

# Rethinking Deindustrialization\*

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## Abstract

This paper examines the decline in manufacturing in Denmark from 1994 to 2007. As in almost every other high-income country, manufacturing employment and the number of manufacturing firms in Denmark have been shrinking as a share of the total and in absolute levels. Most of the decline of manufacturing is due to firm exit and reduced employment at surviving manufacturers. However, a portion of the recorded decline is due to firms switching industries, from manufacturing to service sectors. We focus on this last group of firms, asking what they looked like before switched and how they fared after the switch. Overall this is a group of small high productivity firms that grow more rapidly after they switch. By 2007, employment at these former manufacturers equals 10 percent of manufacturing employment, reducing the apparent decline in manufacturing employment by about one half.

**Keywords:** deindustrialization, manufacturing firms, industry switching, employment, skill composition

**JEL codes:** D22, F61, L25

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# 1 Introduction

Common features of manufacturing sectors in the advanced industrialized world over the last several decades have included falling employment, lower shares of aggregate value-added and a substantial reduction in active firms. Denmark is no exception. Manufacturing employment peaked at 546,665 workers in 1986 and fell by over 40% over the next twenty six years, see Figure 1.<sup>1</sup> Similarly the number of manufacturing firms dropped in every year from 1988 to 2011. From 1980 to 2011, the share of manufacturing in value-added fell from 18 to 11 percent reflecting a similar drop in employment shares (Statistics Denmark, ed (2012)). Manufacturing in high-income countries is on the decline.

This decline is the subject of an enormous body of work offering explanations from differential productivity changes to comparative advantage and the emergence of China.<sup>2</sup> Manufacturing jobs are often considered special because of relative high wages for workers with lower levels of education and skill. Policy-makers devote enormous energy to developing proposals to stem or reverse this decline in manufacturing jobs.

In this paper we look at the change in the relative performance of the manufacturing sector from a different perspective. To be engaged in the production of a good involves a wide range of tasks from design and engineering to finance and accounting to marketing and distribution in addition to the specific act of production of the product. Firms that are considered to be manufacturers are likely performing most, if not all, of the tasks, but in particular they must be involved in the production process. Firms outside of manufacturing may, in fact, be doing every task associated with the creation of the product except the production process itself. We ask whether part of the loss of manufacturing is in fact due to the changing nature of firms and production. We try to rethink deindustrialization by focusing less on the manufacturing label assigned to the firm and focusing more on the set of activities that are associated with manufacturing activity. We focus on firms that remain in the manufacturing sector and, especially, those that switch out of manufacturing.

The basic premise of our analysis is quite simple. We ask whether firms that are leaving manufacturing for another industry are still performing many of the basic activities or tasks of manufacturing. In fact, the only change in their set of tasks may be the lack of production.

We divide our analysis into four parts. First, we consider the aggregate implications if these firms are reclassified as manufacturing. Second, we ask which firms are most likely to switch out of manufacturing and how they performed in the years leading up to their switch. Third, we examine their post-switch performance including the evolution of their employment levels and composition, their productivity and output and their engagement in international markets. Finally, we try

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<sup>1</sup>Our definition of manufacturing jobs differs from the one adopted conventionally. See section 2 for more details. The evolution is similar with any definition used.

<sup>2</sup>See e.g. the recent contributions by Pierce and Schott (2012), Bernard and Fort (2013) and Crozet and Millet (2013).

to distinguish between different types of switchers: those that have transformed themselves into traditional wholesalers, and those that have kept most of their manufacturing capabilities.

The results are dramatic. Switchers are small yet productive in the year they leave manufacturing and their post-switch performance is very strong. As a result, by the end of our sample, these former manufacturers are a sizable presence in the Danish economy. Employment at switchers equals 12.8 percent of total manufacturing employment, sales are 20.0 percent, and they have higher value-added to sales ratios. Furthermore, we can clearly identify two types of firms among our switchers: on the one hand, there are firms that have stopped any involvement in manufacturing and are conducting the traditional activities of wholesalers. On the other hand, there is a group of firms that are still involved in some manufacturing activities, but mostly focused on the design and distribution, not in production. These firms have also upgraded their workforce and employ a larger proportion of high tech workers. In sum, some of these switching firms are no longer counted as manufacturers, but they retain many of the characteristics of producers, minus the production itself.

Our work is related to several recent contributions that analyze the decline of manufacturing employment. Pierce and Schott (2012) document the “swift decline” of US manufacturing after China’s entry into WTO (see also Baily and Bosworth, 2014 for a recent overview of the decline in US manufacturing employment and prospects for the future). Bernard and Fort (2014) offer a reconsideration of this question and argue that part of this decline is masking the fact that many firms not labelled as manufacturers continue to conduct some kind of manufacturing activities, even if not the production process itself. They call these firms factoryless producers. Crozet and Millet (2014) show that French manufacturing firms have an increasing share of their revenues coming from services activities and also find an inverted U-shape relationship between “servitization” and firm’s performance. Our paper goes one step further, as it documents that the same firms transition out of manufacturing to services and also shows how their workforce composition evolves as they make the transition. We focus our analysis on the dynamics of the deindustrialization process in a small EU country.

Section 2 describes the data. Section 3 documents the aggregate evolution of the Danish manufacturing sector. Section 4 explores the changes at the firm-level before and after switching. Section 5 explains how we try to distinguish between different types of switchers. Section 6 concludes.

## 2 Data

Our main dataset is the IDA longitudinal database that provides detailed information about the population of Danish individuals over the period 1980-2011: gender, age, tenure, wage, occupation<sup>3</sup>, education level, etc. Workers are linked to the plant and firm where they are employed. The dataset also provides a detailed code for the economic activity of the plant. Using this information, we are

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<sup>3</sup>Our detailed occupation variable (ISCO) is only available since 1991.

able to identify firms that have at least one establishment classified in a manufacturing industry activities; those with no manufacturing establishments; and, especially relevant to our analysis those firms that switch from manufacturing to non-manufacturing.<sup>4</sup>

One difficulty of our analysis is related to the several changes in industrial classification implemented in 1993, 2003 and 2007. The first and third reclassifications were substantial, moving from DB77 to DB93 (the Danish equivalents of the European classification NACE CLIO and NACE Rev. 1) and DB03 to DB07 (the equivalents of NACE Rev 1.1 and NACE Rev 2). The second change was less important and did not involve large modifications. Statistics Denmark made substantial efforts during these periods of industrial re-classification to properly assign firms to their main industries using both the new and old activity codes. Nevertheless, because we want to focus on real switching behavior coming from a decision of the firm, and not on a statistical re-classification, we concentrate our analysis on the period 1993-2007. All our results are robust when we extend the period of analysis to the entire period (1980-2011).

Based on this dataset, we also determine the number of workers for five different occupational categories: managers; tech workers (R&D workers and technicians); support activities; sales activities; and line workers. We further decompose line workers into two separate categories: those involved in transport and warehousing (line 1) and the others, mostly involved in the production process (line 2)<sup>5</sup>.

Our central dataset does not contain any information about accounting variables such as sales or value added; or about imports and exports. Therefore, we merge the IDA dataset with two other datasets: the VAT statistics dataset and the Foreign Trade dataset. Unfortunately, these two datasets only start in 1993 limiting the time coverage of our analysis to 1994-2007.

### 3 The Aggregate Evolution of Danish Manufacturing

The path of the Danish manufacturing sector over the last several decades is similar to the well-known path in other developed countries. Figure 1 shows the precipitous fall in the number of manufacturing firms starting in the early 1980s and continuing up to the present. Manufacturing firms can leave in one of two ways, through exit (closure of the firm) or by switching into a non-manufacturing sector. Figure 1 shows a similar pattern for employment. The drop in manufacturing employment begins later but is especially pronounced beginning in the end of the 1990s.

Table 1 documents the evolution of firms in manufacturing from 1994-2007.<sup>6</sup> There is a large amount of churning of firms in the sector throughout the period. In any given year, 9-13 percent of current manufacturers shut down and a comparable but smaller number begin to produce. Net

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<sup>4</sup>We refer to non-manufacturing industries and service industries interchangeably throughout this paper.

<sup>5</sup>See Appendix A for the definition of these groups based on the ISCO code.

<sup>6</sup>As mentioned above, data limitations restrict our detailed analysis to the period 1994-2007.

exit is positive and significant in almost every year; on average there is net exit of 1.3 percent of manufacturing firms in every year.

Industry switching, which is the focus of the remainder of our analysis, is less common but occurs consistently over time. On average in each year, 1.7 percent of manufacturing firms switch to a non-manufacturing sector and 1.1 percent of non-manufacturing firms switch to manufacturing. A firm is defined as “switching out” of manufacturing when it no longer reports any establishment in a manufacturing industry. The net switching out of manufacturing increases in the latter half of the sample, rising to an annual average of 0.8 percent of manufacturing firms. The cumulative number of firms that switch out of manufacturing from 1994-2007 is 3,158. Of those, 1,728 firms are still active in 2007.

Tables 2 and 3 report totals for firms, employment, sales, value-added, exports and imports separately for manufacturing firms and “switchers”. Switchers are defined as firms that are in manufacturing in year  $t$  but switch out of manufacturing to a non-manufacturing sector in year  $t+1$  and do not re-switch back to manufacturing.

There are many more firms in manufacturing, and they account for much more employment than switchers. In addition, they dominate total sales, value-added, exports and imports. However, it is interesting to look at the evolution of these aggregate variables over time for each group. While overall manufacturing employment is declining, as noted earlier, in contrast employment at switchers is rising dramatically over the period. This rise in employment is due largely to the increasing number of switching firms, as employment per firm is relatively constant over the interval.

Aggregate sales at manufacturing firms increase 13 percent from 1994 to 2007 due to sales per firm that rise 42 percent from 33dkk million per firm in 1994 to 47dkk million in 2007. Sales at switchers are increasing much faster due to an increasing number of firms and much faster growth of sales per firm. Total value-added at manufacturing firms rises only 4.5 percent from 1994 to 2007. A decline in manufacturing firms is offset by a 31 percent increase in value-added per firm. For switchers, value-added rises at a comparable rate to sales.

Table 4 compares three groups of firms in 2007 and estimates the average difference between switchers and all manufacturing firms within industries from 1994-2007. Manufacturing firms are significantly larger in terms of employment; however, sales, sales per worker and value-added per worker are all higher at firms that switched out of manufacturing. By 2007, sales per worker are almost twice as high in switchers and value-added per worker is more than 40 percent greater.

Switchers are also different in terms of the wage and employment structure relative to manufacturing firms. The share of medium and especially high education workers is substantially higher at switchers, as is the share of white collar workers and tech workers. Perhaps unsurprisingly, wages are also higher at these switching firms (even when controlling for the composition of the workforce).

## 4 Switchers and Stayers

To fully understand what is happening at these firms that exit manufacturing but stay in business, we now consider a variety of dimensions of their performance. We start by examining the characteristics associated with switching itself. We then turn to post-switching performance, both the probability of survival of the firm and the evolution of firm characteristics before, during, and after the switch.

### 4.1 Switching Out

While we have shown that switchers are different from continuing manufacturing firms after they make the transition, we know little about the characteristics of firms that are likely to switch.

We frame the switching decision as one related to expected future profits of the firm and comparative advantage in tasks. For current manufacturing firms, the decision to switch is in large part a decision about the expected comparative advantage of the firm going forward. During the period in question, firms are facing dramatic changes in the relative cost of locating activities outside the firm and outside the country. Both onshore and offshore outsourcing are on the rise and the lower cost of communications as well as increasing global linkages present opportunities for firms to split their activities across the borders of the firm as well as across national borders.

We would expect that firms with a comparative disadvantage in production would be the most likely to incur any fixed or sunk costs of outsourcing the production process. However measuring such internal comparative disadvantage is difficult. We start by estimating a simple probit on the decision to switch. We ask whether firm characteristics such as size, productivity and trade status are systematically related to the probability of switching controlling for industry and year effects.

The results are reported in Table 5. Within the same industry, firm size as measured by log employment is negatively and significantly correlated with switching out of manufacturing. In contrast, the coefficient on the measure of firm productivity, log sales per worker, is positive and significant. Firms with multiple establishments are less likely to switch out of manufacturing, while those with larger shares of white collar wages and tech workers are more likely to make the change. Importer and exporter status are negatively correlated with switching, the share of imports and exports in total sales are significant. A greater import share and lower export share are both associated with switching.

### 4.2 Survival and Post-switching Performance

We now turn our attention to the relative performance of switchers versus continuing manufacturers. In Table 6, we consider the possibility that switchers are more likely to fail than non-switchers. We control for a variety of firm characteristics and examine the switch status of the firm. As is typical, survival is increasing in productivity, and employment. However, switching firms are no more likely

to exit than are continuing manufacturing firms.

In Table 7, we examine the performance of switchers around the switch date. We compare switchers to non-switchers in their manufacturing industry (pre-switch industry) as well as to non-switchers in their destination non-manufacturing industry (post-switch industry).

Two years before the industry change, future switchers are smaller in terms of sales, employment but have higher sales per worker and comparable value-added per worker compared to non-switching manufacturing firms. They already have a workforce more tilted towards white collar tech workers with higher education. Their export shares are lower while their import intensity is higher than firms that will remain in manufacturing.

