	YES
Year FE	YES	YES	YES
Industry FE	YES	YES	YES

Note: This table reports the estimated difference-in-differences coefficients from equation (4). The sample period covers up to four years before an acquisition and up to nine years after the acquisition. The dependent variable is the total value of trade, the value of exports, and the value of imports, respectively, in columns 1-3. All specifications include controls for firm characteristics, year fixed effects, and industry fixed effects. For details on equation (4), see Section 4.1. In parentheses are standard errors clustered at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 9: The effect of foreign acquisitions on trade at the firm-level, separately by source countries of acquirers and by trade destination countries.

	Norway	Denmark	US	UK	Germany	Finland	France	EU-15	Nordic	Tax havens	English speaking
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Panel A: Dependent Variable = trade with source country as a share of total firm trade.										
DiD	0.087***	0.094***	0.041*	0.019*	0.053***	0.040***	0.030	0.033***	0.065***	0.014	0.035**
	(0.018)	(0.015)	(0.021)	(0.011)	(0.018)	(0.016)	(0.018)	(0.009)	(0.013)	(0.009)	(0.015)
Observations	8,992	6,447	5,390	4,952	4,614	4,524	1,896	33,125	19,963	10,395	10,971
R-squared	0.146	0.248	0.151	0.153	0.332	0.189	0.177	0.292	0.149	0.075	0.099
	Panel B: Acquisitions by Norway (Dependent Variable = trade with specific countries as a share of total firm trade).										
DiD	0.087***	0.009	-0.022**	0.006*	0.007	-0.000	-0.003	0.025*	0.096***	0.005	-0.020*
	(0.018)	(0.006)	(0.011)	(0.004)	(0.006)	(0.005)	(0.002)	(0.014)	(0.019)	(0.007)	(0.011)
Observations	8,992	8,992	8,992	8,992	8,992	8,992	8,992	8,992	8,992	8,992	8,992
R-squared	0.146	0.153	0.070	0.084	0.099	0.048	0.067	0.245	0.178	0.042	0.062
	Panel C: Acquisitions by Denmark (Dependent Variable = trade with specific countries as a share of total firm trade).										
DiD	-0.015	0.094***	-0.013	-0.010*	-0.016**	-0.016**	0.004	0.050**	0.062***	0.008	-0.024
	(0.020)	(0.015)	(0.013)	(0.005)	(0.007)	(0.008)	(0.005)	(0.020)	(0.023)	(0.009)	(0.015)
Observations	6,447	6,447	6,447	6,447	6,447	6,447	6,447	6,447	6,447	6,447	6,447
R-squared	0.052	0.248	0.078	0.041	0.126	0.070	0.048	0.312	0.164	0.056	0.090
	Panel D: Acquisitions by the US (Dependent Variable = trade with specific countries as a share of total firm trade).										
DiD	-0.001	0.005	0.041*	0.014*	-0.002	-0.006	-0.005	0.021	-0.002	0.013	0.054**
	(0.020)	(0.007)	(0.021)	(0.008)	(0.010)	(0.008)	(0.004)	(0.021)	(0.022)	(0.013)	(0.022)
Observations	5,390	5,390	5,390	5,390	5,390	5,390	5,390	5,390	5,390	5,390	5,390
R-squared	0.072	0.091	0.151	0.076	0.116	0.058	0.065	0.308	0.092	0.067	0.144
	Panel E: Acquisitions by the UK (Dependent Variable = trade with specific countries as a share of total firm trade).										
DiD	0.007	0.006	-0.004	0.019*	-0.005	-0.011	-0.001	0.010	0.001	-0.014	0.014
	(0.021)	(0.008)	(0.018)	(0.011)	(0.009)	(0.007)	(0.004)	(0.021)	(0.023)	(0.010)	(0.020)
Observations	4,952	4,952	4,952	4,952	4,952	4,952	4,952	4,952	4,952	4,952	4,952
R-squared	0.057	0.096	0.081	0.153	0.135	0.092	0.102	0.331	0.113	0.035	0.086

