

# Worker reallocation around ownership change and its implications for wages and job tenure \*

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May 2014

Preliminary and incomplete. Do not cite without author's permission

## Abstract

In this paper we investigate the consequences of foreign and domestic acquisitions for the employees in these plants. While they may make many employees fear for their jobs or employment conditions, from a management perspective an ownership change presents an opportunity for restructuring and for improving the match between a plant and its employees. We document the extent of ‘excess’ labour reallocation around ownership changes from the perspective of the worker and the plant. We further investigate developments in employment conditions for workers around domestic and foreign acquisitions depending on whether they stay in the plant, whether they are newly hired or whether they leave the plant. Using a comprehensive panel of matched employer-employee data of Norwegian manufacturing firms for the period 1996-2007, we find that overall high-skilled employees tend to fare better around foreign acquisitions, this is the case whether they stay or come newly into plant. In turn workers that (are forced to) leave plants subject to domestic or foreign acquisitions tend to have

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\*This work makes use of data from Statistics Norway, but does not imply the endorsement of Statistics Norway in relation to the interpretation or analysis of the data. This work uses a research dataset which may not exactly reproduce statistical aggregates published by Statistics Norway. We are grateful to Francesco Devicienti for valuable suggestions. We thank Matteo Picchio and seminar participants at the Economic and Social Research Institute, ETSG Leuven, ITSG Ancona and the Nordic Econometrics Meeting in Bergen for valuable comments. All remaining errors are our own responsibility.

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lower wage growth than other leavers. Attachment to the plant increases (decreases) after domestic (foreign) acquisitions.

**Keywords:**

**JEL Classification:**

## 1 Introduction

Mergers and acquisitions (M&A) are a tool for restructuring the ownership and control of plants. Much of the literature views M&As as a way to improve the allocation of resources towards more efficient firms and owners, either by improving the match between the firm and its plants (Lucas, 1978; Lichtenberg and Siegel, 1987; Maksimovic and Phillips, 2002; Maksimovic et al., 2011), or by improving the match between the firm and/or the technology and its employees (Siegel and Simons, 2010). Indeed some recent papers argue in a similar vein that shocks such as trade liberalisation affect both the sorting of workers across firms and industries as well as the wage distribution (Davidson et al., 2010, 2012; Helpman et al., 2012; Krishna et al., 2011, 2012; Menezes-Filho and Muendler, 2011). For the employees in the plants subject to an acquisition the prospect of such a deal is frequently associated with concerns over changes in employment conditions or even fears of losing their jobs. In the most prominent cases, these worries are exacerbated by the media and sometimes also by politicians. However, some employees may view the restructuring associated with an acquisition as an opportunity to find a more desirable job. Also, if there are search frictions in the labour market a plant's management may use the period of restructuring during an acquisition to screen more intensively with the objective of hiring better-suited employees (as modeled by Helpman et al. (2010) in a trade setting).

If the restructuring following ownership change is a systematic attempt from the firms perspective of making sure that its employees are a good match to the firm, we should expect to see that acquired plants make changes in the composition of their workforce, or that possible unobserved changes they introduce (for example in technology) improve the match with existing employees.

Our aim in this paper is twofold. First, we document the extent of restructuring among employees in firms subject to foreign and domestic acquisitions. In particular, we examine whether acquisitions affect the employees' probability of leaving or joining a plant and whether these probabilities differ across skill levels (we are unable to distinguish between voluntary and involuntary separations). Second, we show how this process affects workers' conditions. We look at changes in wages, wage growth and the length of job spells of workers in plants subject to acquisitions. We consider separately the wages of workers that remain in the plant throughout the acquisition period as well as those of workers that leave plants subject to acquisitions and those that are newly hired during an acquisition period.

We use comprehensive matched employer-employee data from Norwegian manufacturing for the period 1996-2007 for our analysis. We distinguish between domestic and foreign acquisitions since the target firms as well as the motivation for the takeover in these deals tend to be quite different (Balsvik and Haller, 2010). According to the OLI paradigm by Dunning (1981) foreign firms expanding abroad need to have an ownership, location or internalisation advantage. As a result plants subject to foreign acquisitions may undergo greater organisational changes or receive more new technology.

The related literature on labour turnover and worker reallocation around acquisitions by and large confirms that there is 'excess' labour turnover around acquisitions. Some studies also show that the skill composition changes. Davis et al. (2011) provide evidence of higher hiring and separation rates before and after private equity buy-outs in the US between 1980 to 2000. Lichtenberg and Siegel (1990) show that ownership change results in a reduction of auxiliary-establishment employment (central office staff) relative to production-establishment employment for US manufacturing between 1963 and 1982. Pesola (2009) provides evidence that job separation hazards increase following domestic and foreign acquisitions in a sample of Finnish matched employer-employee data for 1990-2002; her results also indicate that the hazards vary across sectors and types of employees. Csengödi et al. (2008) document a higher share of new workers and a higher

share of highly educated workers after foreign acquisition in a panel of Hungarian manufacturing firms for the period 1992-2001.

In terms of changes in the skill composition following foreign acquisitions, Huttunen (2007) shows that it is associated with a reduction in the share of high-skilled employees in a panel of Finnish establishments complemented with employee data from 1988-2001. In turn, Almeida (2007) does not find evidence of a significant change in the level of education following foreign acquisitions using matched employer-employee data for Portugal for the period 1991-1998. Our analysis is more comprehensive than the above in that we look at hiring and separations overall and by skill group both from the perspective of the employees as well as from the perspective of the plants. Moreover we document these developments from before to after acquisition to capture possible announcement effects and we distinguish between domestic and foreign acquisitions.

As regards the second aspect of our paper, namely changes to wages around acquisitions, the related literature has found positive and negative effects, in some instances they differ depending on the employees' skill level, education or occupation. Using matched employer-employee data Andrews et al. (2009); Balsvik (2011); Csengödi et al. (2008); Malchow-Møller et al. (2013) find small positive effects of foreign takeovers on individual wages for respectively West Germany (for 2000 and 2004), Norwegian manufacturing (1990-2000), Hungary (1992-2001) and Denmark (2000-2002). In contrast Heyman et al. (2007) and Martins (2004) find a small negative effect in Sweden (1996-2000) and Portugal (1991-1999).<sup>1</sup> Heyman et al. (2011) find a positive effect of foreign takeovers on wages in Sweden that is concentrated on CEOs and other managers while the effect is negative for the medium- and low-skilled workers. Hijzen et al. (2010) in their study of five countries (Brazil, Germany, Indonesia, Portugal and the UK) also find a small positive effect of foreign takeovers on individual wages, but little effect on other outcomes such as hours of work, job stability and union coverage.

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<sup>1</sup>Almeida (2007) uses matched employer-employee data for Portugal, but aggregates wages and worker characteristics to the firm level she finds little effect of foreign acquisitions on wages.

Apart from Hijzen et al. (2010) the above studies do not control for changes in the composition of the workforce in their analysis. We examine the effects of foreign and domestic acquisitions on all workers and on workers that remain in the plant during the period of acquisition. We further investigate how wages develop for workers that are newly hired and for workers that separate from plants subject to acquisitions. Jolivet et al. (2006) show for a number of European countries and the US that up to a third of job-to-job transitions in the labour market are associated with a wage reduction (they don't look at acquisitions). While wages may change for reasons other than acquisitions, if the reallocation of labour around acquisitions is efficient, job spells that start after acquisitions should last longer than those before. Pesola (2009) provides evidence that job separation hazards increase following domestic and foreign acquisitions in a sample of Finnish matched employer-employee data for 1990-2002; her results show some variation across sectors and types of employees. We compare the hazard of a job spells ending before and after acquisition.