The relative evolution of these switchers during and after their switch is quite dramatic. Employment levels fall in the years leading up to the switch while relative sales rise a bit and sales per worker and value-added per worker surge. The decline in employment is concentrated in lower education, blue collar workers.

Compared to firms in their destinations sectors, the switchers start with much high levels of employment and sales and lower levels of sales per worker and value-added per worker. Two years after the switch, the levels of sales per worker and value-added per worker are comparable to their peers while the switchers still retain substantial size differences. The switcher firms start the transition with lower levels of high education and white collar worker, but close these gaps during the five year period.

### **4.3 The Evolution of Switching firms**

In this section we use detailed information on individual workers in Danish firms to examine the evolution of these switching firms around their transition dates. We consider the numbers and shares of different types of workers at switching firms before and after their exit from manufacturing. We also consider the wage profile at the switching firms relative to that at continuing manufacturers.

Figure 2 shows the evolution of the workforce at both switching firms and a control group of non-switching manufacturing firms for the 5 year period centered around the switch date. The switchers show a noticeable decline in employment in the years leading up to the switch and a small growth in employment afterwards. While both the numbers of white and blue collar workers are declining the drop is particularly pronounced for blue collar workers. After the switch, the rise in employment at switchers is concentrated in the white collar workforce. Over the entire transition period, the share of white collar workers increases from 46 to 60 percent of the workforce at switching firms. In contrast the white collar share at non-switchers increases by just one percent.

In addition to the changing composition, there is dramatic turnover in workers for switchers. All firms naturally have workers arrive and depart in any year. However, this process is much stronger at these switching firms. Two years after the switch, more than 53 percent of the workforce is new

at switchers, hired in years  $t$  through  $t+2$ . The comparable figure for non-switchers is under 42 percent. The pattern of educational attainment of the workforce at switchers is similar (see Figure 3). Low education and medium education workers are reduced before the switch out, and while all categories of workers increase after the transition, the growth is largest for high education workers. The share of high education workers rises from 4.4 to 9.0 percent of the workforce; at non-switching firms the share is unchanged.

Figure 4 examines the types of activities performed at switching firms from 1994 to 2007. All firms that will switch out of manufacturing are included in every year, whether or not they have already made the industry change. Overall employment declines starting with the recession in the early part of the 2000's, but the more noticeable change is in the composition of employment across function. Both types of line workers contract sharply in levels and as a share of employment at these firms. In contrast, sales and tech workers rise both in levels and shares. These firms are clearly changing their activities away from production.

## 5 Identifying Types of Switchers

We next try to identify whether some of these firms are still involved in some aspect of the manufacturing process even after switching industry. We adopt two different approaches to distinguish between these two types of firms. First, we look at the destination industries of switching firms. Second, we group firms by their pre-switch levels of high tech employment.

### 5.1 Types by destination

Figure 5 allows us to examine whether there are important differences across firms according to their destination industry. There are at least two possible types of firms that leave manufacturing. The first type transits from a set of production-based activities towards pure intermediation. These firms use their knowledge of suppliers and customers to become traditional wholesalers who match buyers and producers. A second possible category is a firm that no longer undertakes production of the goods but still is involved in design and engineering, supervision of third party production (inside or outside the country) and branding, marketing and distribution. These so-called factoryless goods producers (FGPs) have many of the same capabilities and activities as traditional manufacturing firms but no longer directly control the assembly and processing activities in-house.<sup>7</sup>

We do not have data on any pre-production and post-production activities activities at the switching firms, nor do we know whether they are engaged in hiring contract manufacturing services. Instead, we attempt to find indirect ways to distinguish between types. We start by dividing the switching firms by destination sector. We assume that firms ending up in the wholesale sector

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<sup>7</sup>Bernard and Fort (2013) document the extent of these types of firms in the wholesale sector in the US and find that a substantial number of firms and workers are employed at FGPs.



are more likely to be closer to traditional wholesalers, the evidence of Bernard and Fort (2013) notwithstanding, while switching firms that move to Computer and R&D sectors or Other Business Activities are more likely to still be engaged in manufacturing-like activities.

Figure 5 shows big differences in the levels and shares of different functions across switching firms in these destination sectors. Firms that move to Wholesale see drops in line workers but increasing shares of sales and support staff, with little change in the share of tech workers. On the other hand, firms that move either to Computer and R&D or to Other Business Activities show large increases in the share of tech workers.

This evidence suggests that the narrative about firms that leave manufacturing includes at least two different stories. In one, the manufacturing-related capabilities are indeed declining as the firms become more like traditional wholesale firms. The other path is one of continuing activity related to manufacturing in spite of the absence of the manufacturing processes themselves.

## 5.2 Types by initial conditions in workforce composition

Another way to distinguish between firm types is to look at their initial stock of knowledge workers, i.e. those workers that we define as high tech. We focus on the subset of surviving switchers at the end of our period of analysis. We then define high tech firms as those firms that have a share of high tech workers above the 75th percentile two years before switching (somewhere above 8%). Those firms represent about a quarter of our sample, but they also employ about half of the workers (see Figure 6). We can also see that these firms experienced a large increase in the number and share of high tech workers.

Figure 7 shows the composition of the workforce by type of firm. We observe that high tech switchers are much larger than low tech firms. They both experience a large decline in employment the year before and during the industry change (especially getting rid of line 2 workers), but start growing again afterwards. However, for high tech firms, the share of tech workers increases (the stock remains constant) dramatically, from 19% to 27%; while sales and support activities gain in relative terms for low tech firms.

## 6 Conclusions

The present paper examines the set of firms that leave the manufacturing sector. These former manufacturers account for an increasing share of firms, employment, sales and value-added in the Danish economy. They represent a source of success due to their rising employment and productivity. In fact, these switching firms are likely the by-product of increasing globalization and improvements in technology. They are able to continue producing at high levels and are heavily engaged in the international economy even though they are no longer considered manufacturing firms. Further

research is needed to understand what these deindustrialized firms are doing and how they contribute to economic well-being in high income countries.

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Figure 1: Manufacturing Firms and Workers over time