Note: This table reports results from estimating equation (4) on firm-level trade shares separately by source countries of foreign acquirers and trade destination countries. The sample period covers up to four years before an acquisition and up to nine years after the acquisition. The dependent variable in Panel A is the share of trade with the same country as the source country of foreign acquirers. Panels B-D show regressions for the top four foreign investors. Each column reports the results for trade with a specific country. For instance, the DID estimate in Panel B, column 2 (0.009) shows the impact of acquisitions from Norway on trade with Denmark as a share of total firm trade. In column 9, Nordic countries exclude Sweden. In column 10, tax havens include the Netherlands, Luxembourg, and Switzerland. In column 11, English-speaking countries include the UK, the US, Ireland, Australia and New Zealand. All specifications include controls for firm characteristics, year fixed effects, and industry fixed effects. For details on equation (4), see Section 4.1. In parentheses are standard errors clustered at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 10: The effect of foreign acquisitions on job mobility to MNE, separately by high- and low-tech source countries.

	Software capital/K		Software capital/Empl		Robot stocks/Empl		Robot stocks/Empl in 1997	
	High tech	Low tech	High tech	Low tech	High tech	Low tech	High tech	Low tech
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DiD	0.034***	0.008	0.056***	-0.004	0.030**	0.003	0.029**	0.003
	(0.012)	(0.015)	(0.015)	(0.015)	(0.014)	(0.017)	(0.014)	(0.017)
Observations	539,753	692,005	580,157	557,775	544,669	749,850	542,610	751,909
R-squared	0.048	0.057	0.067	0.068	0.050	0.058	0.049	0.058
Control variables	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES

Note: This table reports results from estimating equation (1) separately by source countries with different technology sophistication. The measures of technology sophistication include software capital to total capital in columns 1-2, software capital per employee in columns 3-4, robot stocks per employee in columns 5-6, and robot stocks per employee for year 1997 in columns 7-8. Based on different measures, for each industry, high-tech (low-tech) countries are those with technology expenditure shares above (below) the sample median. Each column shows DiD estimates of the effect of acquisitions on job mobility to MNEs separately by high-tech and low-tech source countries. All specifications include controls for firm and worker characteristics, year fixed effects, and industry fixed effects. See Table 4 for the included control variables. In parentheses are standard errors clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 11: The effect of foreign acquisitions on mobility to MNEs by high- and low-quality management practices.

	Management1				*Management2*			
	>median	<median	>p(75)	<p(25)	>median	<median	>p(75)	<p(25)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: Move to MNEs							
DiD	0.018	0.077***	0.042***	0.084***	0.018	0.077***	0.036***	0.084***
	(0.011)	(0.010)	(0.012)	(0.013)	(0.011)	(0.010)	(0.011)	(0.013)
Observations	1,519,656	1,028,061	715,960	673,770	1,520,123	1,027,594	834,859	674,552
R-squared	0.047	0.060	0.063	0.073	0.047	0.060	0.058	0.073
	Panel B: Move to foreign MNEs							
DiD	0.035***	0.084***	0.042***	0.101***	0.035***	0.084***	0.035***	0.101***
	(0.007)	(0.007)	(0.006)	(0.009)	(0.007)	(0.007)	(0.006)	(0.009)
Observations	1,519,656	1,028,061	715,960	673,770	1,520,123	1,027,594	834,859	674,552
R-squared	0.037	0.053	0.045	0.064	0.037	0.052	0.041	0.064

Note: This table reports results from estimating equation (1) separately by acquisitions from source countries with management practices at different quality levels (high vs. low). Two measures of management practices are calculated, based on data from the World Management Survey (WMS). *Management1* in columns 1-4 is based on all MNEs in the WMS, and *Management2* in columns 5-8 excludes parent firms, i.e., the part of the MNEs located in the source country. Source countries with high (low)-quality management practices are those with a measure above (below) the sample median or above the 75th percentile (below the 25th percentile) of the measure. Each column shows DiD estimates of the effect of acquisitions on job mobility to MNEs separately by source countries with high- or low-quality management practices. All specifications include controls for firm and worker characteristics, year fixed effects, and industry fixed effects. See Table 4 for the included control variables. In parentheses are standard errors clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Table 12: Estimating the effect of mobility on wages for treated workers.