## **2 Data and Definitions**

### **2.1 Data sources and cleaning**

In our analysis we use several annual data bases for the years 1996-2007. All of these data bases are censuses that can be linked to each other through firm or plant identifiers. All data sources are administered by Statistics Norway. Our starting point is the Norwegian Manufacturing Statistics, which is collected at the plant level. We keep only plants that are observed for at least three years during 1996-2007 and do not have one or more missing years before they reappear in the manufacturing statistics. We then drop very small plants; these are plants with on average less than 3 employees every year or with average production value or total wage costs of less than one million NOK per year.

To the resulting plant panel, we link the SIFON register using the firm identifiers of these plants. The SIFON register is a register of foreign ownership interests in Norwegian firms. This

register provides information about shares of firm assets/stocks that are owned by foreign owners. With the information in the SIFON register we use a strict definition for foreign ownership: we define a plant as foreign owned if the ownership share of the largest foreign owner is above 50%. Our definition of a foreign acquisition occurring in year  $t$  is, thus, that the largest foreign ownership share is above 50% in year  $t$ , but was below this threshold in year  $t - 1$ . We also observe divestures in our data, i.e. cases where the foreign ownership share drops from above to below 50%. Due to the small number of these cases we drop these plants from our analysis. We also drop plants with more than one ownership change.

We are also interested in plants that experience a change of ownership from one Norwegian owner to a different Norwegian owner. In order to identify these changes in our data set, we make use of the plant and firm identifiers in the manufacturing statistics. While the plant identifiers are connected to a specific location with production in a specific industry, the firm identifier is related to the legal owner (firm). The plant identifier does not change as long as the production is within the same industry and in the same location, while the firm identifier may change if the plant gets a new owner. Thus we identify a domestic ownership change for a plant in year  $t$  if the plant does not have the same firm identifier in year  $t$  and year  $t - 1$ . We also require that the new firm id in year  $t$  owned other plants in  $t-1$ . Further, the plant must not be defined as foreign owned in either year  $t$  or  $t-1$ . We drop plants with more than one domestic ownership change.<sup>2</sup>

We then link our third data source, the income tax files containing information about job spells and associated earnings over the course of a job spell for individuals, to the manufacturing plant panel using the plant identifiers. Based on this match, we drop plants that have one or more years without any matched workers from the job spell data. The resulting plant panel at this stage

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<sup>2</sup>In earlier work we also identified domestic plants that were taken over by Norwegian multinationals (Balsvik and Haller, 2010). During our sample period we are able to identify less than 20 such cases and we therefore drop these plants from our analysis. A handful of other papers are able to identify domestic multinationals in their studies of ownership change, e.g Heyman et al. (2007), Bandick and Görg (2010) and Criscuolo and Martin (2009). These studies find that domestic and foreign MNE characteristics are much more similar than the characteristics of foreign and domestic firms, and also that the impact on firm performance is rather similar when a domestic and a foreign MNE acquires a local firm.

accounts for between 68 and 71% of total employment and 74-77% of total production in the full manufacturing statistics in each year.

In order to include individual characteristics like age, gender and education, we use register data on the whole population. 2-3% of person identifiers with job spells in manufacturing plants according to the spell data, are not found in the register data on the whole population. We drop these individuals. With the workers and job spells we have linked to manufacturing plants at this stage, we construct plant level variables for employment and skill-shares of the work force. In doing this we take the number of workers employed by the plant at three different dates during the year (10th of each February, June and October) and construct a measure of the number of employees and skill shares as the average of these three points during the year. Workers recorded working part time are given a lower weight than fulltime workers.<sup>3</sup> We use firm level customs data in order to get information on exports and imports at the firm level per year. With this data source we identify whether a plant belongs to a firm that exports and/or imports. We use the value of exports and imports as controls for plant characteristics in regressions.

The final part of our cleaning procedures is related to the information in the job spell data. With spell-based data we have some workers in our panel that have more than one job and/or workers that start several new jobs in the same year. In our analysis we are interested in following individuals over time in their main jobs and changes between their main jobs. In order to achieve this, we conduct the following cleaning on the job spell data. We drop all observations of individuals that are only observed one year in our panel. We also drop workers who do not work full-time all years when they are in manufacturing plants, workers who change jobs five times or more between plants in our panel, workers with more than three parallel jobs in any one year, workers who only have job spells of less than 90 days. Further, we drop workers observed in more than three different plants during a single year, and workers who seem to start a new job in our panel of plants twice

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<sup>3</sup>The data contains a categorical variable for expected weekly work hours. One group being 30 hours or more per week, these workers are given the weight of 1 in the calculations of skill shares and number of employees. Job spells with work hours between 20 and 30 hours are given a weight of 0.65, while shorter work hours are given a weight of 0.3.

or more during a single year. Based on the data on earnings during the job-spell and information about start and stop dates of the spell, we calculate our wage measure as the daily wage during the job spell in a given year. Workers that always earn less than 350 NOK per day are dropped from our sample.<sup>4</sup>

After the cleaning procedures mentioned above, we are left with almost 70,000 plant-year observations from 7,000 different plants for the period from 1996 to 2007. These plants employ in total over the period 300,000 different workers giving rise to 1.85 million worker-year observations.

## 2.2 Descriptive statistics

Table 1 provides descriptive statistics on the plants in our sample, and on those plants that experience ownership change. Overall there are between 5,130 and 5,830 plants each year in the sample, with an average of 29-36 employees amounting to 167,000-203,000 employees per year (columns 2-4). Columns 5-7 of table 1 provide information on the number of plants, their average size and total number of employees subject to a domestic ownership change each year; columns 8-10 provide similar information for plants subject to a foreign acquisition. In total, we observe 163 domestic acquisitions during our data period. We have 428 plants subject to foreign acquisition. The number of employees working in an acquired plant in the year of acquisition varies from year to year, for foreign acquisitions the number of affected employees (i.e. those that work in the plant in the year of takeover) ranges from 608 to 4,340, while for domestic acquisitions the number of affected employees ranges from 296 to 2,134.

Table 2 provides a description of worker characteristics. The average daily wage over the period was 850NOK. Employees in plants ever subject to a domestic acquisition earn less than average, while employees in plants ever subject to a foreign acquisition earn above average. The same pattern is observable also for low-, medium- and high-skilled workers. Looking at the skill shares, the share of workers employed in plants subject to domestic acquisitions that are low-skilled is

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<sup>4</sup>This is based on the earnings deflated by the consumer price index, and represents a daily wage that would be well below the expected average daily wage for a fulltime manufacturing worker in Norway.