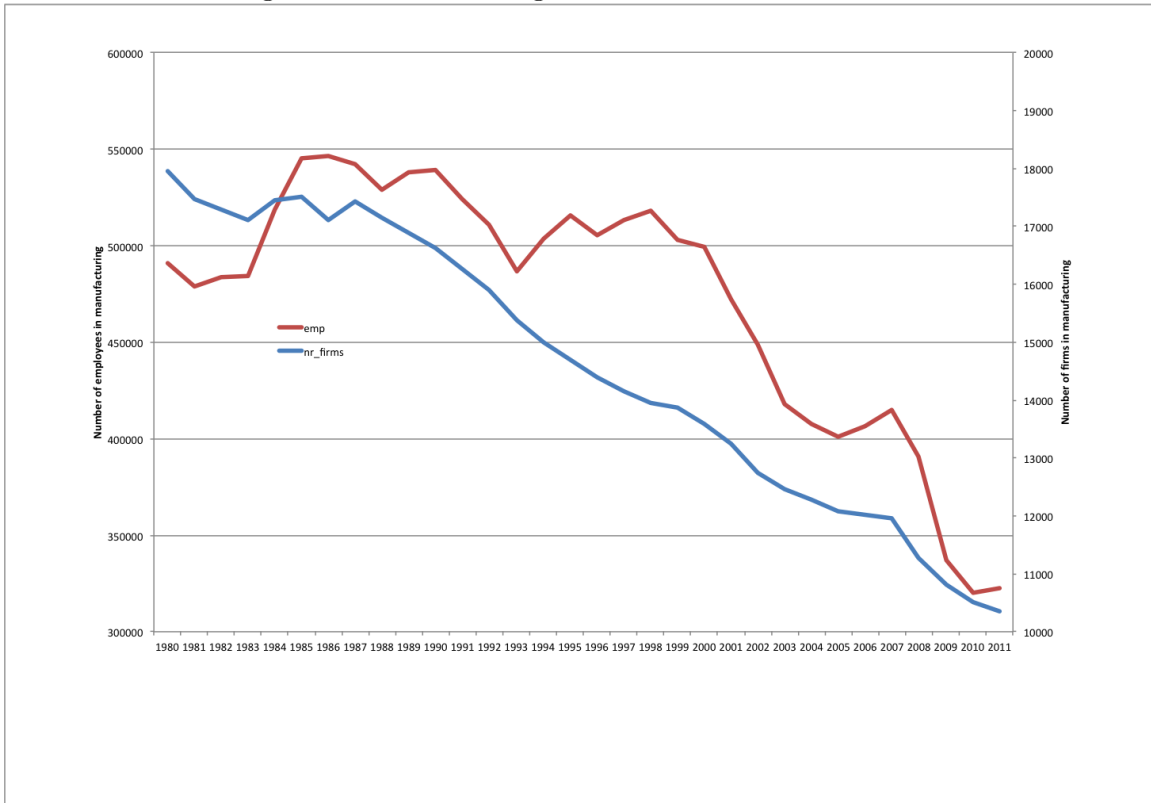


Figure 2: White and Blue Collar Workers

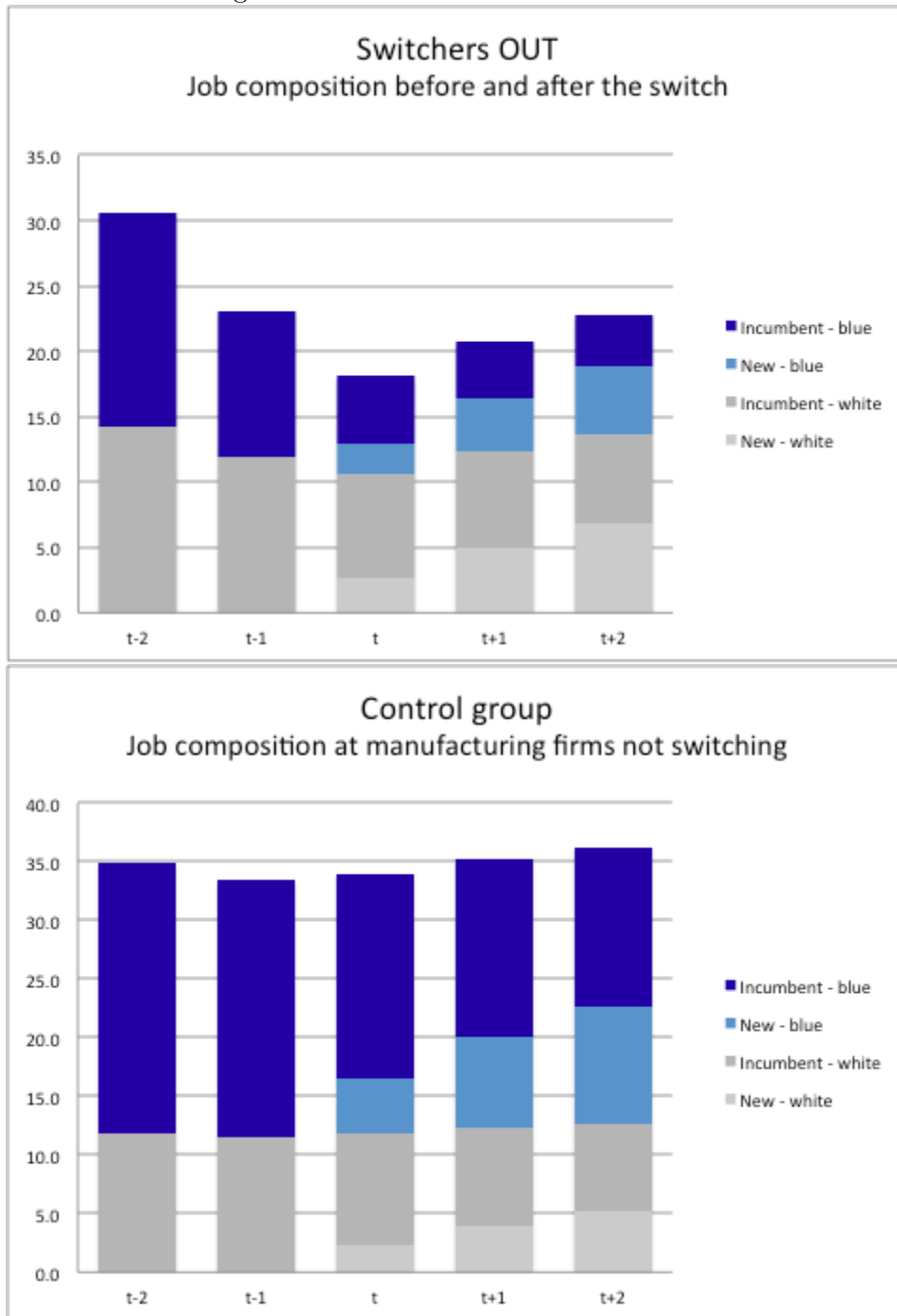


Figure 3: Education

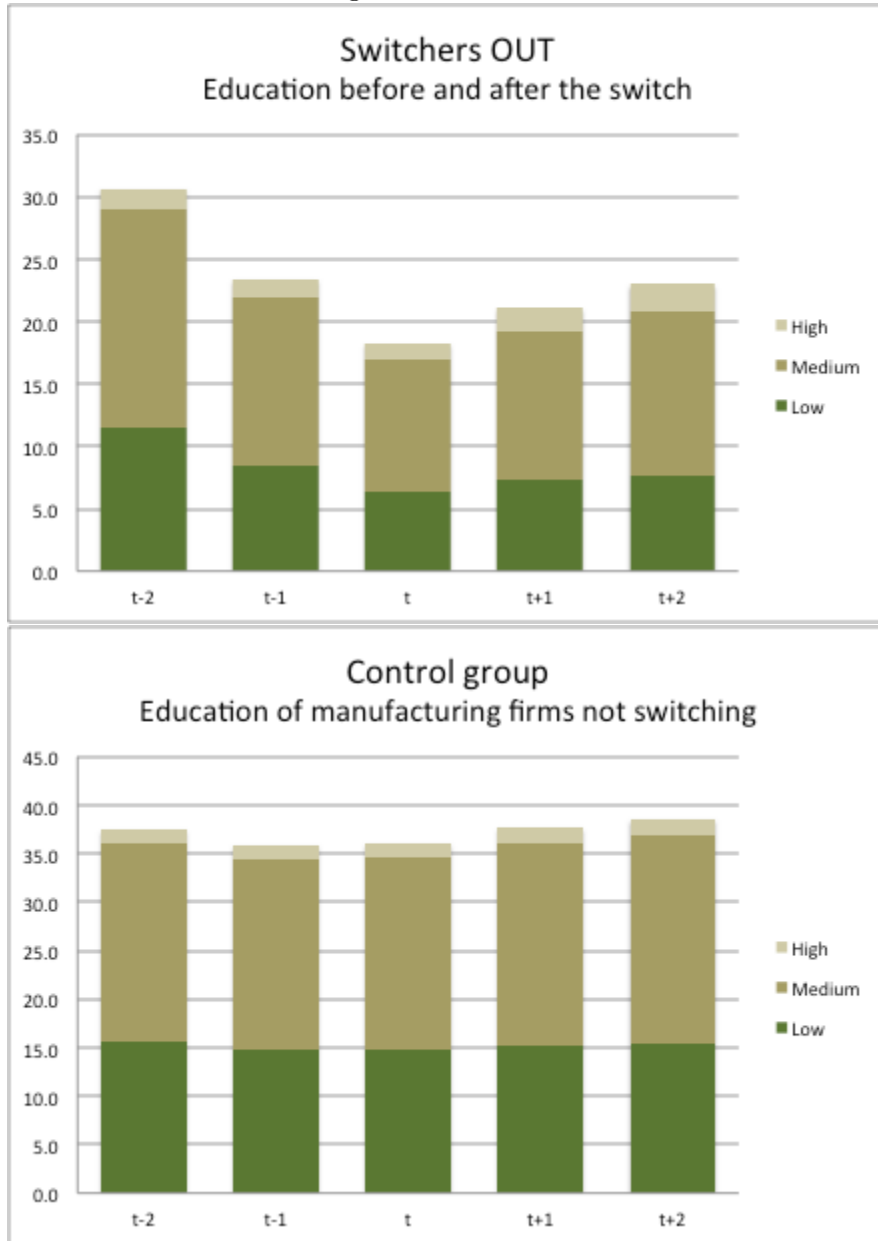


Figure 4: Workforce Composition

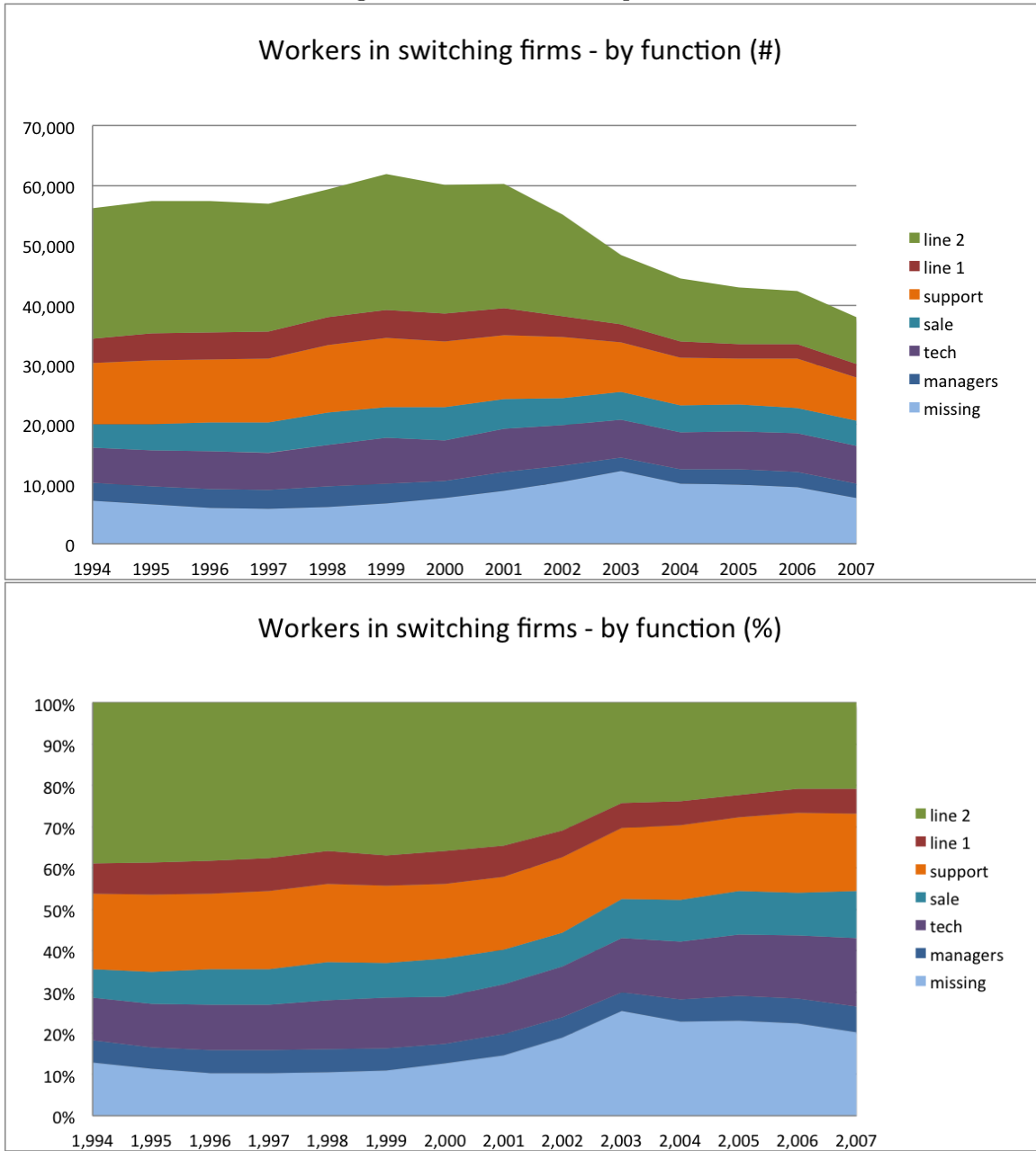


Figure 5: Workers in Switching Firms by Function

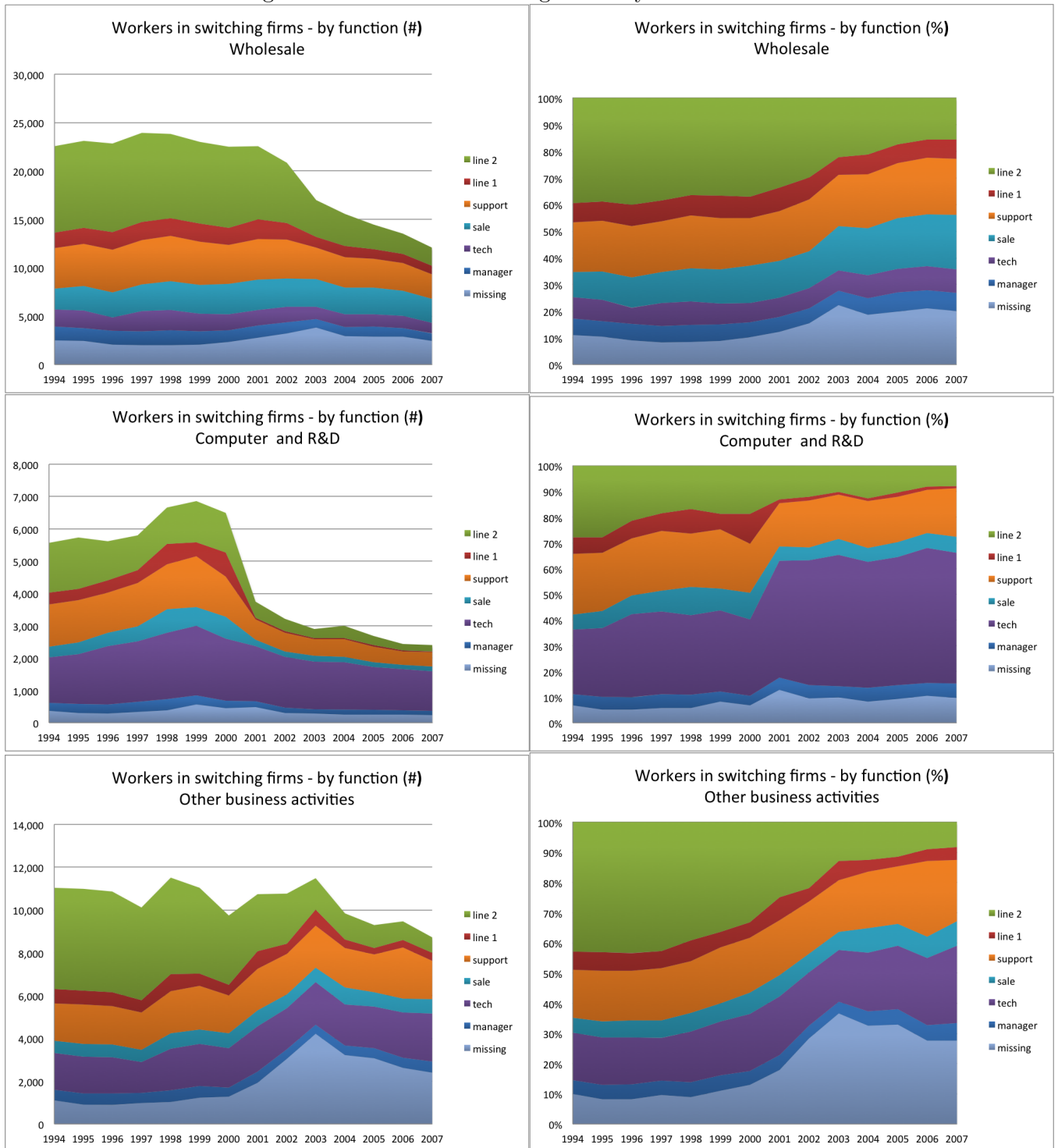




Figure 6: Evolution of the Number of Workers in Switching Firms

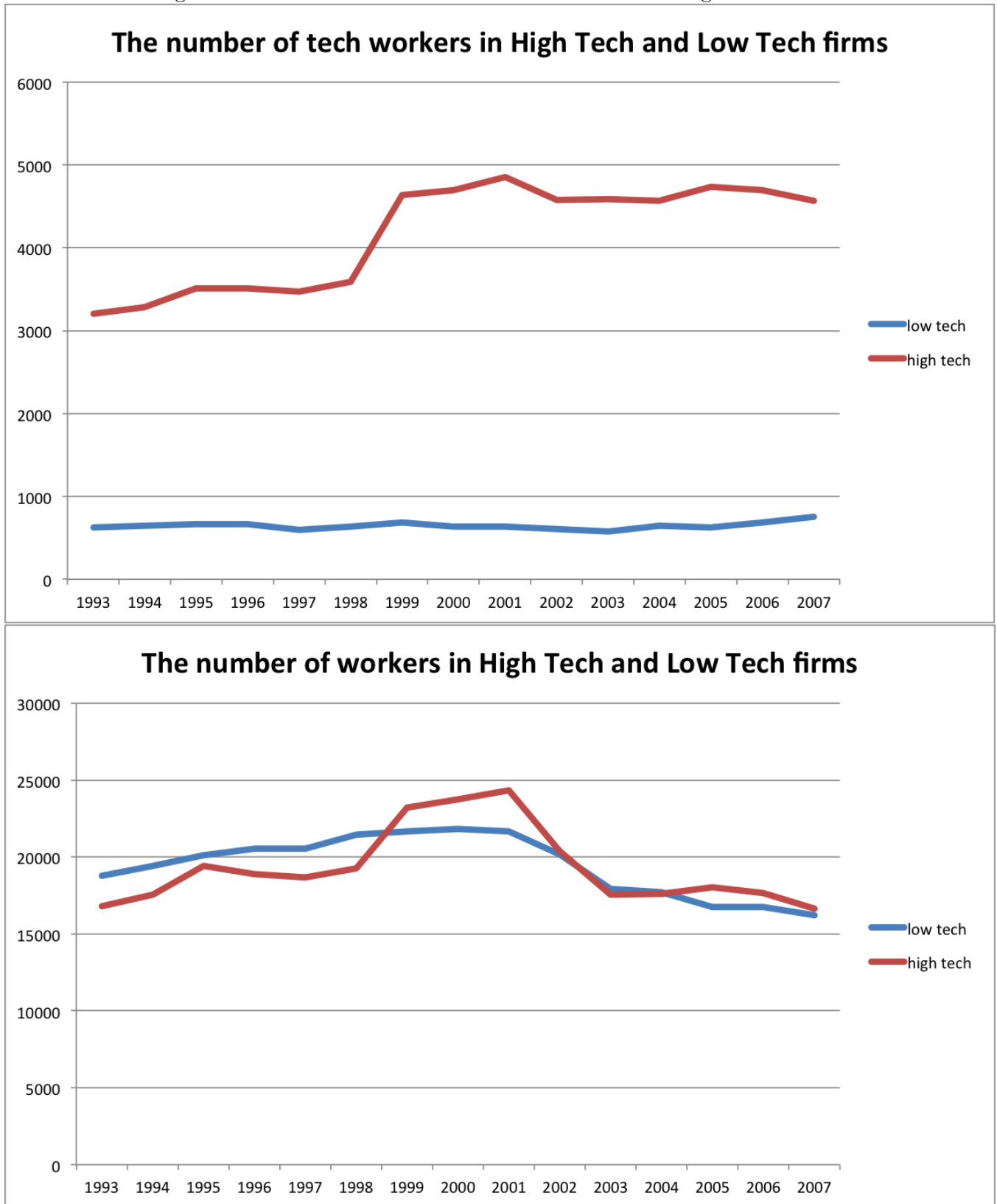


Figure 7: Evolution of the occupational composition of the workforce

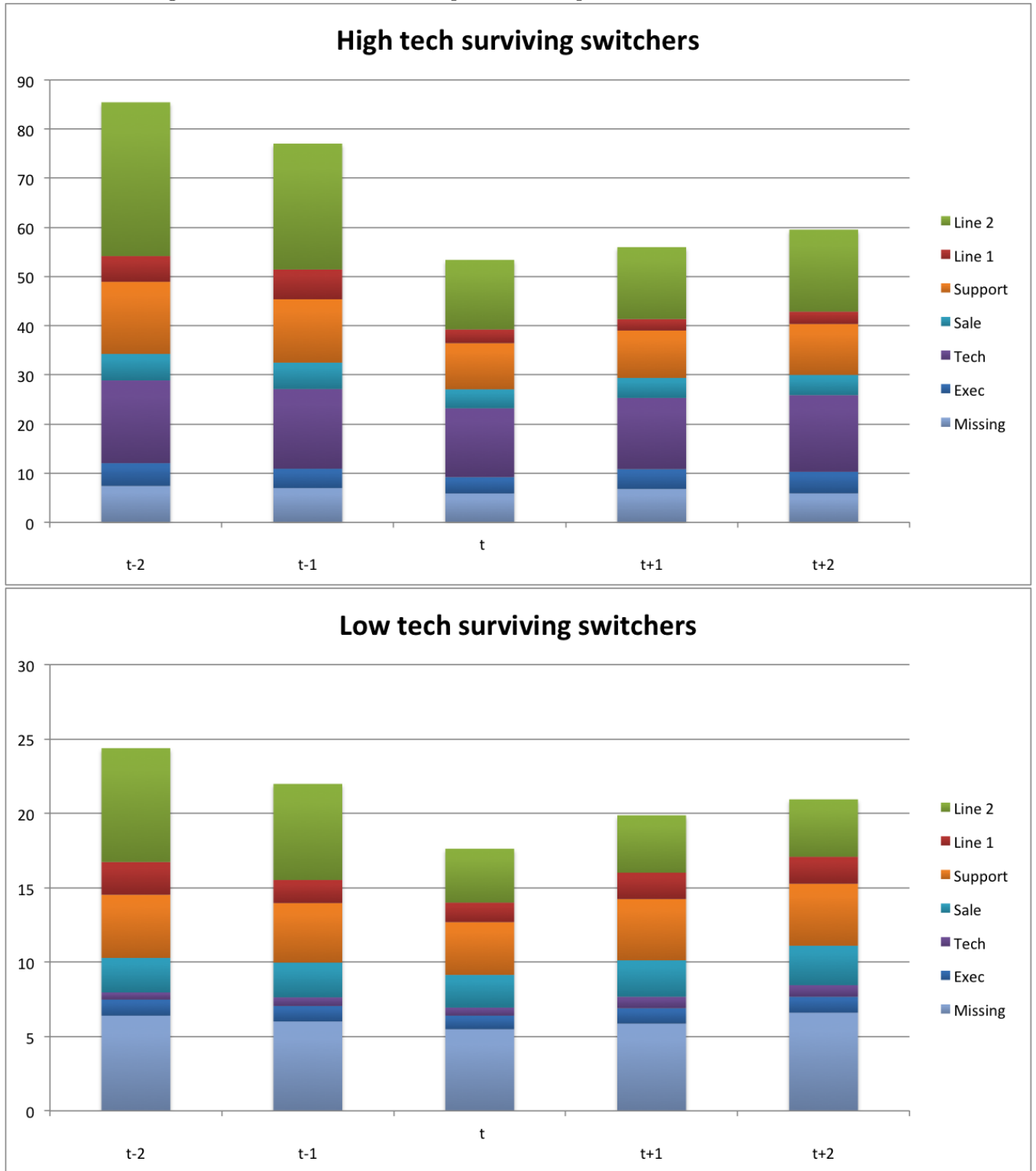


Table 1: Stayers, Switchers and Exiters in Manufacturing

Year	Entry	Stay	Switch in	Switch out	Exit	All firms
1994	1,596	13,371	206	211	1,966	15,173
1995	1,431	13,319	106	234	1,620	14,856
1996	1,272	13,066	210	259	1,531	14,548
1997	1,310	12,865	127	203	1,480	14,302
1998	1,267	12,694	146	221	1,387	14,107
1999	1,574	12,249	185	215	1,643	14,008
2000	1,307	12,274	131	180	1,554	13,712
2001	1,266	11,988	108	258	1,466	13,362
2002	1,132	11,596	124	288	1,478	12,852
2003	1,136	11,279	150	210	1,363	12,565
2004	1,181	11,094	105	186	1,285	12,380
2005	1,116	10,918	139	166	1,296	12,173
2006	1,167	10,818	111	185	1,170	12,096
2007	1,215	10,596	231	342	1,158	12,042

Note: Sales, value added, exports and imports are in millions DKK in real terms, deflated using the CPI index with baseline in 1995.

Table 2: Aggregates for All Manufacturing Firms

Year	# firms	# workers	# manufacturing workers	Sales	Value added	Exports	Imports
1994	15,173	493,801	471,462	501,075	165,648	131,085	68,496
1995	14,856	497,981	475,260	504,663	161,106	138,496	72,137
1996	14,548	488,900	464,435	497,503	170,275	144,503	72,552
1997	14,302	497,771	473,132	507,912	169,068	150,504	77,772
1998	14,107	500,014	476,146	475,304	158,892	153,709	77,119
1999	14,008	485,167	459,351	481,108	166,019	177,187	77,761
2000	13,712	481,789	459,624	498,541	166,249	207,072	92,675
2001	13,362	482,119	452,940	525,390	170,842	217,512	93,678
2002	12,852	459,036	433,328	508,837	166,105	215,533	92,745
2003	12,565	426,553	408,097	478,393	158,585	209,031	87,015
2004	12,380	411,500	392,705	488,965	160,561	210,068	87,995
2005	12,173	404,799	385,355	503,004	160,062	218,519	92,262
2006	12,096	409,766	390,895	535,783	166,112	231,061	105,552
2007	12,042	419,600	393,505	566,425	173,134	238,130	111,079

Note: Sales, value added, exports and imports are in millions DKK in real terms, deflated using the CPI index with baseline in 1995.

Table 3: Aggregates for Firms Switching Out of Manufacturing

Year	# firms	# workers	Sales	Value added	Exports	Imports
1994	211	4,113	4,774	1,401	839	775
1995	410	7,209	9,144	2,326	1,646	2,309
1996	606	11,101	13,557	3,413	2,615	3,321
1997	745	14,473	21,134	6,069	5,248	4,541
1998	897	18,720	29,177	9,952	6,086	5,886
1999	981	19,338	30,345	9,428	6,753	7,010
2000	1,042	23,733	39,012	7,848	6,833	8,241
2001	1,189	26,161	43,925	8,577	7,510	8,910
2002	1,348	28,236	50,274	8,731	12,266	13,380
2003	1,418	33,035	59,748	11,183	11,248	13,877
2004	1,485	33,465	62,495	13,192	12,334	15,057
2005	1,507	36,669	77,852	14,022	18,086	21,238
2006	1,550	38,865	82,485	14,765	14,276	19,839
2007	1,728	37,948	83,132	16,946	12,242	18,770

Sales, value added, exports and imports are in millions DKK in real terms, deflated using the CPI index with baseline in 1995.