	Movers to MNEs compared to stayers in treated firms		Movers to local firms compared to stayers in treated firms	
	(1)	(2)	(3)	(4)
After	0.077***	0.100***	0.081***	0.101***
	(0.019)	(0.006)	(0.019)	(0.006)
Mover	0.033**	-0.031***	-0.183***	-0.188***
	(0.015)	(0.013)	(0.013)	(0.006)
After * Mover	0.090***	0.129***	0.047***	0.085***
	(0.018)	(0.017)	(0.017)	(0.007)
Female		-0.355***		-0.352***
		(0.003)		(0.003)
Experience		0.037***		0.037***
		(0.000)		(0.000)
Experience square		-0.001***		-0.001***
		(0.000)		(0.000)
Years of schooling		0.082***		0.078***
		(0.001)		(0.001)
Log employment		-0.022***		-0.018***
		(0.001)		(0.001)
Share of high-skilled		0.494***		0.480***
		(0.010)		(0.010)
Capital intensity		0.004***		0.005***
		(0.000)		(0.000)
Observations	1,206,218	1,206,218	1,298,064	1,298,064
R-squared	0.034	0.264	0.028	0.200

Note: This table reports results from estimating equation (5). The sample period covers up to four years before an acquisition and up to nine years after the acquisition. Columns 1-2 compare wage growth of treated movers to MNEs with that of treated stayers. Columns 3-4 compare wage growth of treated movers to local firms with that of treated stayers. Treated workers are those who are present in acquired firms at the time of acquisitions. All specifications include controls for firm and worker characteristics, year fixed effects, and industry fixed effects. Female, Experience, Experience square and Years of schooling are worker characteristics at the year of acquisition. Log employment, Share of high-skilled workers, and Capital intensity are firm characteristics at the year of acquisition. For details on equation (5), see Section 5. In parentheses are standard errors clustered at the firm-year level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix

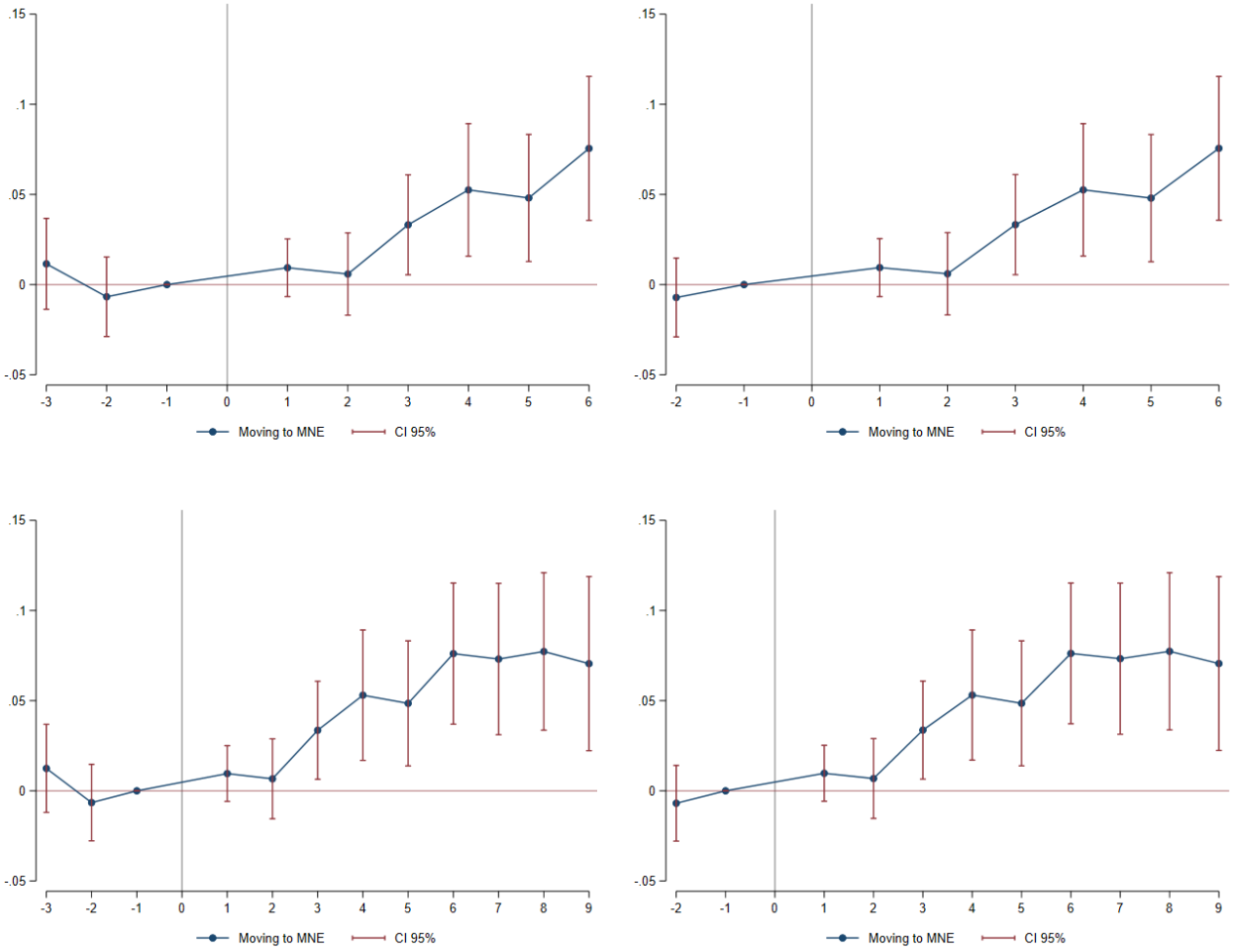


Figure A1: Event study. The effect of foreign acquisitions on mobility to MNEs. Robustness to different sample periods.

Note: The figures show the yearly difference-in-difference estimates of β_j using equation (2), relative to one year prior to foreign acquisitions (event time $j = -1$). Each figure displays estimates based on different sample periods. The vertical bars show the 95% confidence intervals. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (2), see Section 2.2.