Table 1: Plants and workers involved in ownership change, by year

| Year | All plants |            |        | Domestic acquisitions |            |       | Foreign acquisitions |            |       |
|------|------------|------------|--------|-----------------------|------------|-------|----------------------|------------|-------|
|      | No.        | Employment |        | No.                   | Employment |       | No.                  | Employment |       |
|      |            | Mean       | Total  |                       | Mean       | Total |                      | Mean       | Total |
| 1996 | 5131       | 36         | 183220 | .                     | .          | .     | .                    | .          | .     |
| 1997 | 5474       | 35         | 192291 | 9                     | 60         | 542   | 23                   | 81         | 1854  |
| 1998 | 5723       | 35         | 203098 | 9                     | 64         | 577   | 21                   | 97         | 2032  |
| 1999 | 5661       | 35         | 198872 | 19                    | 45         | 847   | 48                   | 84         | 4019  |
| 2000 | 5758       | 33         | 188731 | 18                    | 101        | 1824  | 62                   | 70         | 4340  |
| 2001 | 5785       | 33         | 189322 | 31                    | 69         | 2134  | 31                   | 104        | 3236  |
| 2002 | 5819       | 32         | 184025 | 13                    | 52         | 676   | 38                   | 48         | 1820  |
| 2003 | 5832       | 30         | 174876 | 15                    | 72         | 1083  | 43                   | 28         | 1200  |
| 2004 | 5830       | 29         | 169286 | 7                     | 42         | 296   | 21                   | 29         | 608   |
| 2005 | 5689       | 29         | 166595 | 11                    | 34         | 372   | 23                   | 45         | 1042  |
| 2006 | 5489       | 31         | 167467 | 18                    | 25         | 449   | 71                   | 58         | 4109  |
| 2007 | 5227       | 32         | 167404 | 13                    | 30         | 384   | 47                   | 54         | 2521  |

higher than the sample average, whereas the share of high-skilled in these plants is lower than the sample average. In contrast, plants subject to foreign acquisitions have higher shares of high-skilled employees and lower shares of low-skilled employees than the sample average. Plants subject to domestic acquisitions have on average higher than sample average shares of females among their employees, in turn plants subject to foreign acquisitions have lower than average shares of females.

Figure 1 compares how the plants that are subject to acquisitions during our sample period compares relative to plants that do not experience ownership change, in the same industry and year. We have estimated four OLS regressions of the following type

$$y_{jt} = \sum_{\tau=t-6}^{t+6} \alpha_{D\tau} \text{Dom acq}_{j,\tau} + \sum_{\tau=t-6}^{t+6} \alpha_{F\tau} \text{For acq}_{j,\tau} + \log emp_{jt} \gamma + \gamma_t + \gamma_I + \gamma_{It} + \epsilon_{jt}, \quad (1)$$

where we let the plant level outcome  $y_{jt}$  be either the log of employment, average wage at the plant level, labour productivity and TFP. We control for plant size and also include a full set of 2-digit industry-year interactions terms.<sup>5</sup> Figure 1 plots the estimated coefficients on the dummies around ownership change. The results have to be interpreted as comparisons to same-sized plants in the

<sup>5</sup>We do not control for plant size in the regression where the outcome variable is plant size.

Table 2: Descriptive statistics on worker panel

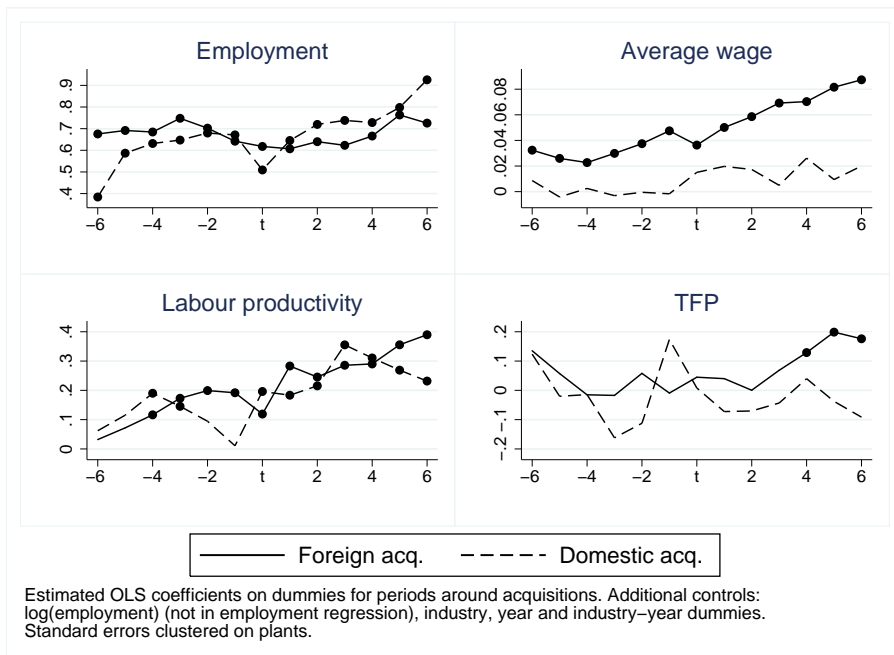
|                       | All workers |       | Domestic acq |       | Foreign acq |       |
|-----------------------|-------------|-------|--------------|-------|-------------|-------|
|                       | mean        | sd    | mean         | sd    | mean        | sd    |
| Avg. daily wage (NOK) | 851.4       | 335.8 | 823.2        | 315.2 | 892.1       | 350.6 |
| - low skilled         | 727.2       | 250.7 | 711.0        | 248.4 | 747.2       | 250.8 |
| - medium skilled      | 833.8       | 293.8 | 817.1        | 276.5 | 863.1       | 300.1 |
| - high skilled        | 1141.0      | 434.9 | 1125.8       | 418.8 | 1176.9      | 438.7 |
| Age                   | 40.8        | 11.6  | 41.2         | 11.7  | 40.7        | 11.4  |
| Tenure                | 8.1         | 6.8   | 8.9          | 7.3   | 8.0         | 6.7   |
| Low skilled (%)       | 27.5        |       | 30.1         |       | 25.0        |       |
| Medium skilled (%)    | 57.3        |       | 57.5         |       | 56.5        |       |
| High skilled (%)      | 15.3        |       | 12.3         |       | 18.5        |       |
| Females (%)           | 18.2        |       | 20.1         |       | 17.3        |       |
| Obs                   | 1,850,139   |       | 89,874       |       | 258,746     |       |

Note: Statistics on domestic and foreign acquisitions are for workers in plants ever subject to an acquisition. Skill-levels are defined by years of education: low-skilled workers have less than 10 years of education, medium-skilled workers have 10-13 years of education and high-skilled workers have 13 or more years of education, i.e. a college degree.

same industry and year not subject to ownership change. The top left panel of Figure 1 shows the development of employment in plants subject to acquisition. The figure shows that both types of acquisition plants are larger than plants not subject to acquisition. For plants that are acquired by new owners there is a decrease in employment relative to the average of plants not subject to ownership change in the years leading up to ownership change. This starts earlier for foreign acquisitions, while in the case of domestic acquisitions there is a sharp decline in employment only in the year of acquisition. The size premium for foreign acquisitions plants is in the order of 60 to 70% larger than domestic plants not changing ownership. Plant level average wages and labour productivity are also higher in foreign acq plants, and also more or less steadily increasing relative to industry-year average. Also domestic acquisition plants see a rise in their labour productivity, but average wages do not differ significantly from that of plants who do not experience ownership change. When it comes to total factor productivity (TFP), there is little evidence of a productivity premium in acquisitions plants prior to acquisition, though there seems to be the case that foreign

owned plants have significantly higher productivity than average from four years after ownership change.<sup>6</sup>

Figure 1: Characteristics of plants subject to acquisitions - employment, wages, productivity



### 3 Employee turnover around ownership change

The restructuring associated with ownership change may take a number of different forms. The new owner may introduce new technology, bring in new management practices, change the size or composition of the labour force or implement any combination of these. Researchers using firm-level data are usually unable to observe these changes directly and instead are forced to look at the effects of ownership change on productivity, employment and average wages. While our data does not allow us to say anything about new management practices and little about new technology, we are able to analyse in detail changes to the composition, size and remuneration of the workforce around ownership change. Given the view that ownership change is an opportunity

<sup>6</sup>The TFP measure is based on estimations using the procedure suggested by Akerberg et al. (2008).

for restructuring, and the constraint in plant level datasets that we do not have good information about changes in technology, internal organization, etc, our focus is on changes in the composition of the employees, which we can observe from our matched employer-employee dataset.