Table 4: Characteristics of Switchers and Manufacturers

	Manufacturing	Switchers	Switcher premium
Period	2007	2007	1994-2007
Value added per worker	345,778	492,229	0.180***
Sales per worker	1,026,621	2,004,704	0.365***
Sales	47,727,100	51,316,310	0.112***
Employment	34.8	22.0	-0.302***
Education of workers (%)			
low education	36.0	30.9	-0.047***
medium education	60.0	61.0	0.013***
high education	4.0	8.1	0.034***
Share of white-collar workers (%)	36.0	63.6	0.243***
Share of tech workers (%)	7.3	12.7	0.042***
Average wage	144.0	169.2	0.118***
Wagebill share (high education)	4.4	8.8	0.036***
Wagebill share (white collar)	39.8	65.1	0.220***
Export share (%)	20.3	12.5	-0.093***
Import intensity (%)	13.0	23.1	0.083***
# products exported (HS6)	11.8	15.5	0.091***
# destinations exported to	11.1	7.6	-0.205***
# products imported (HS6)	17.2	21.0	0.134***
# destinations imported from	7.1	7.0	0.027**
Year*industry fixed effects			Y
N	12,042	1,728	203,293

Table 5: Probability of Switching Out of Manufacturing

Dep. Var.: Switching Out Probability	(1)	(2)	(3)
Log labor productivity in t-1	0.005*** (0.000)	0.004*** (0.000)	0.004*** (0.000)
Log employment in t-1	-0.003*** (0.000)	-0.003*** (0.000)	-0.001*** (0.000)
Multi-establishments firm	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
Exporter in t-1	-0.002*** (0.001)	-0.001 (0.001)	-0.002** (0.001)
Importer in t-1	0.004*** (0.001)	0.001 (0.001)	-0.002** (0.001)
Export share in t-1		-0.012*** (0.002)	-0.013*** (0.002)
Import share in t-1		0.029*** (0.002)	0.022*** (0.002)
Share of white collar worker wages t-1			0.019*** (0.001)
Share of tech workers in employment in t-1			0.003** (0.001)
Year dummies	x	x	x
Sector dummies	x	x	x
Pseudo R2	0.054	0.060	0.086
N	165,376	165,376	149,434

Note: Probit analysis, marginal effects are reported with standard errors in parentheses. We used a probit specification with year and industry (3-digit) fixed effects. Industry is defined as the lagged industry. Export (import) shares are set to 0 for firms not involved in exporting (importing). Marginal effects are reported with standard errors in parentheses. \*\*\*/\*\*/\* indicates statistical significance at the 1%/5%/10% respectively.

Table 6: Probability of Survival

Dep. Var.: Survival probability	(1)	(2)
Switcher	-0.001 (0.003)	-0.001 (0.003)
Log labor productivity <sub>t</sub>	0.008*** (0.001)	0.008*** (0.001)
Log employment <sub>t</sub>	0.044*** (0.001)	0.043*** (0.001)
Multi-establishment firm	-0.049*** (0.004)	-0.049*** (0.004)
Exporter <sub>t</sub>	0.002 (0.002)	0.001 (0.002)
Importer <sub>t</sub>	-0.006*** (0.002)	-0.008*** (0.002)
Export share <sub>t</sub>		0.001 (0.005)
Import share <sub>t</sub>		0.021*** (0.007)
Year dummies	x	x
Sector dummies	x	x
Pseudo R2	0.074	0.074
N	163,934	163,934

Note: Probit analysis, marginal effects are reported with standard errors in parentheses. The survival dummy is equal to 1 if the firm is active in  $t$  and  $t+1$ . It is equal to zero if the firm ceases to operate. Both specifications include year and industry (3-digit) fixed effects. For switchers, industry is defined as the industry prior to switching, for non switchers, it the industry in year  $t$ . Export (import) shares are set to 0 for firms not involved in exporting (importing). \*\*\*/\*\*/\* indicates statistical significance at the 1%/5%/10% respectively.