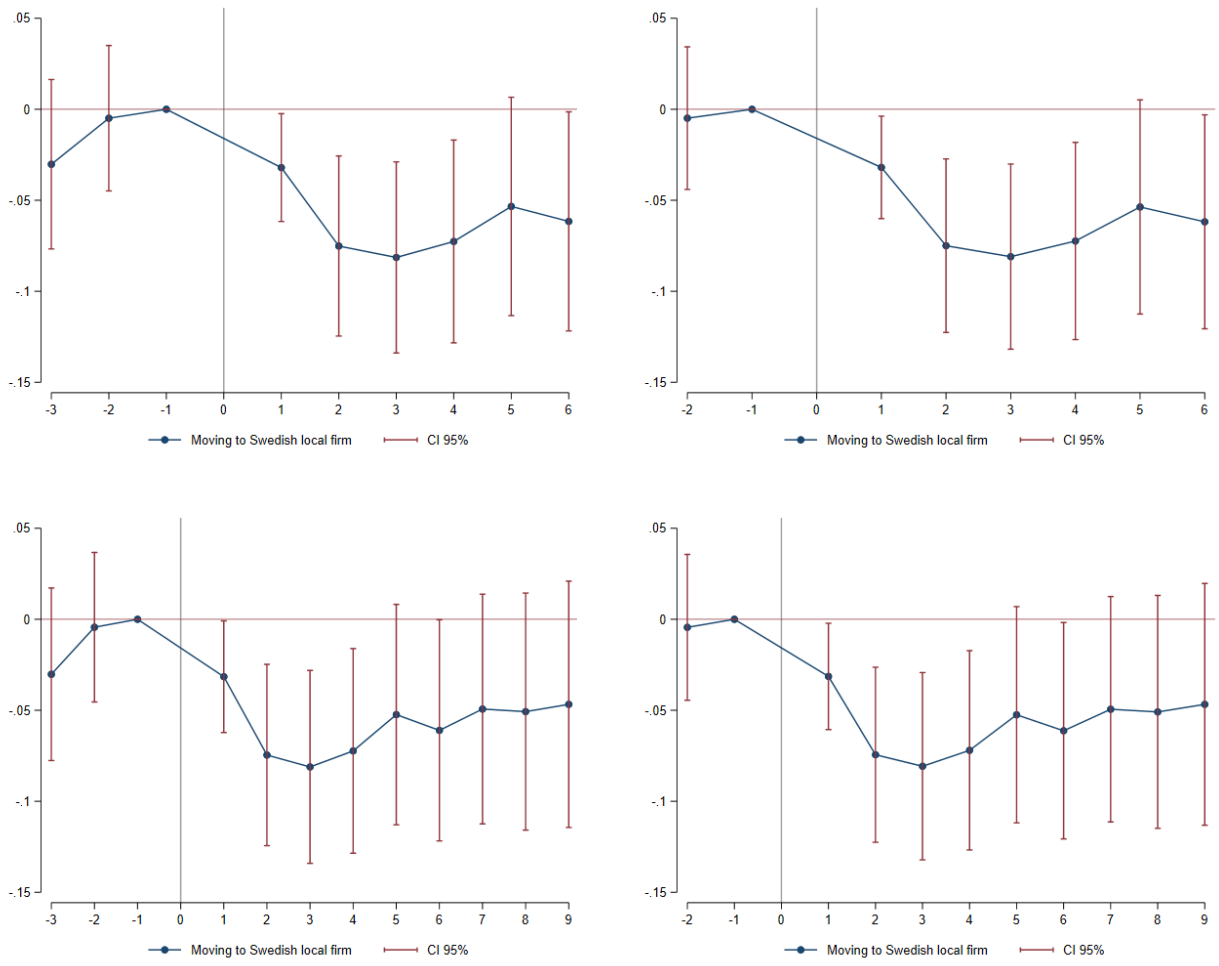
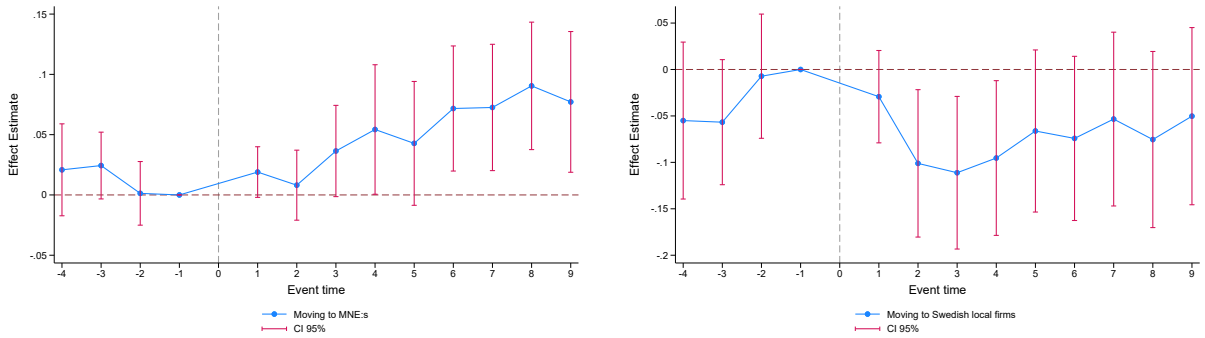


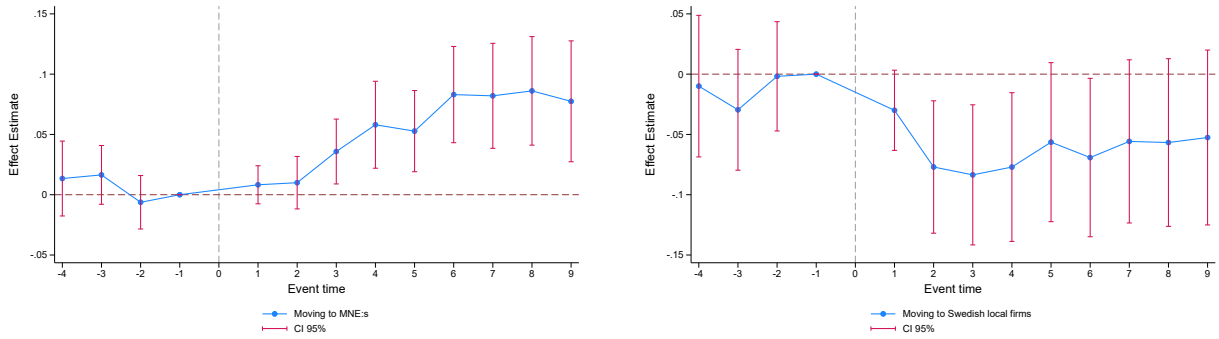
Figure A2: Event study. The effect of foreign acquisitions on mobility to local firms. Robustness to different sample periods.