First, if match quality is primarily improved through a change in the composition of employees, we should see a change in the labour force of a plant following ownership change. According to many theories of the labour market, the role of the labour market is to improve the sorting and matching of workers across firms, thus turnover and job-to-job mobility is a central ingredient in a well-functioning labour market. If ownership change is a type of event where the opportunity and need to improve the match between employees and the firm is particularly large, we should observe excess worker turnover following ownership change. With excess turnover we mean larger turnover than in comparable plants not subject to ownership change. Thus in the following we look for evidence of excess turnover around ownership change, and to what extent there is a systematic change in the skill-composition of employees in the plant

Table 3: Average worker retention rates from year  $t$  to year  $t+2$ .

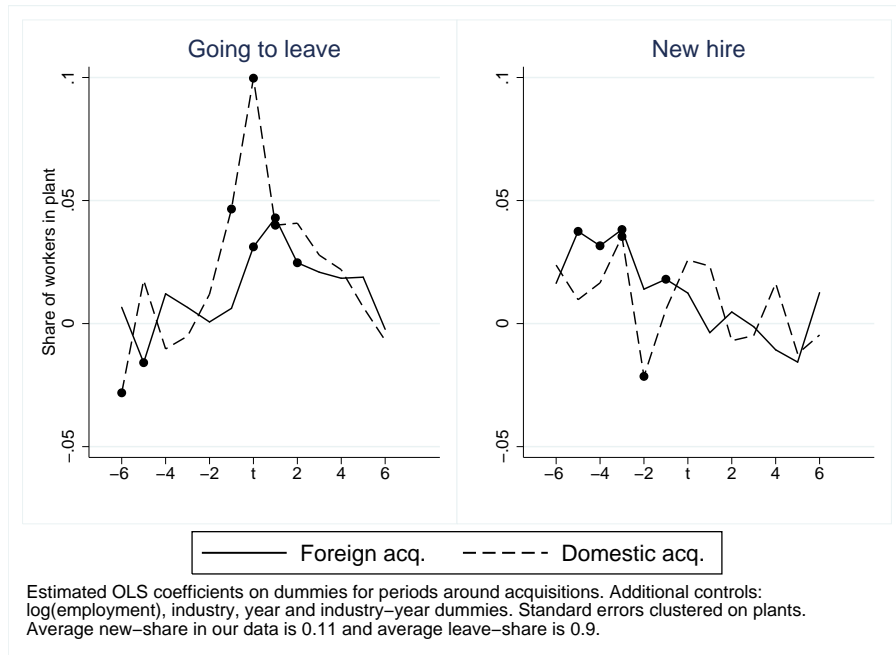
| Workers in plants                              | Work in same plant | Work in other plant | Work outside our panel | Not working |
|--|--------------------|---------------------|------------------------|-------------|
| never subject to acq.                          | 0.72               | 0.04                | 0.13                   | 0.10        |
| with foreign acq. in $t+3$ (before for. acq.)  | 0.69               | 0.04                | 0.13                   | 0.14        |
| with foreign acq. in $t+1$ (around for. acq.)  | 0.70               | 0.04                | 0.12                   | 0.14        |
| with foreign acq. in $t-3$ (after for. acq)    | 0.70               | 0.05                | 0.14                   | 0.11        |
| with domestic acq. in $t+3$ (before dom. acq.) | 0.64               | 0.05                | 0.13                   | 0.18        |
| with domestic acq. in $t+1$ (around dom. acq)  | 0.64               | 0.06                | 0.18                   | 0.12        |
| with domestic acq. in $t-3$ (after dom. acq)   | 0.71               | 0.04                | 0.14                   | 0.12        |

Note: Workers classified as working outside our panel are found in other sectors of the economy or in manufacturing plants dropped in the cleaning procedures. Workers classified as not working are comprised of two main groups: The first group are people who are not observed in our employer-employee data files meaning they are either unemployed or out of the labour force. The second group are people where we observe an employer id, but their total annual earnings are below 50,000NOK.

We start by looking at worker retention rates. The first row of table 3 shows the average 2-year retention rate for firms without ownership change during our sample period. Of the workers present in these plants in a given year, on average during the sample period, 72% are still employed

in the same plant in two years time. Of the workers not retained by these plants, 5% are in other plants in our sample, 13% working with employers outside our sample of manufacturing firms, and 10% are not working. The following rows of table 3 display average retention rates in plants subject to acquisitions. We calculate separately the retention rates for 2-year periods that end the year before acquisition, one year after acquisition and three years after acquisition. In plants close to an ownership change, worker retention rates are lower than in plants not subject to ownership change. The effect is particularly pronounced for plants experiencing a domestic ownership change in the near future. Only 64% of workers who are employed by plants that will experience ownership change three years ahead, are still working in this plant one year before the ownership change, and 18% of these workers will not be working two years ahead.

Figure 2: Share of newly hired and leaving workers at the plant level



On the one hand, average retention rates that are lower in plants experiencing ownership change than in other plants, could mean that down-scaling is more prevalent around ownership change. On the other hand, if the excess of leaving workers are replaced by new hires, worker turnover may be higher in plants undergoing ownership change. Figure 2 is based on estimating equation 1 with

the outcome variables being the share of workers in the plant that are leavers, ie will not be present in the plant the following year, and the share of employees that are new hires, ie are present in the plant for the first time. The figure clearly documents excess separations in the years close to ownership change. For the domestic ownership changes, this starts the year before acquisition, and in the year of ownership change, the share of leaving workers is about 10 percentage points higher than in the average plant in the same industry-year. Given that the average share of leaving workers in our sample is about 11%, this represents a leave rate that is almost twice the average leave rate. The share of newly hired employees is not significantly different from average close to and after ownership change, though the share of new hires is above average in plants subject to foreign acquisitions more than three years before the acquisition.

Figure 2 suggests that plants that are acquired are downscaling to some extent. We document the extent of down-scaling around ownership change by calculating the change in log employment for all plants over two, three and four year periods, and then calculating the deviation in employment change from the average employment change in plants without ownership change in the same 2-digit industry-year and size class.<sup>7</sup> We then regress this deviation on indicator variables of foreign or domestic ownership change.<sup>8</sup> Results are presented in table 4. Each row represents a regression where the dependent variable is the change in plant level employment relative to the average change in employment for the same time-span in plants not subject to acquisitions but in the same 2-digit industry, year and size-class. In the regressions we control for employment and average wages in the plant at the start of the period, in addition to the acquisition dummies (with p-values in parentheses) reported in columns 1 and 2. Relative to plants not subject to acquisition, we observe downscaling of the labour force in plants that have just experienced an acquisition. From one year before to one and two years after foreign acquisitions, employment is on average reduced by between 3 and 4 % relative to plants not subject to acquisition in the same period, industry and size class. The downscaling in plants subject to domestic acquisitions tends to be

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<sup>7</sup>We use 5 size classes, below 10 employees, 10-20, 20-40, 40-80, 80-200, and above 200 employees.