Table 7: Performance of switchers OUT before and after the switch (level analysis)

	Premium of switchers vs. manufacturing (PRE switch control group)					Premium of switchers vs. non manufacturing (POST switch control group)				
	in t-2	in t-1	in t	in t+1	in t+2	in t-2	in t-1	in t	in t+1	in t+2
	Value added per worker	0.014	0.028**	0.116***	0.124***	0.117***	-0.112***	-0.085***	-0.016	0.002
Sales per worker	0.146***	0.183***	0.315***	0.355***	0.338***	-0.137***	-0.095***	0.005	0.020	0.002
Sales	-0.186***	-0.188***	-0.160***	-0.119***	-0.123***	0.393***	0.387***	0.352***	0.358***	0.350***
Employment	-0.346***	-0.382***	-0.523***	-0.521***	-0.520***	0.554***	0.501***	0.336***	0.315***	0.314***
Education of workers (%)										
low education	-0.045***	-0.038***	-0.050***	-0.052***	-0.055***	0.016***	0.015***	0.001	0.003	-0.001
medium education	0.024***	0.012***	0.020***	0.015***	0.016***	0.011*	0.006	0.016***	0.006	0.007
high education	0.020***	0.026***	0.029***	0.038***	0.039***	-0.027***	-0.021***	-0.017***	-0.008***	-0.006*
Share of white collar workers	0.143***	0.171***	0.229***	0.259***	0.253***	-0.161***	-0.132***	-0.073***	-0.051***	-0.057***
Share of tech workers	0.026***	0.035***	0.042***	0.051***	0.050***	-0.015***	-0.007**	-0.001	0.008**	0.006
Average wage	0.083***	0.079***	0.094***	0.099***	0.093***	0.063***	0.068***	0.086***	0.084***	0.078***
Share of wages - high edu.	0.023***	0.029***	0.031***	0.039***	0.041***	-0.019***	-0.013***	-0.010***	-0.001	0.002
Share of wages - white collar	0.147***	0.172***	0.203***	0.233***	0.230***	-0.131***	-0.104***	-0.067***	-0.044***	-0.046***
Export share	-0.043***	-0.059***	-0.086***	-0.101***	-0.109***	0.118***	0.098***	0.067***	0.061***	0.056***
Import intensity	0.063***	0.067***	0.070***	0.080***	0.081***	-0.015**	-0.013**	-0.015**	-0.014*	-0.011
# products exported (6 digit)	0.145***	0.123***	0.077**	0.008	0.038	0.448***	0.425***	0.390***	0.297***	0.299***
# destinations exported to	-0.023	-0.068*	0.178***	-0.231***	-0.254***	0.590**	0.552***	0.443***	0.385***	0.354***
# products imported (6 digit)	0.111***	0.093**	0.029	0.007	0.075*	0.270***	0.281***	0.199***	0.114***	0.171***
# destinations imported from	0.036	0.010	-0.034	-0.061*	-0.039	0.316***	0.310***	0.258***	0.185***	0.216***
N	140,763	166,783	166,783	140,690	120,363	1,287,590	1,580,647	1,580,647	1,287,148	1,076,533

Note: The premium is computed using the entire panel, therefore every cell in the table is the result of a separate regression. For value added per worker, sales per worker, sales, firm size, average wage, the number of products and the number of destinations, OLS regressions are run with the log of the variable of interest on a dummy for firms switching out of manufacturing. For the various share variables, The OLS regressions are run with the shares on a dummy for switchers out of manufacturing. For importer and exporter dummy, probits are estimated on a dummy for switchers out of manufacturing. The two control groups are constructed as (1) pre-switch control group: manufacturing firms that do not experiencing any switch in the (t-2) to (t+2) window and (2) post-switch control group: non manufacturing firms that do not experiencing any switch in the (t-2) to (t+2) window. All estimations include year\*industry (3 digit) fixed effects. For switchers, we use the industry prior to switching when comparing to manufacturing firms, and the industry after switching when comparing to non manufacturing firms. \*\*\*/\*\*/\* indicates significance at the 1%/5%/10% level.

Appendix A: Definition of our occupational groups

Group M: Managers

DISCO code	Definition (Danish)	Definition (English)
1	Ledelse på øverste plan i virksomheder, organisationer og den offentlige sektor	Leadership at senior levels in companies, organizations and public sector
1000	Ledelse på øverste plan i virksomheder, organisationer og den offentlige sektor	Management at senior level in companies, organizations and public sector
11	Lovgivningsarbejde samt ledelse i offentlig administration og interesseorganisationer	Legislative work and leadership in public administration and interest organizations
1100	Lovgivningsarbejde samt ledelse i offentlig administration og interesseorganisationer	Legislative work and leadership in public administration and interest organizations
111	Lovgivningsarbejde og ledelse i offentlig administration	Legislative work and leadership in public administration
1110	Lovgivningsarbejde og ledelse i offentlig administration	Legislative work and leadership in public administration
114	Overordnet ledelse i interesseorganisationer og humanitære organisationer	Overall leadership in community organizations and humanitarian organizations
1140	Overordnet ledelse i interesseorganisationer og humanitære organisationer	Overall leadership in community organizations and humanitarian organizations
1141	Ledelse i politiske partiorganisationer	Leadership in political party organizations
1142	Ledelse i økonomiske interesseorganisationer, fx arbejdsgiverforeninger, brancheorganisationer og fagforeninger	Management of economic interest groups, such as employers' associations, professional associations and
1143	Ledelse i humanitære organisationer, fx miljø- og idrætsorganisationer	Leadership in humanitarian organizations such as environmental and sports organizations
12	Ledelse i virksomheder med ti eller flere beskæftigede	Management in enterprises with ten or more employees
1200	Ledelse i virksomheder med ti eller flere beskæftigede	Management in enterprises with ten or more employees
121	Overordnet og/eller tværgående ledelse i virksomheder med ti eller flere beskæftigede	Overall and / or transverse direction in enterprises with ten or more employees
1210	Overordnet og/eller tværgående ledelse i virksomheder med ti eller flere beskæftigede	Overall and / or transverse direction in enterprises with ten or more employees
122	Ledelse af hovedaktiviteten i virksomheder med ti eller flere beskæftigede	Directing the main activity of enterprises with ten or more employees
1220	Ledelse af hovedaktiviteten i virksomheder med ti eller flere beskæftigede	Directing the main activity of enterprises with ten or more employees
1221	Ledelse af bedriften inden for landbrug, skovbrug og fiskeri	Management of farm fields of agriculture, forestry and fishing
1222	Ledelse af produktionen i håndværks- og industrivirksomheder	Management of production in the handicraft and industrial enterprises
1223	Ledelse af produktionen i bygge- og anlægssektoren	Management of production in construction sector
1224	Ledelse af salget i engros- og detailhandelsvirksomheder	Management of sales in wholesale and retail businesses
1225	Ledelse af hovedaktiviteten i hotel- og restaurationsvirksomheder	Directing the main activity in the hotel and catering businesses
1226	Ledelse af hovedaktiviteten i virksomheder inden for transport og kommunikation	Directing the main activity of firms in transport and communications
1227	Ledelse af hovedaktiviteten i virksomheder inden for forretningservice	Directing the main activity of firms in business
1228	Ledelse af hovedaktiviteten i virksomheder inden for sektoren "personlige tjenesteydelser"	Directing the main activity of firms in the "personal services"
1229	Ledelse af hovedaktiviteten i øvrige virksomheder med ti eller flere beskæftigede	Directing the main activity in other businesses with ten or more employees
123	Ledelse af specialområder i virksomheder med ti eller flere beskæftigede	Management of special areas in enterprises with ten or more employees
1230	Ledelse af specialområder i virksomheder med ti eller flere beskæftigede	Management of special areas in enterprises with ten or more employees
1231	Ledelse vedrørende administration og finansiering i ikke-finansielle virksomheder	Management of administration and finance in non-financial companies

1232	Personaleledelse	Human Resources
1233	Salgs- og afsætningsledelse, eksklusive salgsvirksomheder	Sales and marketing management, net sales companies
1234	Informations- og markedsføringsledelse	Information and marketing management
1235	Indkøbs- og forsyningsledelse	Purchasing and supply management
1236	Edb-ledelse, eksklusive edb-virksomheder	Computer management, excluding computer companies
1237	Forsknings- og udviklingsledelse	Research and development management
1239	Ledelse af andre specialområder i virksomheder med ti eller flere beskæftigede	Management of other special areas in enterprises with ten or more employees
13	Ledelse af virksomheder med færre end ti beskæftigede	Management of companies with fewer than ten employees
1300	Ledelse af virksomheder med færre end ti beskæftigede	Management of companies with fewer than ten employees
131	Ledelse af virksomheder med færre end ti beskæftigede	Management of companies with fewer than ten employees
1310	Ledelse af virksomheder med færre end ti beskæftigede	Management of companies with fewer than ten employees
1311	Ledelse af virksomheder inden for landbrug, skovbrug og fiskeri	The management of enterprises in agriculture, forestry and fishing
1312	Ledelse af håndværks- og industrivirksomheder	Management of craft and industrial
1313	Ledelse af virksomheder i bygge- og anlægssektoren	Management of companies in construction sector
1314	Ledelse af engros- og detailhandelsvirksomheder	The management of wholesale and retail businesses
1315	Ledelse af hotel- og restaurationsvirksomheder	Management of hotel and catering businesses
1316	Ledelse af virksomheder inden for transport og kommunikation	Management of companies in transport and communications
1317	Ledelse af virksomheder inden for forretningsservice	Management of companies in business
1318	Ledelse af virksomheder inden for sektoren "personlige tjenesteydelser"	Management of companies in the sector "personal services"
1319	Ledelse af øvrige virksomheder med færre end ti beskæftigede	Management of other businesses with fewer than ten employees

Group R: High-skill, R&D and technicians

2	Arbejde, der forudsætter færdigheder på højeste niveau inden for pågældende område	Jobs that require skills at the highest level in that area
2000	Arbejde, der forudsætter færdigheder på højeste niveau inden for pågældende område	Jobs that require skills at the highest level in that area
21	Forskning og/eller anvendelse af færdigheder inden for de ikke-biologiske grene af naturvidenskab samt datalogi, statistik,	Research and / or use of skills within the non-biological branches of science and computer science, statistics,
2100	Forskning og/eller anvendelse af færdigheder inden for de ikke-biologiske grene af naturvidenskab samt datalogi, statistik,	Research and / or use of skills within the non-biological branches of science and computer science, statistics,
211	Arbejde med emner inden for fysik, kemi, astronomi, meteorologi, geologi og geofysik	Working with topics in physics, chemistry, astronomy, meteorology, geology and geophysics
2110	Arbejde med emner inden for fysik, kemi, astronomi, meteorologi, geologi og geofysik	Working with topics in physics, chemistry, astronomy, meteorology, geology and geophysics
2111	Arbejde med emner inden for fysik og astronomi	Working with topics in physics and astronomy
2112	Arbejde med emner inden for meteorologi	Working with topics in meteorology
2113	Arbejde med emner inden for kemi	Working with themes in chemistry
2114	Arbejde med emner inden for geologi og geofysik	Working with topics in geology and geophysics

212	Arbejde med matematiske og statistiske begreber, teorier og metoder	Working with mathematical and statistical concepts, theories and methods
2120	Arbejde med matematiske og statistiske begreber, teorier og metoder	Working with mathematical and statistical concepts, theories and methods
2121	Arbejde med matematiske begreber, teorier og metoder	Work with mathematical concepts, theories and methods
2122	Arbejde med statistiske begreber, teorier og metoder	Working with statistical concepts, theories and methods
213	Edb-planlægning og systemudvikling	Computer programming and systems development
2130	Edb-planlægning og systemudvikling	Computer programming and systems development
2131	Design, analyse og overordnet planlægning af edb-systemer	Design, analysis and overall planning of computer systems
2132	Systemudvikling samt konstruktion/programmering af edb-systemer	System Development and construction / programming computer systems
2139	Andet edb-arbejde på højeste faglige niveau	Other computer work at the highest professional level
214	Arkitekt- og ingeniørarbejde med videre	Architectural and engineering work on further
2140	Arkitekt- og ingeniørarbejde med videre	Architectural and engineering work on further
2141	Arkitektarbejde og planlægning af anlægsarbejder	Architectural work and planning of construction works
2142	Ingeniørarbejde vedrørende bygninger og anlæg	Engineering for buildings and facilities
2143	Ingeniørarbejde vedrørende stærkstrøm	Engineering regarding electrical power
2144	Ingeniørarbejde vedrørende svagstrøm	Engineering for low power
2145	Ingeniørarbejde vedrørende ikke-elektriske motorer og maskinanlæg	Engineering for non-electric engines and engine installations
2146	Ingeniørarbejde vedrørende kemiske processer ved industriel produktion	Engineering for chemical processes in industrial production
2147	Mineingeniørarbejde	Mine Engineering
2148	Landinspektørarbejde	Surveyor Jobs
2149	Andet arkitekt- og ingeniørarbejde med videre	Other architectural and engineering work on further
22	Forskning og/eller anvendelse af færdigheder inden for medicin, farmaci og de biologiske grene af naturvidenskab samt	Research and / or use of skills in medicine, pharmacy and the biological activities of science and midwifery
2200	Forskning og/eller anvendelse af færdigheder inden for medicin, farmaci og de biologiske grene af naturvidenskab samt	Research and / or use of skills in medicine, pharmacy and the biological activities of science and midwifery
221	Arbejde med emner inden for de biologiske grene af naturvidenskab	Working with topics in the biological activities of science
2210	Arbejde med emner inden for de biologiske grene af naturvidenskab	Working with topics in the biological activities of science
2211	Arbejde med emner inden for biologi, genetik, zoologi, botanik og økologi samt levnedsmiddeldområdet	Working with topics in biology, genetics, zoology, botany and ecology and food sector
2212	Arbejde med emner inden for anatomi, biokemi, fysiologi, patologi og farmakologi	Working with topics in anatomy, biochemistry, physiology, pathology and pharmacology
2213	Arbejde med emner inden for agronomi vedrørende plante- og husdyravl	Working with themes in agronomy for plant and animal production
222	Arbejde med emner inden for medicin, odontologi, veterinærvidenskab og farmaci	Working with issues in medicine, dentistry, veterinary science and pharmacy
2220	Arbejde med emner inden for medicin, odontologi, veterinærvidenskab og farmaci	Working with issues in medicine, dentistry, veterinary science and pharmacy
2221	Lægearbejde	Medical Work
2222	Tandlægearbejde	Dental Work
2223	Veterinærarbejde	Veterinary Work
2224	Farmaceutarbejde	Pharmaceutical Jobs