Note: The figures show the yearly difference-in-difference estimates of β_j using equation (2), relative to one year prior to foreign acquisitions (event time $j = -1$). Each figure displays estimates based on different sample periods. The vertical bars show the 95% confidence intervals. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (2), see Section 2.2.

Panel A. The effect of foreign acquisitions on mobility for the low-education group.



Panel B. The effect of foreign acquisitions on mobility for the middle-education group.



Panel C. The effect of foreign acquisitions on mobility for the high-education group.

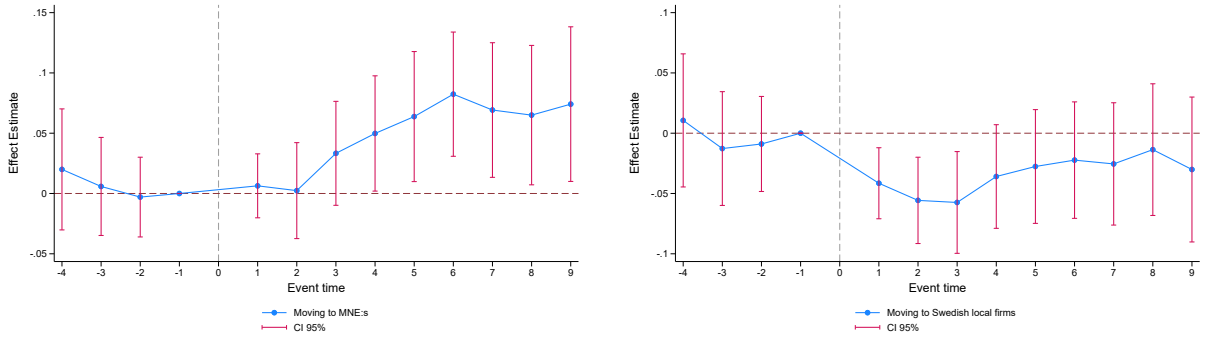


Figure A3: Event study. The effect of foreign acquisitions on mobility by education groups.

Note: The figures show the yearly difference-in-difference estimates of β_j using equation (2), relative to one year prior to foreign acquisitions (event time $j = -1$). The low-education group includes workers with at most 9 years of compulsory schooling. The middle-education group includes workers with 2-4 years of upper secondary school education. The high-education group includes workers with at least undergraduate college education. The vertical bars show the 95% confidence intervals. Controls for worker and firm characteristics, industry fixed effects, and year fixed effects are included. For details on equation (2), see Section 2.2.

Appendix Table A1: The top ten source countries of foreign acquisitions.

	Number of acquisitions	Share of acquired firms (%)	Share of workers in acquired firms (%)
Norway	859	19.4	14.8
Denmark	610	13.8	13.0
U.S.	512	11.5	15.1
Netherlands	506	11.4	9.1
U.K.	446	10.1	12.8
Germany	425	9.6	14.3
Finland	423	9.5	7.6
Luxembourg	334	7.5	5.8
France	172	3.9	4.3
Switzerland	147	3.3	3.0

Note: This table reports the top ten source countries of foreign acquisitions that have the largest number of acquisitions and the largest number of employment in the acquired firms during 1998-2013.

Appendix Table A2: The effect of foreign acquisitions on job mobility in the short-, medium-, and long run.

	To MNEs		To local firms	
	(1)	(2)	(3)	(4)
DiD pre-medium	0.015	0.014	-0.024	-0.022
	(0.012)	(0.010)	(0.022)	(0.020)
DiD short-run	0.012	0.011	-0.051***	-0.051***
	(0.008)	(0.008)	(0.017)	(0.016)
DiD medium-run	0.047***	0.047***	-0.076***	-0.075***
	(0.013)	(0.012)	(0.022)	(0.021)
DiD long-run	0.065***	0.065***	-0.056**	-0.055**
	(0.015)	(0.014)	(0.024)	(0.023)
DiD longest-run	0.078***	0.076***	-0.046**	-0.047**
	(0.015)	(0.014)	(0.022)	(0.021)
Observations	2,957,840	2,957,840	2,957,840	2,957,840
R-squared	0.039	0.066	0.045	0.078
Control variables	NO	YES	NO	YES
Year FE	YES	YES	YES	YES
Industry FE	NO	YES	NO	YES