<sup>8</sup>We drop the top and bottom percentile of changes in employment in this regression.

Table 4: Plant-level changes in employment in different periods around acquisitions

|  | Foreign acq. |        | Domestic acq. |        | p-val test<br>foracq=domacq | N     |
|--|--------------|--------|---------------|--------|-----------------------------|-------|
|  | 1            |        | 2             |        | 3                           | 4     |
| <i>From 3 years before acquisition until</i> |              |        |               |        |                             |       |
| 1 year before acq                            | 0.016        | (0.27) | -0.016        | (0.47) | 0.23                        | 45589 |
| year of acq                                  | 0.003        | (0.87) | -0.080        | (0.02) | 0.04                        | 39687 |
| 1 year after acq                             | -0.023       | (0.34) | -0.043        | (0.33) | 0.70                        | 34083 |
| <i>From 1 year before acquisition until</i>  |              |        |               |        |                             |       |
| 1 year after acq                             | -0.036       | (0.03) | -0.037        | (0.30) | 0.98                        | 45589 |
| 2 years after acq                            | -0.038       | (0.09) | -0.079        | (0.06) | 0.39                        | 39687 |
| 3 years after acq                            | -0.010       | (0.72) | -0.099        | (0.04) | 0.11                        | 34083 |

Note: Each row represents a regression where the dependent variable is the change in plant level employment relative to the average change in employment for the same time-span in plants not subject to acquisitions but in the same 2-digit industry, year and size-class. In the regressions we control for employment and average wages in the plant at the start of the period, in addition to the acquisition dummies (with p-values in parentheses) reported in columns 1 and 2.

of greater magnitude than in plants subject to foreign acquisitions (though not significantly so). In addition, plants subject to domestic ownership change experience on average a reduction in employment already before acquisition (from 3 to 1 year before the ownership change).

So far we have examined worker turnover from the perspective of the plant. The evidence shows that there is excess turnover, and that this is associated with separations and downscaling. In the following exercise we assess whether different types of workers are more or less likely to be separated from a plant or to be newly hired to a plant close to acquisition controlling for worker and plant characteristics. We first estimate the probability of being separated from a plant in the years around acquisition. We define the indicator variable  $leave_{ijt} = 1$  if worker  $i$  is observed in plant  $j$  in year  $t$ , but is not observed in this plant the following year. Our data does not allow us to distinguish between voluntary and involuntary separations. To assess the probability of separation, we estimate linear probability models of the following type

$$leave_{ijt} = \sum_{\tau=t-2}^{t+2} \alpha_{D\tau} \text{Dom acq}_{j,\tau} + \sum_{\tau=t-2}^{t+2} \alpha_{F\tau} \text{For acq}_{j,\tau} + X_{it}\beta + X_{jt}\gamma + \epsilon_{it}. \quad (2)$$

In equation (2),  $Domacq_{j,\tau}$  is a set of dummy variables equal to one if the observation of worker  $i$  in plant  $j$  is, two years before a domestic ownership change, one year before ownership change, and so on, until two years after ownership change. We construct a similar set of indicators around foreign acquisitions  $Foracq_{j,\tau}$ . Our main interest lies in finding out if for a given worker the probability of separating from a plant is higher close to ownership change than in other periods. Time-varying individual and plant-level traits may affect the probability of separation, thus we control for these in the vectors  $X_{it}$  and  $X_{jt}$ .  $X_{it}$  is the vector of individual-level control variables: age and tenure and their square terms. Our plant-level controls in  $X_{jt}$  consist of log of employment and production value, skill shares for medium- and high-skilled employees and exporter and importer dummies. Unobserved individual effects could be correlated with the probability of separation, thus we estimate equation 2 using worker fixed effects.<sup>9</sup> In addition, we include year and 2-digit industry interaction terms to make sure our results are not confounded by both separations and ownership change being correlated with industry-specific shocks.

The coefficients on the indicator variables for the years around ownership change are reported in figure 3.<sup>10</sup> The upper left graph shows the results for a regression using all workers; the three other graphs show the coefficients from estimating equation (2) for each skill group. Since the results are based on worker fixed effects, the coefficients can be interpreted as deviations from the worker's mean over time. Thus, the upper left panel of figure 3 indicates that the probability of separation is higher for workers when they are employed in a plant that is close to acquisition than at other times. The higher separation probability is more pronounced for workers in plants that experience domestic ownership change. Figure 3 also makes it clear that in plants subject to domestic acquisitions, the medium- and high-skilled workers are more likely to face separations around acquisition. For the high-skilled workers this is particularly the case before the ownership change. Given that the average probability of separation of high skilled workers is around 12%,

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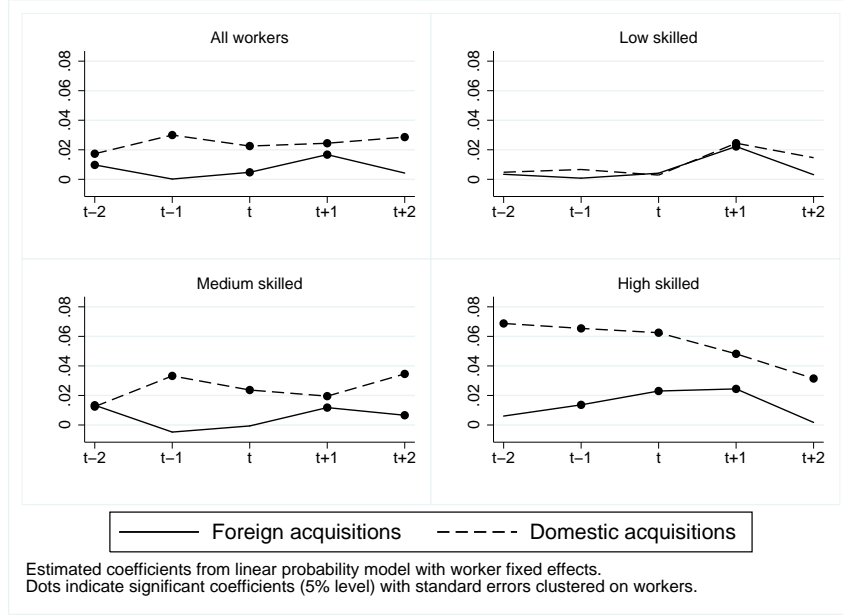
<sup>9</sup>Spell fixed effects give very similar results.

<sup>10</sup>A table with the estimated coefficients will be reported in the appendix.



the estimated coefficient of around 0.06 in the year of acquisition implies that the probability of separation increases with 6 percentage points relative to other years.