2229	Arbejde med emner inden for medicin, odontologi, veterinærvidenskab og farmaci i øvrigt	Working with topics in medicine, dentistry, veterinary medicine and pharmacy in addition
31	Teknikerarbejde inden for ikke-biologiske emner	Technician Working in non-biological issues
3100	Teknikerarbejde inden for ikke-biologiske emner	Technician Working in non-biological issues
311	Teknikerarbejde inden for fysik, kemi, mekanik med videre	Technicians work in physics, chemistry, mechanics and so on
3110	Teknikerarbejde inden for fysik, kemi, mekanik med videre	Technicians work in physics, chemistry, mechanics and so on
3111	Teknikerarbejde inden for fysik, kemi, astronomi, meteorologi, geologi med videre	Technicians work in physics, chemistry, astronomy, meteorology, geology and so on
3112	Teknikerarbejde vedrørende bygninger og anlæg	Technician Work on buildings and installations
3113	Teknikerarbejde vedrørende elektriske anlæg med videre	Technician Work on electrical installations with further
3114	Teknikerarbejde vedrørende elektroniske anlæg med videre	Technicians work on electronic systems with more
3115	Teknikerarbejde vedrørende maskiner og røranlæg, eksklusive vedligeholdelse af maskiner om bord på skibe	Technician Working on machinery and pipe, excluding maintenance of machinery on board ships
3116	Teknikerarbejde vedrørende kemiske processer ved industriel produktion	Technicians work on chemical processes in industrial production
3117	Teknikerarbejde vedrørende industrielle udvindingsanlæg	Technician Working on industrial extraction plant
3118	Teknisk tegnearbejde	Technical signs work
3119	Teknikerarbejde i øvrigt inden for fysik, kemi, mekanik med videre	Technician Working in the area of the physics, chemistry, mechanics and so on
312	Edb-teknisk arbejde	Computer technical work
3120	Edb-teknisk arbejde	Computer technical work
3121	Programmørarbejde	Programmer Jobs
3122	Edb-operatørarbejde samt planlægning af edb-drift	Computer Operator work and planning of computer operation
3123	Arbejde med industrielle robotprogrammer	Working with industrial robot applications
313	Arbejde med lyd, lys og billeder ved film- og teaterforestillinger med videre samt betjening af medicinsk udstyr	Working with sound, light and images through film and theater, with more and operation of medical
3130	Arbejde med lyd, lys og billeder ved film- og teaterforestillinger med videre samt betjening af medicinsk udstyr	Working with sound, light and images through film and theater, with more and operation of medical
3131	Arbejde med lyd, lys og billeder ved fotografering, optagelse, film- og teaterforestillinger med videre	Working with sound, light and images through photography, recording, film and theater, with further
3132	Betjening af maskiner ved udsendelse af radio- og fjernsynsudsendelser samt ekspedition af samtaler ved anvendelse	Operating the machines for broadcasting radio and television broadcasts as well as dispatching calls using
3133	Betjening af medicinsk udstyr såsom scannings- og narkoseapparat samt maskiner til optagelse af røntgenbilleder og	Control of medical devices such as scanning and anesthesia equipment and machines for recording of X-
3139	Arbejde med lyd, lys og billeder i øvrigt	Working with sound, light and images in addition
32	Teknikerarbejde inden for biologiske emner	Technician Working in biological subjects
3200	Teknikerarbejde inden for biologiske emner	Technician Working in biological subjects
321	Teknikerarbejde inden for biologi, medicin, landbrug med videre	Technician Working in biology, medicine, agriculture etc.
3210	Teknikerarbejde inden for biologi, medicin, landbrug med videre	Technician Working in biology, medicine, agriculture etc.
3211	Teknikerarbejde inden for biologi, medicin med videre	Technician Working in biology, medicine and so on
3212	Teknikerarbejde inden for landbrug og skovbrug	Technician Working in agriculture and forestry
3213	Rådgivningsarbejde inden for landbrug og skovbrug	Consultancy work in agriculture and forestry

Group S: support activities

223	Jordemoderarbejde, overordnet sygeplejearbejde med videre	Midwives work, comprehensive nursing work further
2230	Jordemoderarbejde, overordnet sygeplejearbejde med videre	Midwives work, comprehensive nursing work further
23	Undervisning i folkeskoler, erhvervsskoler, gymnasier og højere læreanstalter samt forskningstilrettelæggelse og kontrol af	Teaching in primary schools, vocational schools, colleges and universities, and research organization and
2300	Undervisning i folkeskoler, erhvervsskoler, gymnasier og højere læreanstalter samt forskningstilrettelæggelse og kontrol af	Teaching in primary schools, vocational schools, colleges and universities, and research organization and
231	Undervisning på universiteter og andre højere læreanstalter	Teaching at universities and other higher education institutions
2310	Undervisning på universiteter og andre højere læreanstalter	Teaching at universities and other higher education institutions
232	Undervisning på gymnasier, erhvervsskoler med videre	Teaching in secondary schools, vocational schools, with further
2320	Undervisning på gymnasier, erhvervsskoler med videre	Teaching in secondary schools, vocational schools and so on
233	Undervisning i folkeskoler og lignende	Teaching in schools and similar
2330	Undervisning i folkeskoler og lignende	Teaching in schools and similar
2331	Undervisning i folkeskoler og lignende	Teaching in schools and similar
234	Undervisning af handicappede mennesker	Education of disabled people
2340	Undervisning af handicappede mennesker	Education of disabled people
235	Arbejde vedrørende undervisning i øvrigt	Work on other education
2350	Arbejde vedrørende undervisning i øvrigt	Work on other education
2351	Forskning, udvikling og rådgivning vedrørende undervisningsmetoder	Research, development and advice on teaching methods
2352	Kontrol og tilrettelæggelse af undervisning	Control and organization of teaching
2359	Andet arbejde vedrørende undervisning, herunder kursusvirksomhed	Other work relating to education, including training activities
24	Forskning og/eller anvendelse af færdigheder inden for samfundsvidenskab og humaniora	Research and / or use of skills in the social sciences and humanities
2400	Forskning og/eller anvendelse af færdigheder inden for samfundsvidenskab og humaniora	Research and / or use of skills in the social sciences and humanities
241	Arbejde med emner vedrørende virksomheders organisation og økonomi	Working with issues relating to corporate organization and economics
2410	Arbejde med emner vedrørende virksomheders organisation og økonomi	Working with issues relating to corporate organization and economics
2411	Overordnet revisions- og regnskabsarbejde	Overall audit and accounting work
2412	Udvikling og planlægning af personalespørgsmål	Development and planning of personnel issues
2419	Specialfunktioner vedrørende organisation, herunder ledelsesrådgivning	Special functions related to organization, including management consultancy
242	Juridisk præget arbejde	Legal embossed work
2420	Juridisk præget arbejde	Legal embossed work
2421	Advokatarbejde	Lawyer Jobs
2422	Dommerarbejde	Referee Work
2429	Juridisk præget arbejde i øvrigt	Legal embossed work also
243	Kulturformidling og informationsarbejde	Cultural and information work

2430	Kulturformidling og informationsarbejde	Cultural and information work
2431	Museums- og arkivararbejde	Museums and archives work
2432	Bibliotekararbejde	Work Librarian
244	Arbejde med emner inden for samfundsøkonomi, samfundsfag og humaniora samt overordnet socialrådgivningsarbejde	Working with topics in economics, social sciences and humanities as well as overall social advocacy work
2440	Arbejde med emner inden for samfundsøkonomi, samfundsfag og humaniora samt overordnet socialrådgivningsarbejde	Working with themes in economics, social sciences and humanities as well as overall social advocacy work
2441	Arbejde med emner inden for samfundsøkonomi	Working with topics in economics
2442	Arbejde med emner inden for sociologi og antropologi	Working with themes in sociology and anthropology
2443	Arbejde med emner inden for filosofi og historie	Working with topics in philosophy and history
2444	Arbejde med emner inden for sprogvidenskab	Working with themes in linguistics
2445	Arbejde med emner inden for psykologi	Working with topics in psychology
2446	Overordnet socialrådgivningsarbejde	Overall social advocacy work
245	Journalist-, kunst- og skribentarbejde	Journalist, art and the writer's work
2450	Journalist-, kunst- og skribentarbejde	Journalist, art and the writer's work
2451	Alment journalistisk arbejde og skribentarbejde	General journalistic work and writer's work
2452	Illustrationsgrafisk arbejde vedrørende formidling og kunstnerisk arbejde vedrørende billedkunst og formgivning	Illustration Graphic work on communication and artistic work of art and design
2453	Kunstnerisk arbejde vedrørende udøvelse/instruktion af musik/sang	Artistic work regarding performance / instruction of music / song
2454	Kunstnerisk arbejde vedrørende dans og koreografi	Artistic work on dance and choreography
2455	Film- og skuespilararbejde	Film and theater work
246	Arbejde inden for religion	Working within the religion
2460	Arbejde inden for religion	Work in religion
247	Arbejde med administration af lovgivningen inden for den offentlige sektor	Working with the administration of law within the public sector
2470	Arbejde med administration af lovgivningen inden for den offentlige sektor	Working with the administration of law within the public sector
315	Arbejde vedrørende sikkerhed og kvalitet	Work on safety and quality
3150	Arbejde vedrørende sikkerhed og kvalitet	Work on safety and quality
3151	Arbejde vedrørende bygnings- og brandsikkerhed	Work on building and fire safety
3152	Arbejde vedrørende kontrol af miljø, sikkerhed og kvalitet	Work on control of environmental, safety and quality
322	Assistentarbejde inden for sundhedssektoren med videre, eksklusive sygeplejearbejde	Assistant Work in the health sector, etc., excluding nursing work
3220	Assistentarbejde inden for sundhedssektoren med videre, eksklusive sygeplejearbejde	Assistant Work in the health sector, etc., excluding nursing work
3221	Assistentarbejde og rådgivning vedrørende sundhed, fødsel med videre	Assistant Labour and advice on health, childbirth and so on
3222	Assistentarbejde og rådgivning vedrørende hygiejne	Assistant Labour and advice on hygiene
3223	Assistentarbejde og rådgivning vedrørende kostforplejning på hospitaler og andre lignende institutioner	Assistant Labour and advice on diet meals in hospitals and other similar institutions
3224	Optikerarbejde	Optician Jobs
3225	Assistentarbejde vedrørende tandpleje	Assistant Work on dental care

3226	Arbejde med emner inden for fysioterapi, kiropraktik med videre	Working with topics in physical therapy, chiropractic with the further
3227	Assistentarbejde hos dyrlæge	Assistant Work at vet
3228	Assistentarbejde inden for farmaci	Assistant Jobs in pharmacy
3229	Arbejde med emner inden for ergoterapi, zoneterapi, yoga med videre	Working with topics in occupational therapy, reflexology, yoga and so on
323	Sygeplejearbejde	Nursing Jobs
3230	Sygeplejearbejde	Nursing Jobs
3231	Sygeplejearbejde	Nursing Jobs
33	Undervisnings- og omsorgsarbejde	Teaching and care work
3300	Undervisnings- og omsorgsarbejde	Education and care work
331	Skoleundervisning af børn under den undervisningspligtige alder	Schooling of children under school age
3310	Skoleundervisning af børn under den undervisningspligtige alder	Schooling of children under school age
332	Pædagogisk arbejde med børn under den undervisningspligtige alder	Educational work with children under school age
3320	Pædagogisk arbejde med børn under den undervisningspligtige alder	Educational work with children under school age
333	Omsorgsarbejde med handicappede mennesker	Caring Working with disabled people
3330	Omsorgsarbejde med handicappede mennesker	Caring Working with disabled people
334	Undervisnings- og omsorgsarbejde i øvrigt	Teaching and care work in addition
3340	Undervisnings- og omsorgsarbejde i øvrigt	Teaching and care work in addition
343	Administrationsarbejde	Managing Work
3430	Administrationsarbejde	Managing Work
3431	Administrativt arbejde i sekretariat og lignende	Administrative work in secretarial and similar
3432	Advokatsekretærarbejde	Legal Work
3433	Revisions- og regnskabsarbejde	Audit and accounting work
3434	Assistentarbejde ved matematiske beregninger og udarbejdelse af statistik	Assistant Work with mathematical calculations and statistics
3439	Administrationsarbejde i øvrigt	Administrative Work in addition
344	Administrativt arbejde vedrørende offentlige ydelser og afgifter	Administrative work related to public benefits and taxes
3440	Administrativt arbejde vedrørende offentlige ydelser og afgifter	Administrative work related to public benefits and taxes
3441	Toldarbejde med publikumsbetjening	Customs Working with public service
3442	Toldarbejde med administrative funktioner	Customs Working with administrative functions
3443	Arbejde vedrørende tildeling af offentlige ydelser	Work relating to the allocation of public benefits
3444	Arbejde vedrørende udstedelse af pas, licens med videre	Work concerning the issuance of passports, licenses and so on
3449	Andet administrativt arbejde vedrørende offentlige ydelser og afgifter	Other administrative work relating to public benefits and taxes
345	Politimæssigt undersøgelsesarbejde	Police investigation work
3450	Politimæssigt undersøgelsesarbejde	Police investigation work