Note: This table reports results from estimating equation (2) for six sub-periods. The sample period covers up to four years before an acquisition and up to nine years after the acquisition. DiD pre-medium measures years 3 and 4 before treatment. Years 1 and 2 before treatment are omitted as years of comparison. DiD short-run examines the treatment effect in years 1 and 2 post-acquisition, DiD medium-run in years 3 and 4, DiD long-run in years 5 and 6, and DiD longest-run in years 7, 8 and 9. All specifications include year fixed-effects, control variables, and industry fixed-effects. See Table 4 for the included control variables. Standard errors are clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Appendix Table A3: The effect of foreign acquisitions on job mobility for different sample periods.

	-4 to +9	-3 to +6	-2 to +6	-3 to +9	-2 to +9
	(1)	(2)	(3)	(4)	(5)
	Panel A: Move to MNEs				
DiD	0.040***	0.033***	0.038***	0.042***	0.047***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Observations	2,957,840	2,260,524	2,023,180	2,754,526	2,517,182
R-squared	0.043	0.036	0.039	0.046	0.048
	Panel B: Move to local firms				
DiD	-0.050***	-0.054***	-0.061***	-0.051***	-0.059***
	(0.013)	(0.014)	(0.014)	(0.013)	(0.013)
Observations	2,957,840	2,260,524	2,023,180	2,754,526	2,517,182
R-squared	0.045	0.042	0.044	0.048	0.052

Note: This table reports results from estimating equation (1) for different sample periods. For comparison, column 1 lists the baseline estimates from Table 4, columns 2 and 4. All specifications include year fixed-effects, control variables, and industry fixed-effects. See Table 4 for the included control variables. In parentheses are standard errors are clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Appendix Table A4: The effect of foreign acquisitions on mobility to high-wage firms.

	Top-10%	Top-20%	Top-33%
	(1)	(2)	(3)
DiD	-0.003	-0.010	-0.014
	(0.004)	(0.006)	(0.011)
Observations	2,957,840	2,957,840	2,957,840
R-squared	0.064	0.089	0.073

Note: This table reports results from estimating equation (1) with mobility to high-wage firms as dependent variable. High-wage firms are defined as the top ten percent of firms with the highest wages in column 1, the top 20 percent in column 2, and the top 33 percent in column 3. The sample period covers up to four years before an acquisition and up to nine years after the acquisition. All specifications include year fixed-effects, control variables, and industry fixed-effects. See Table 4 for the included control variables. In parentheses are standard errors clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.

Appendix Table A5: The effect of foreign acquisitions on mobility. Robustness to the inclusion of worker or firm fixed effects.

	To MNEs			To local firms		
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	0.019***		-0.054***	-0.015		0.034***
	(0.005)		(0.003)	(0.01)		(0.003)
After	0.023***	-0.081***	-0.037***	0.052***	-0.077***	0.021***
	(0.005)	(0.006)	(0.004)	(0.011)	(0.015)	(0.005)
DiD	0.040***	0.037***	0.022***	-0.050***	-0.040***	-0.012***
	(0.008)	(0.006)	(0.003)	(0.013)	(0.016)	(0.003)
Observations	2,957,840	2,957,840	2,957,840	2,957,840	2,957,840	2,957,840
R-squared	0.048	0.034	0.023	0.052	0.030	0.006
Worker and Firm Controls	YES			YES		
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Worker FE		YES			YES	
Firm FE			YES			YES

Note: This table reports results from estimating equation (1) where the dependent variable is the mobility to MNEs and local firms, respectively, in columns 1-3 and 4-6. The sample period covers up to four years before an acquisition and up to nine years after the acquisition. Columns 1 and 4 include controls for firm and worker characteristics one year prior to the acquisition. Columns 2 and 5 include worker fixed effects. Columns 3 and 6 include firm fixed effects. All specifications include year fixed effects and industry fixed effects. See Table 4 for the included control variables. Standard errors are clustered at the firm-year level. *** p<0.01, ** p<0.05, * p<0.1.