Figure 3: Probability of separation around acquisition in year  $t$



We also assess whether the probability of being new to a plant is higher around acquisitions than at other times. To do so we define the indicator variable  $new_{ijt} = 1$  if worker  $i$  is observed in plant  $j$  in year  $t$ , but was not observed in this plant the year before, and replace the dependent variable in equation (2) with  $new_{ijt} = 1$ .<sup>11</sup> The results are displayed in figure 4. Again, a clear pattern for new hires around domestic acquisitions appears. Workers in plants subject to domestic acquisitions have higher probabilities of being newly hired after, rather than before, ownership change. This effect is again most pronounced for the high-skilled workers. For the high skilled, figure 4 shows that the probability of hire the year after domestic acquisition is about 6 percentage points higher than usual. The overall probability of hire in the sample of high-skilled workers is 10.4%. For the workers in plants subject to foreign acquisitions, the probability of hire is lower

<sup>11</sup>We want to condition separations on the plant being in existence after separations and new hires on the plant being in existence before hires, thus we drop observations in the year of plant entry and the year of plant exit in both the separation and new hire regressions.

than usual before takeover, but seems to increase somewhat two years after the acquisition for the low-skilled workers.

As the last exercise in this section we investigate how the changes to overall employment and the different probabilities of hire and separation affect average wages and skill shares at the plant level. To do this we calculate the change in wages and skillshares for all plants over two, three and four year periods, and then calculate the deviation in change from the average change in plants without ownership change in the same 2-digit industry-year and size class. We then regress this deviation on indicator variables of foreign or domestic ownership change.<sup>12</sup> In column 1 of table 5 each row represents a regression where the dependent variable is the change in plant level wages relative to the average change in wages for the same time-span in plants not subject to acquisitions but in the same 2-digit industry, year and size-class. In the regressions we control for employment and average wages in the plant at the start of the period, in addition to the acquisition dummies for which we report the estimated coefficients. While column 1 shows the results for average wages at the plant level, columns 2-4 show results for plant level average wages per skill group, and the final three columns show the results for the skill shares at plant level. The story that emerges from table 5 is that overall wage growth is not significantly larger than in no acquisition plants, there is even a significant lower wage growth on average in these plants from three years before to the year before ownership change. For plants subject to foreign acquisitions wage growth from before to after ownership change is higher than in no acquisition plants, this extra wage growth (in the order of 2-3% additional wagegrowth) is primarily coming among the medium and to some extent high skilled workers. The changes in skill shares are small in magnitude and in most cases not significantly different from those of plants not subject to acquisitions. For plants subject to domestic acquisitions we see a decline in the share of high skilled workers that is consistent with the separation pattern shown in figure 3, and a corresponding increase in the share of low-skilled workers.

To summarize:

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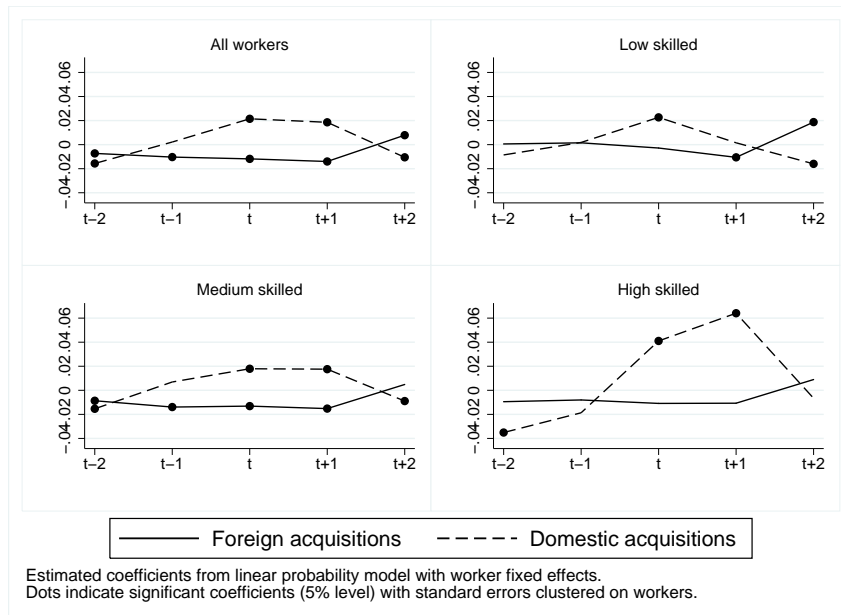
<sup>12</sup>This is the same approach as used for the results presented in table 4.

Table 5: Change in average wages and skillshares in acquired plants relative to non-acquired plants

|  | Average wage   |                  |                     | Skill share       |                  |                     |                   |
|--|----------------|------------------|---------------------|-------------------|------------------|---------------------|-------------------|
|  | All<br>(1)     | Low skill<br>(2) | Medium skill<br>(3) | High skill<br>(4) | Low skill<br>(5) | Medium skill<br>(6) | High skill<br>(7) |
| <b>Foreign acquisitions</b>                  |                |                  |                     |                   |                  |                     |                   |
| <i>From 3 years before acquisition until</i> |                |                  |                     |                   |                  |                     |                   |
| 1 yr before acq                              | 0.020 (0.001)  | 0.019 (0.074)    | 0.010 (0.126)       | 0.018 (0.102)     | -0.002 (0.735)   | -0.001 (0.803)      | 0.003 (0.474)     |
| yr of acq                                    | 0.007 (0.451)  | 0.015 (0.246)    | -0.003 (0.725)      | 0.015 (0.311)     | 0.002 (0.780)    | -0.004 (0.504)      | 0.002 (0.611)     |
| 1 yr after acq                               | 0.025 (0.014)  | 0.012 (0.277)    | 0.030 (0.012)       | 0.039 (0.030)     | 0.007 (0.268)    | -0.001 (0.840)      | -0.006 (0.302)    |
| <i>From 1 year before acquisition until</i>  |                |                  |                     |                   |                  |                     |                   |
| 1 yr after acq                               | 0.008 (0.342)  | -0.002 (0.840)   | 0.017 (0.067)       | 0.015 (0.327)     | 0.009 (0.057)    | -0.007 (0.236)      | -0.003 (0.480)    |
| 2 yrs after acq                              | 0.022 (0.007)  | 0.021 (0.113)    | 0.017 (0.080)       | 0.011 (0.498)     | 0.006 (0.327)    | -0.004 (0.569)      | -0.002 (0.750)    |
| 3 yrs after acq                              | 0.027 (0.003)  | 0.010 (0.475)    | 0.028 (0.007)       | 0.033 (0.046)     | 0.016 (0.024)    | -0.013 (0.105)      | -0.003 (0.632)    |
| <b>Domestic acquisitions</b>                 |                |                  |                     |                   |                  |                     |                   |
| <i>From 3 years before acquisition until</i> |                |                  |                     |                   |                  |                     |                   |
| 1 yr before acq                              | -0.040 (0.006) | -0.043 (0.006)   | -0.032 (0.041)      | -0.034 (0.295)    | 0.003 (0.695)    | 0.008 (0.275)       | -0.011 (0.014)    |
| yr of acq                                    | -0.008 (0.664) | -0.023 (0.217)   | 0.004 (0.843)       | -0.010 (0.737)    | 0.007 (0.456)    | 0.008 (0.385)       | -0.015 (0.009)    |
| 1 yr after acq                               | -0.008 (0.549) | -0.032 (0.059)   | 0.017 (0.339)       | -0.061 (0.079)    | 0.022 (0.061)    | -0.009 (0.466)      | -0.013 (0.038)    |
| <i>From 1 year before acquisition until</i>  |                |                  |                     |                   |                  |                     |                   |
| 1 yr after acq                               | 0.009 (0.599)  | -0.009 (0.631)   | 0.018 (0.353)       | -0.004 (0.901)    | 0.024 (0.031)    | -0.016 (0.172)      | -0.008 (0.164)    |
| 2 yrs after acq                              | 0.013 (0.516)  | -0.009 (0.698)   | 0.027 (0.236)       | 0.021 (0.509)     | 0.016 (0.050)    | 0.003 (0.735)       | -0.019 (0.003)    |
| 3 yrs after acq                              | 0.001 (0.964)  | -0.005 (0.855)   | 0.022 (0.368)       | 0.025 (0.530)     | 0.023 (0.050)    | -0.004 (0.761)      | -0.019 (0.012)    |

Note: Each row represents a regression where the dependent variable is the change in plant-level average wages or skill shares (as indicated) relative to the average change in average wages or skill shares for the same time-span in plants not subject to acquisitions but in the same 2-digit industry, year and size-class. In the regressions we control for employment and average wages in the plant at the start of the period, in addition to the acquisition dummies. P-values in parentheses).