346	Socialt vejlednings- og omsorgsarbejde	Social guidance and care work
3460	Socialt vejlednings- og omsorgsarbejde	Social guidance and care work
347	Arbejde inden for kunst, underholdning og sport	Work of art, entertainment and sports
3470	Arbejde inden for kunst, underholdning og sport	Work of art, entertainment and sports
3471	Arbejde med dekoration, design, illustration og indretning	Working with decoration, design, artwork and decor
3472	Speakerarbejde	Speaker Work
3473	Arbejde med dans og musik, der ikke forudsætter færdigheder på højeste niveau	Working with dance and music that does not require skills at the highest level
3474	Artistarbejde med videre	Artist Working With further
3475	Sportsudøvelse og trænervirksomhed	Sports Exercise and coach company
348	Arbejde med tilknytning til religion	Work related to religion
3480	Arbejde med tilknytning til religion	Work related to religion
4	Kontorarbejde	Office Work
4000	Kontorarbejde	Office Jobs
41	Internt kontorarbejde	Internally, office work
4100	Internt kontorarbejde	Internally office work
411	Indtastning og alment kontorarbejde	Entering and general office work
4110	Indtastning og alment kontorarbejde	Entering and general office work
4111	Arbejde med stenografering og maskinskrivning	Working with steno graph classification and typing
4112	Betjening af teleprinter, telefax og lignende maskiner	Operating the remote printer, facsimile and similar machines
4113	Edb-indtastningsarbejde	Data-entry work
4114	Andet indtastningsarbejde på regnemaskine med videre	Other input working calculator with further
4115	Alment kontorarbejde	General office work
412	Beregningsarbejde	Calculating Work
4120	Beregningsarbejde	Calculating Work
4121	Beregningsarbejde i forbindelse med bogføring, lønadministration og revision	Calculating Work in connection with accounting, payroll and audit
4122	Beregningsarbejde i forbindelse med finansielle transaktioner, statistik med videre	Calculating Work in connection with financial transactions, statistics and so on
413	Registreringsarbejde vedrørende lagerføring, vareforbrug og transport	Registration Work for stock, sales and transportation
4130	Registreringsarbejde vedrørende lagerføring, vareforbrug og transport	Registration Work for stock, sales and transportation
4131	Registreringsarbejde vedrørende lagerføring af færdige produkter og produktionsmidler	Registration Work for stock of finished products and production resources
4132	Registreringsarbejde vedrørende ordrer, forbrug og lignende samt kontrol med overholdelsen af produktionsprogrammer	Registration Work for orders, consumption and the like, or compliance with production programs
4133	Registrerings- og kontrolarbejde vedrørende transport og transporttilrettelæggelse	Detection and control work on transport and transport organization
414	Post- og betjentarbejde, korrekturlæsning med videre samt registreringsarbejde vedrørende diverse samlinger	Postal and cop work, proofreading and so on and recording work on various collections
4140	Post- og betjentarbejde, korrekturlæsning med videre samt registreringsarbejde vedrørende diverse samlinger	Postal and cop work, proofreading and so on and recording work on various collections

4141	Registreringsarbejde vedrørende samlinger af bøger og lignende	Registration Work for collections of books and similar
4142	Post- og betjentarbejde	Postal and cop job
4143	Arbejde med korrekturlæsning, kodning og lignende	Working with proofreading, tagging, etc.
419	Internt kontorarbejde i øvrigt	Internally office work in addition
4190	Internt kontorarbejde i øvrigt	Internally office work in addition
42	Kontorarbejde med kundebetjening	Office Work with customer service
4200	Kontorarbejde med kundebetjening	Office Work with customer service
421	Arbejde vedrørende pengetransaktioner	Work for monetary transactions
4210	Arbejde vedrørende pengetransaktioner	Work for monetary transactions
4211	Kassererarbejde og billet salg	Treasurer Work and ticketing
4212	Arbejde med registrering af pengetransaktioner, veksling af valuta med videre	Working with the recording of cash transactions, foreign exchange and so on
4213	Bookmaker- og croupierarbejde med videre	Bookmaker and croupierarbejde with further
4214	Pantelånerarbejde	Mortgage Borrower Work
4215	Inkassoarbejde	Collection Work
422	Kundebetjening i øvrigt	Customer care also
4220	Kundebetjening i øvrigt	Customer care also
4221	Rejsebureauarbejde	Travel Jobs
4222	Receptionsarbejde	Reception Work
4223	Telefonomstillingsarbejde	Telephone Switchboard Work
51	Service- og omsorgsarbejde	Service and care work
5100	Service- og omsorgsarbejde	Service and care work
511	Servicearbejde i forbindelse med transport og rejser	Services Work for the transport and travel
5110	Servicearbejde i forbindelse med transport og rejser	Services Work for the transport and travel
5111	Betjening af passagerer og besætning, eksklusive ekspedientarbejde	Operation of the passengers and crew, exclusive sales clerk job
5112	Kontrol- og informationsvirksomhed under rejser	Control and information activities while traveling
5113	Turist- og rejselederarbejde	Tourism and courier work
512	Arbejde i restaurant, cafeteria og husholdning	Working in restaurant, cafeteria and household
5120	Arbejde i restaurant, cafeteria og husholdning	Working in restaurant, cafeteria and household
5121	Generelt husholdningsarbejde	General household work
5122	Tilberedning af måltider	Preparation of meals
5123	Serveringsarbejde	Serving Work
513	Omsorgs- og plejearbejde	Care and care work
5130	Omsorgs- og plejearbejde	Care and care work

5131	Børnepasning i private hjem	Child care in private homes
5132	Plejearbejde på institutioner	Care Work in institutions
5133	Omsorgsarbejde i private hjem	Care Work in private homes
5139	Omsorgs- og plejearbejde i øvrigt	Care and care work in addition
514	Andet servicearbejde for privatpersoner	Other service work for individuals
5140	Andet servicearbejde for privatpersoner	Other service work for individuals
5141	Personpleje	Personal Care
5142	Kammertjenerarbejde	Valet Work
5143	Bedemandsarbejde	Funeral Work
5149	Servicearbejde for privatpersoner i øvrigt	Service work for individuals also
516	Overvågnings- og redningsarbejde	Monitoring and rescue work
5160	Overvågnings- og redningsarbejde	Monitoring and rescue work
5161	Brandbekæmpelse	Fire Fighting
5162	Politiarbejde	Police work
5163	Overvågningsarbejde i fængsler	Monitoring Work in prisons
5169	Overvågnings- og redningsarbejde i øvrigt	Monitoring and rescue work in addition
91	Rengørings- og renovationsarbejde, bud- og vagttjeneste samt telefon- og dørsalg med videre	Cleaning and renovation work, bid-and-call service, telephone and doorstep with further
9100	Rengørings- og renovationsarbejde, bud- og vagttjeneste samt telefon- og dørsalg med videre	Cleaning and renovation work, bid-and-call service, telephone and doorstep with further
913	Rengørings- og køkkenhjælpsarbejde	Cleaning and kitchen help work
9130	Rengørings- og køkkenhjælpsarbejde	Cleaning and kitchen help work
9131	Rengørings- og køkkenhjælpsarbejde i private hjem	Cleaning and kitchen help work in private homes
9132	Rengørings- og køkkenhjælpsarbejde i øvrigt	Cleaning and kitchen help work also
9133	Vaskeri- og renseriarbejde	Laundry and dry cleaning work
914	Arbejde med bygningsrengøring og vinduespolering	Working with building cleaning and window polishing
9140	Arbejde med bygningsrengøring og vinduespolering	Working with building cleaning and window polishing
9141	Tilsyns-, vicevært- og pedelarbejde	Surveillance, caretaker and janitor work
9142	Bil- og vinduespolerarbejde	Car and window polishing work
915	Budtjeneste, vagtarbejde samt arbejde med måler aflæsning med videre	Messengers, guard work, and work with the meter reading with further
9150	Budtjeneste, vagtarbejde samt arbejde med måler aflæsning med videre	Messengers, guard work, and work with the meter reading with further
9151	Budtjeneste og lignende	Messengers, etc.
9152	Vagtarbejde	Guard Jobs
9153	Arbejde med måler aflæsning, automattømning med videre	Working with meter reading, automatic emptying of the further
916	Renovations-, gadefejningsarbejde og lignende, eksklusiv kørsel af renovationsvogne	Renovations, gadefejningsarbejde like, exclusive services of refuse collection vehicles

9160	Renovations-, gadefejningsarbejde og lignende, eksklusive kørsel af renovationsvogne	Renovations, gadefejningsarbejde like, exclusive services of refuse collection vehicles
9161	Renovationsarbejde, eksklusive kørsel af renovationsvogne	Renovation Work, excluding driving by refuse collection vehicles
9162	Arbejde med gadefejning, snerydning og lignende	Working with street cleaning, snow removal and similar
92	Medhjælp inden for landbrug, gartneri, fiskeri og skovbrug	Technicians in agriculture, horticulture, fisheries and forestry
9200	Medhjælp inden for landbrug, gartneri, fiskeri og skovbrug	Technicians in agriculture, horticulture, fisheries and forestry
921	Medhjælp inden for landbrug, gartneri, fiskeri og skovbrug	Technicians in agriculture, horticulture, fisheries and forestry
9210	Medhjælp inden for landbrug, gartneri, fiskeri og skovbrug	Technicians in agriculture, horticulture, fisheries and forestry
9211	Landbrugs- og gartnerimedhjælperarbejde	Agricultural and horticultural assistant job
9212	Medhjælp ved skovbrug	Assisting in forestry
9213	Medhjælp i fiskerierhverv (på land) samt medhjælp ved jagt og lignende	Assisting in the fishing industry (onshore) as well as assisting in hunting and similar

#### Group SA sales activities

34	Arbejde med salg, finansiering, forretningsservice, administration med videre	Working with sales, finance, business, administration and so on
3400	Arbejde med salg, finansiering, forretningsservice, administration med videre	Working with sales, finance, business, administration and so on
341	Salgs- og finansieringsarbejde	Sales and financing work
3410	Salgs- og finansieringsarbejde	Sales and financing work
3411	Finansielt arbejde vedrørende omsætning af værdipapirer, opstilling af lånebetingelser, undersøgelse af kreditværdighed med	Financially work on the circulation of securities, establishment of loan conditions, examination of the
3412	Forsikringsalgsarbejde	Insurance Sales Jobs
3413	Arbejde med køb, salg, leje og leasing af fast ejendom	Working with the purchase, sale, rental and leasing real estate
3414	Arbejde vedrørende tilrettelæggelse af rejser	Work on organizing trips
3415	Opsøgende salgsarbejde, eksklusive detailsalg	Canvassing, excluding retail
3416	Indkøbsarbejde i virksomheder og organisationer	Procurement Working in companies and organizations
3417	Vurderings- og takseringsarbejde	The assessment and billing work
3419	Salgs- og finansieringsarbejde i øvrigt	Sales and finance work also
342	Agentarbejde og forretningsservice	Agent Work and business
3420	Agentarbejde og forretningsservice	Agent Work and business
3421	Mæglerarbejde	Brokerage Jobs
3422	Speditionsarbejde	Expedition Work
3423	Jobformidlingsarbejde	Work placement
3429	Agentarbejde og forretningsservice i øvrigt	Agent Work and business activities nec
5	Salgs-, service- og omsorgsarbejde	Sales, service and caring work
5000	Salgs-, service- og omsorgsarbejde	Sales, service and caring work

52	Salgsarbejde	Sales Jobs
5200	Salgsarbejde	Sales Jobs
521	Modelarbejde	Model Work
5210	Modelarbejde	Model Work
522	Ekspedient-, kasse- og demonstrationsarbejde	Clerk, crates and demonstration work
5220	Ekspedient-, kasse- og demonstrationsarbejde	Clerk, crates and demonstration work
911	Salgs- og servicearbejde primært ved telefon	Sales and service work primarily by telephone
9110	Salgs- og servicearbejde primært ved telefon	Sales and service work primarily by telephone
9113	Salgs- og servicearbejde primært ved telefon	Sales and service work primarily by telephone