Figure 4: Probability of hire around acquisition in year  $t$



## 4 Wage effects around acquisitions

The results in table 5 indicate that from the year before acquisition to three years after acquisitions, average plant level wages increase more in foreign acquired firms than in non acquired firms, while wage growth in domestically acquired firms is not significantly different from that of non acquired firms. In this section we want to investigate to what extent the selection process in terms of hirings and separations from the acquisition firms contribute to the average plantlevel wage, and to what extent the stayers in the plants experience a wagegrowth premium. The idea of ownership change as an opportunity to improve the match between the plant, its management and its employees implies that a selection effect in terms of which workers stay, leave and are newly hired to the firm is likely.

### 4.1 Separations

If we start by looking at the separated workers, we would expect that workers who separate from their plants do this because either the worker finds a better match outside the firm, or the firm wants to separate from the workers that have turned out not to be good matches. An indication that would be consistent with this is that leaving workers on average have lower wages than their coworkers before they leave, or that their wage developments leading up to their separation is more negative than for workers who stay in the plant. To investigate this we conduct mincer wage regressions with plant fixed effects and save the residuals from this regression. We then calculate the deviation in this residual from the plant-year average for stayers in the plant. We regress this deviation on an indicator variable for being a leaver, and the interaction between this leave indicator and an indicator for leaving close to an ownership change (defined as the years from one year before to two years after the ownership change). The results from this procedure are shown in table 6, the first column uses the level of wages before leaving as the dependent variable in the mincer regression, while the second and third columns uses wage growth over the last two years prior to leaving and tenure before leaving, respectively. Leavers in general are paid less than their

coworkers who stay, though this is not the case for leavers close to ownership change. Leavers have experienced lower wage growth than their coworkers prior to leaving, and here there is no difference between leavers close to acquisitions and other leavers. The same goes for tenure, those who leave have lower tenure than those who stay. Overall the leavers do seem to be negatively selected out of their plants, but there is no evidence that indicates that the plants that have experienced ownership change are better at letting the "right" workers go.

Table 6: Leavers before leave

|                      | wage   |                        | 2yr wage growth |                        | tenure |                        |
|----------------------|--------|------------------------|-----------------|------------------------|--------|------------------------|
| leavers              | -0.020 | (0.001) <sup>***</sup> | -0.013          | (0.001) <sup>***</sup> | -0.174 | (0.003) <sup>***</sup> |
| leavers from for acq | -0.003 | (0.005)                | -0.014          | (0.004) <sup>***</sup> | -0.166 | (0.014) <sup>***</sup> |
| leavers from dom acq | -0.004 | (0.009)                | -0.010          | (0.006) <sup>***</sup> | -0.131 | (0.025) <sup>***</sup> |

Note: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*  $p < 0.01$ . xxx Bootstrapped standard errors (200 replications) in parentheses.

To be completed..

## 4.2 Stayers and new hires

If acquisitions are a way to redistribute benefits from workers to the new owners (i.e. from non-financial stakeholders to new owners), this could lead to lower wages for the employees that remain in the plant after an acquisition relative to workers who stay in their plants that are not subject to experience ownership change. Siegel and Simons (2010) argue that an improved match is consistent with a reduction in wages for workers in acquired plants after the acquisition.

If times of ownership change are periods when firms are particularly careful in their selection of workers, we should expect newly hired employees to be better matched to the firm close to ownership change than new hires are in general. One possible indication of this would be that wage growth for new hires is higher in acquisition plants than for new hires in general. In order to study this we estimate regressions on wage growth over a 5-year period where we identify separately workers that leave plants before an acquisition, workers that are newly hired to plants after ownership change and workers who stay in plants that change owner. The results of these

regressions are presented in table 7. We look at these long differences in order to make sure our results are not affected by temporary changes to wages between jobs.

Table 7: Wage growth of stayers, those new to a plant and those leaving a plant

|  | 5yr wage growth      |                      |                      |                     |
|--|----------------------|----------------------|----------------------|---------------------|
|  | All<br>(1)           | Low-skill<br>(2)     | Medium-skill<br>(3)  | High-skill<br>(4)   |
| Stayer (5yrs+) in plant not subject to acq               | 0.009<br>(0.001)***  | 0.012<br>(0.002)***  | 0.010<br>(0.001)***  | 0.006<br>(0.003)**  |
| Stayer in plant up to year of foreign acq                | 0.011<br>(0.002)***  | 0.015<br>(0.003)***  | 0.009<br>(0.002)***  | 0.020<br>(0.004)*** |
| Stayer in plant up to year 1, 2, or 3 after foreign acq  | 0.009<br>(0.002)***  | 0.010<br>(0.003)***  | 0.010<br>(0.002)***  | 0.012<br>(0.005)**  |
| Stayer in plant up to year 4 or later after foreign acq  | 0.027<br>(0.002)***  | 0.020<br>(0.003)***  | 0.027<br>(0.002)***  | 0.030<br>(0.004)*** |
| Stayer in plant up to year of domestic acq               | 0.005<br>(0.002)**   | 0.003<br>(0.005)     | 0.010<br>(0.003)***  | -0.002<br>(0.008)   |
| Stayer in plant up to year 1, 2 or 3 after domestic acq  | 0.024<br>(0.003)***  | 0.036<br>(0.005)***  | 0.025<br>(0.003)***  | -0.002<br>(0.008)   |
| Stayer in plant up to year 4 or later after domestic acq | 0.027<br>(0.002)***  | 0.034<br>(0.005)***  | 0.028<br>(0.003)***  | 0.020<br>(0.006)*** |
| New hire to plant not subject to acq                     | -0.016<br>(0.002)*** | -0.010<br>(0.005)**  | -0.022<br>(0.003)*** | -0.009<br>(0.005)*  |
| New hire up to year before foreign acq                   | 0.001<br>(0.009)     | 0.072<br>(0.019)***  | -0.035<br>(0.011)*** | 0.023<br>(0.018)    |
| New hire in years 0, 1 or 2 of foreign acq               | 0.001<br>(0.011)     | 0.029<br>(0.020)     | -0.016<br>(0.015)    | 0.008<br>(0.024)    |
| New hire in year 3 or later after foreign acq            | 0.016<br>(0.010)     | 0.036<br>(0.022)*    | 0.014<br>(0.012)     | -0.001<br>(0.024)   |
| New hire up to year before domestic acq                  | -0.006<br>(0.015)    | -0.005<br>(0.030)    | 0.008<br>(0.019)     | -0.091<br>(0.036)** |
| New hire in years 0, 1 or 2 of domestic acq              | -0.005<br>(0.010)    | -0.001<br>(0.021)    | -0.002<br>(0.014)    | -0.013<br>(0.021)   |
| New hire in year 3 or later after domestic acq           | -0.033<br>(0.021)    | -0.117<br>(0.037)*** | 0.026<br>(0.028)     | -0.075<br>(0.040)*  |
| Separation from plant not subject to acq                 | -0.006<br>(0.001)*** | -0.001<br>(0.003)    | -0.007<br>(0.002)*** | -0.010<br>(0.004)** |
| Last year in plant is up to year of foreign acq          | -0.007<br>(0.005)    | 0.005<br>(0.009)     | -0.008<br>(0.006)    | -0.022<br>(0.012)*  |
| Last year in plant is year 1, 2 or 3 after foreign acq   | -0.008<br>(0.005)    | 0.012<br>(0.009)     | -0.021<br>(0.007)*** | 0.010<br>(0.013)    |
| Last year in plant is year 4 or later after foreign acq  | 0.015<br>(0.005)***  | 0.020<br>(0.009)**   | 0.010<br>(0.006)     | 0.016<br>(0.011)    |
| Last year in plant is up to year of domestic acq         | 0.007<br>(0.007)     | 0.012<br>(0.011)     | 0.001<br>(0.009)     | 0.014<br>(0.018)    |
| Last year in plant is year 1, 2 or 3 after domestic acq  | 0.001<br>(0.006)     | 0.019<br>(0.012)     | -0.006<br>(0.007)    | 0.006<br>(0.018)    |
| Last year in plant is year 4 or later after domestic acq | 0.008<br>(0.009)     | 0.015<br>(0.016)     | 0.020<br>(0.013)     | -0.060<br>(0.025)** |
| Obs  | 627718               | 161343               | 381145               | 85250               |
| R <sup>2</sup>   | 0.075                | 0.056                | 0.070                | 0.111               |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Standard errors adjusted for clustering at the worker level in parentheses.

Worker controls: Initial period age, age<sup>2</sup>, tenure, tenure<sup>2</sup>, 5 highest-level education dummies; and interactions of all of these with a female dummy.

Plant controls: Initial period shares of medium- and high-skill workers, log employment, log turnover, exporter and importer dummy.

Other controls: Plant-level change in log employment, 2-digit industry-year interaction terms.



## 5 Match quality of new hires

As mentioned earlier the literature views ownership change as an opportunity improve the match between a plant's management/technology and its employees. From the point of view of the plant an improved match should result in higher productivity. As we saw in the data description in Figure 1 this is true for labour productivity in both types of acquisition plants but for total factor productivity only in plants subject to foreign acquisitions and only from four years after the acquisition. However, neither of these two measures are very informative about the quality of the match. In particular, measures of productivity at the firm level will not only reflect changes in employee composition and remuneration but also investments (i.e. changes to the plant's capital stock) and the sourcing of inputs.

If the sorting process around acquisitions improves the match between the plant and its employees this might result in increased job satisfaction - which of course we cannot measure. What we can observe though is how long workers stay in a plant. Thus, if we observe workers that are newly hired after acquisitions remaining longer in their new plant, we take this as evidence of an improved match between the worker and the plant. In table 8 we compare the probabilities for newly hired workers to still be observed in the same plant for at least 2, 3 or 4 years later. The table shows that newly hired workers after foreign acquisitions have a lower probability of still being in the same plant after 2 or more, 3 or more or 4 or more years after they were hired than similar newly hired workers to plants not subject to acquisitions. This effect is largely driven by newly hired medium-skilled workers having lower probabilities of remaining in plants after a foreign acquisition relative to similar newly hired workers in non-acquisition plants. Also workers newly hired to plants that have just undergone a domestic acquisition are less likely to stay than similar workers in non-acquisition plants; here the effect is entirely due to the low skilled workers not staying on.

Thus, if there the match quality between workers and the plant improves after acquisition it does not manifest in new workers hired after acquisition staying with the plant for longer. At best

Table 8: Probability of staying in the same plant for at least 2, 3 or 4 years after being newly hired in

|                                | 2 years+          | 3 years+          | 4 years+          |
|--------------------------------|-------------------|-------------------|-------------------|
| <i>All</i>                     |                   |                   |                   |
| year 1 or 2 after foreign acq  | -0.040 (0.008)*** | -0.057 (0.010)*** | -0.062 (0.011)*** |
| year 1 or 2 after domestic acq | -0.042 (0.012)*** | -0.033 (0.014)**  | -0.035 (0.016)**  |
| Obs                            | 143091            | 131137            | 119652            |
| $R^2$                          | 0.058             | 0.082             | 0.087             |
| <i>Low skill</i>               |                   |                   |                   |
| year 1 or 2 after foreign acq  | -0.030 (0.017)*   | -0.031 (0.021)    | -0.038 (0.021)*   |
| year 1 or 2 after domestic acq | -0.061 (0.025)**  | -0.060 (0.028)**  | -0.060 (0.029)**  |
| Obs                            | 42232             | 38620             | 35232             |
| $R^2$                          | 0.074             | 0.094             | 0.099             |
| <i>Medium skill</i>            |                   |                   |                   |
| year 1 or 2 after foreign acq  | -0.054 (0.011)*** | -0.085 (0.014)*** | -0.082 (0.015)*** |
| year 1 or 2 after domestic acq | -0.035 (0.016)**  | -0.014 (0.020)    | -0.035 (0.023)    |
| Obs                            | 72779             | 67051             | 61387             |
| $R^2$                          | 0.047             | 0.073             | 0.080             |
| <i>High skill</i>              |                   |                   |                   |
| year 1 or 2 after foreign acq  | -0.017 (0.013)    | -0.027 (0.019)    | -0.045 (0.021)**  |
| year 1 or 2 after domestic acq | -0.014 (0.023)    | -0.028 (0.031)    | 0.007 (0.035)     |
| Obs                            | 28080             | 25466             | 23033             |
| $R^2$                          | 0.038             | 0.054             | 0.060             |

Note: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Standard errors in parentheses. Dependent variable is indicator equal to one if a person is new to a plant and is still present in the same plant 2 or more, 3 or more or 4 or more years later; it is equal to zero for all other new hires. OLS regressions controlling for worker age, age<sup>2</sup>, tenure, tenure<sup>2</sup>, five highest-level of education dummies, and interactions of all of these with a female dummy. Plant controls: shares of medium- and high-skill workers, log employment, log turnover, exporter and importer dummy. Other controls: Region, year, 2-digit industry and 2-digit industry-year interaction terms. Similar results using a probit model.

the estimates show that the probability is staying on is not significantly different from similar new workers in plants not subject to acquisition.

## **6 Bare bone discussion and conclusions**

‘Excess’ labour turnover around acquisitions.

No change in skill composition in foreign acquisition plants. Reduction in high-skilled increase in low-skilled in domestic acquisition plants. No changes to average wages at the plant level.

High-skilled workers remaining in plants subject to foreign acquisition gain.

No evidence of an improved match between worker and plant in terms of workers that are newly hired after acquisition remaining in the plant for longer than similar workers in non-acquisition plants.

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