Group L1: line workers, involved in transport and warehousing

314	Arbejde inden for skibs- og luftfart	Worked in the shipping and aviation
3140	Arbejde inden for skibs- og luftfart	Worked in the shipping and aviation
3141	Teknisk arbejde om bord på skibe med mekaniske, elektriske og elektroniske installationer	Technical work on board ships with mechanical, electrical and electronic equipment
3142	Skibsførerarbejde	Master Work
3143	Flypilotarbejde	Air pilot
3144	Flyvelederarbejde samt planlægning og afvikling af flytrafik i øvrigt	Air traffic controller work and the planning and conduct of air transport in addition
3145	Flymaskinistarbejde	Flymaskinistarbejde
723	Mekaniker- og montørarbejde	Mechanic and fitter work
7230	Mekaniker- og montørarbejde	Mechanic and fitter work
7231	Automekaniker- og automontørarbejde	Auto mechanic and auto technician job
7232	Flymekaniker- og flymontørarbejde	Aircraft mechanic and flymontørarbejde
7233	Mekaniker- og montørarbejde med andre motorer og mekaniske maskiner	Mechanics and installers work with other motors and mechanical machines
83	Transport- og anlægsarbejde	Transport and construction
8300	Transport- og anlægsarbejde	Transport and construction
831	Jernbanedrift	Train Operating
8310	Jernbanedrift	Train Operating
8311	Lokomotiv- og elektroførerarbejde	Lokomotiv and electrical leads work
8312	Betjentarbejde, arbejde med rangering samt styring af togtrafik	Valet Work, work with rankings as well as management of train services
832	Lastbil- og bustransportarbejde	Truck and bus work
8320	Lastbil- og bustransportarbejde	Truck and bus work
8321	Budkørsel på motorcykel	Messengers on motorcycles

8322	Kørsel af hyre- og varevogn	Running taxis and vans
8323	Kørsel af bus	Running coach
8324	Kørsel af last- og tankbil med videre	Movement of cargo and tanker with further
833	Arbejde med andre mobile maskiner og køretøjer	Working with other mobile machinery and vehicles
8330	Arbejde med andre mobile maskiner og køretøjer	Working with other mobile machinery and vehicles
8331	Landbrugsmaskinførerarbejde	Agricultural Engine Driver Jobs
8332	Entreprenørmaskinførerarbejde	Construction Machine Driver Jobs
8333	Kran- og liftførerarbejde	Crane and lift out work
8334	Truckførerearbejde	Truckdriver Work
834	Skibstransportarbejde	Ship Transport Work
8340	Skibstransportarbejde	Ship Transport Work
933	Manuelt transport- og lagerarbejde, hvor der ikke anvendes maskiner eller køretøjer	Manual transport and storage work, which do not use machinery or vehicles
9330	Manuelt transport- og lagerarbejde, hvor der ikke anvendes maskiner eller køretøjer	Manual transport and storage work, which do not use machinery or vehicles

Group L2: line workers, other activities (mostly production)

6	Arbejde inden for landbrug, gartneri, skovbrug, jagt og fiskeri, der forudsætter færdigheder på grundniveau	Work in agriculture, horticulture, forestry, hunting and fishing, which requires skills at basic level
6000	Arbejde inden for landbrug, gartneri, skovbrug, jagt og fiskeri, der forudsætter færdigheder på grundniveau	Work in agriculture, horticulture, forestry, hunting and fishing, which requires skills at basic level
61	Arbejde inden for landbrug, gartneri, skovbrug, jagt og fiskeri, der forudsætter færdigheder på grundniveau	Work in agriculture, horticulture, forestry, hunting and fishing, which requires skills at basic level
6100	Arbejde inden for landbrug, gartneri, skovbrug, jagt og fiskeri, der forudsætter færdigheder på grundniveau	Work in agriculture, horticulture, forestry, hunting and fishing, which requires skills at basic level
611	Arbejde vedrørende plantevækst	Work on plant growth
6110	Arbejde vedrørende plantevækst	Work on plant growth
6111	Arbejde med markafgrøder inden for landbrug	Working with arable crops in agriculture
6112	Arbejde vedrørende plantevækst inden for gartneri	Work on plant growth in horticulture
612	Arbejde med dyr	Working with animals
6120	Arbejde med dyr	Working with animals
6121	Arbejde med husdyr undtagen fjerkræ	Working with livestock other than poultry
6122	Arbejde med opdræt af fjerkræ	Working with the rearing of poultry
6129	Arbejde med dyr i øvrigt	Working with animals also
613	Arbejde med såvel markafgrøder som husdyr	Working with both crops and livestock
6130	Arbejde med såvel markafgrøder som husdyr	Working with both crops and livestock
614	Arbejde inden for skovbrug med videre	Working in forestry with further
6140	Arbejde inden for skovbrug med videre	Working in forestry with further

6141	Skovbrugsarbejde	Forestry Work
6142	Kulsvierarbejde	Kulsvierarbejde
615	Arbejde inden for fiskeri og jagt	Work in the fishing and hunting
6150	Arbejde inden for fiskeri og jagt	Work in the fishing and hunting
6151	Arbejde med opdræt af fisk, østers og lignende	Working with fish, oysters, etc.
6152	Arbejde med kystfiskeri	Working with coastal
6153	Arbejde med havfiskeri	Working with sea fishing
6154	Arbejde med jagt	Working with hunting
7	Håndværkspræget arbejde	Craft Embossed work
7000	Håndværkspræget arbejde	Craft Embossed work
71	Arbejde med råstofudvinding og bygningshåndværk	Working with mining and construction crafts
7100	Arbejde med råstofudvinding og bygningshåndværk	Working with mining and construction crafts
711	Mine- og stenhuggerarbejde med videre	Miners and stonemason work further
7110	Mine- og stenhuggerarbejde med videre	Mining and stone mason work on further
7111	Minearbejde	Mining Work
7112	Arbejde med miner, fyrværkeri med videre	Working with mines, fireworks and so on
7113	Stenhuggerarbejde	Stonemason Work
712	Bygningsarbejde (basis)	Construction Work (base)
7120	Bygningsarbejde (basis)	Construction Work (base)
7121	Bygningsarbejde med naturmaterialer	Building Working with natural materials
7122	Murer- og brolægningarbejde	Bricklaying and paving work
7123	Beton-, cement- og terazzoarbejde	Concrete, cement and terazzoarbejde
7124	Tømrer- og snedkerarbejde	Carpentry and joinery
7129	Bygningsarbejde (basis) i øvrigt	Construction Work (base) also
713	Bygningsarbejde (finish)	Construction Work (finish)
7130	Bygningsarbejde (finish)	Construction Work (finish)
7131	Tagdækningsarbejde	Tagdækningsarbejde
7132	Arbejde med gulvlægning, vedligeholdelse af gulve og lignende	Working with floor planning, maintenance of floors and similar
7133	Stukkatørarbejde	Stucco
7134	Isoleringsarbejde	Insulation Work
7135	Glarmesterarbejde	Glazing Work
7136	VVS-arbejde	Plumbing
7137	Elektrikerarbejde	Electrician Jobs

7139	Bygningsarbejde (finish) i øvrigt	Construction Work (finish) also
714	Maler-, tapetsererarbejde med videre	Painting, tapetsererarbejde with further
7140	Maler-, tapetsererarbejde med videre	Painting, tapetsererarbejde with further
7141	Maler-og tapetsererarbejde, herunder skibsmaler- og skiltemalerarbejde	Painting and tapetsererarbejde including marine painting and sign painting
7142	Sprøjtelakeringsarbejde	Spray Painting Work
7143	Arbejde med bygningsrengøring	Working with building cleaning
72	Metal- og maskinarbejde	Metal and engineering work
7200	Metal- og maskinarbejde	Metal and engineering work
721	Svejsarbejde med videre	Welding Work with further
7210	Svejsarbejde med videre	Welding Work with further
7211	Formningsarbejde	Forming Work
7212	Svejsarbejde	Welding Work
7213	Tyndpladearbejde	Thin Plate Work
7214	Stålkonstruktionsarbejde	Steel Structure Work
7215	Rigger- og kabelsplejningsarbejde	Rigger and cable splicing work
7216	Dykkerarbejde	Diving Work
722	Grovsmede-, værktøjsmagerarbejde og lignende	Blacksmiths, toolmaker's work and similar
7220	Grovsmede-, værktøjsmagerarbejde og lignende	Blacksmiths, toolmaker's work and similar
7221	Grovsmedearbejde	Blacksmith Work
7222	Værktøjsmagerarbejde	Toolmaker Jobs
7223	Maskinelt præcisionsarbejde i metal og indstilling af metalforbejdningmaskiner	Power-precision work in metal and attitude of metal processing machines
7224	Polerings- og slibearbejde i metal	Polishing and grinding work in metal
724	Elektro- og elektronikmekanikerarbejde med videre	Electrical and electronics mechanic work on further
7240	Elektro- og elektronikmekanikerarbejde med videre	Electrical and electronics mechanic work on further
7241	Elektromekaniker- og specialelektrikerarbejde	Electro-Mechanic and special electrical work
7242	Montørarbejde vedrørende elektronik	Installer work on electronics
7243	Service- og reparationsarbejde vedrørende elektronik	Service and repair work on electronics
7244	Telefon- og telegrafmekanikerarbejde	Telephone and telegraph mechanic work
7245	Kabelmontørarbejde	Cable Installer Jobs
73	Præcisionshåndværk, grafisk arbejde og lignende	Precision Craft, graphic work, etc.
7300	Præcisionshåndværk, grafisk arbejde og lignende	Precision Craft, graphic work, etc.
731	Præcisionsarbejde i metal	Precision Metal Work
7310	Præcisionsarbejde i metal	Precision Metal Work



7311	Fremstilling og reparation af præcisionsinstrumenter	Manufacture and repair of precision instruments
7312	Arbejde vedrørende bygning og stemning af musikinstrumenter	Work on building and tuning of musical instruments
7313	Juvelér-, guld- og sølvmedearbejde	Jeweler, gold and silversmith's work
732	Glas-, keramik- og teglarbejde	Glass, ceramics and brick work
7320	Glas-, keramik- og teglarbejde	Glass, ceramics and brick work
7321	Pottemager-, dreje- og støbearbejde	Pottery, turning and foundry work
7322	Glasblæserarbejde	Glass Blower Work
7323	Glasætsnings- og sandblæsningsarbejde	Glasætsnings and sandblasting work
7324	Glas- og porcelænsmalingsarbejde	Glass and china paint job
733	Håndarbejde i træ, tekstil og lignende materialer	Handicrafts in wood, textile and similar materials
7330	Håndarbejde i træ, tekstil og lignende materialer	Handicrafts in wood, textile and similar materials
7331	Håndarbejde i træ og lignende materialer,	Handicrafts in wood and similar materials,
7332	Håndarbejde i tekstil og læder	Needlework in textile and leather
734	Formfremstilling, håndbogbinding og serigrafi	Shape Manufacturing, manual binding and screen printing
7340	Formfremstilling, håndbogbinding og serigrafi	Shape Manufacturing, manual binding and screen printing
7341	Grafisk formfremstilling (pre-press)	Graphical shape manufacturing (pre-press)
7342	Arbejde vedrørende stereotypi med videre	Work on stereotyping and so on
7343	Gravør- og ætsearbejde	Engraver and ætsearbejde
7344	Fototeknisk og reprofotografisk arbejde	Photo Tech and reprofotografisk work
7345	Bogbinderarbejde	Binding
7346	Serigrafisk arbejde	Silk screen work
74	Andet håndværkspræget arbejde	Other craft dominated work
7400	Andet håndværkspræget arbejde	Other craft dominated work
741	Arbejde inden for nærings- og nydelsesmiddelindustrien	Working within the food and beverage industries
7410	Arbejde inden for nærings- og nydelsesmiddelindustrien	Working within the food and beverage industries
7411	Slagterarbejde og behandling af fisk og skaldyr	Butcher Working and processing of fish and shellfish
7412	Bager-, konfektur- og chokoladearbejde	Bakery, confectionery and chocolate work
7413	Mejeriarbejde	Dairy Work
7414	Arbejde med konservering af frugt og grønt samt fremstilling af juice	Working with the preservation of fruit and vegetables and the manufacture of juice
7415	Prøvesmagningsarbejde	Sample Tasting Work
7416	Arbejde med produktion af tobaksvarer	Working with the production of tobacco products
742	Arbejde inden for træindustrien	Working within the woodworking industry
7420	Arbejde inden for træindustrien	Working within the woodworking industry

7421	Træimprægneringsarbejde	Træimprægneringsarbejde
7422	Bødker- og møbelsnedkerarbejde	Bodker and cabinetmaker job
7423	Opstilling og betjening af maskiner inden for træindustrien	Setting up and operating machines in the wood industry
7424	Kurvemager-, børstenbinderarbejde og lignende	Basketwork, wickerwork, brush work and similar
743	Tekstil- og beklædningsarbejde	Textile and clothing work
7430	Tekstil- og beklædningsarbejde	Textile and clothing work
7431	Garnforberedende arbejde (håndarbejde)	Yarn Preparatory work (needlework)
7432	Spinde-, væve- og strikkearbejde (håndarbejde)	Spinning, weaving and knitting work (needlework)
7433	Skrædder-, modist- og hattemagerarbejde	Tailor, milliner and hatter work
7434	Buntmagerarbejde	Furriers
7435	Tilskærerarbejde (ikke maskinelt)	Tilskærerarbejde (no power)
7436	Sy- og broderiarbejde (ikke maskinelt)	Sewing and embroidery work (no power)
7437	Møbepolstrer- og autosadelmagerarbejde	Upholsterer and auto maker noble work
744	Skind-, læder- og skotøjsarbejde	Fur, leather and skotøjsarbejde
7440	Skind-, læder- og skotøjsarbejde	Fur, leather and skotøjsarbejde
7441	Garveriarbejde	Garveriarbejde
7442	Skomager- og læderarbejde	Cobbler and leather work
8	Proces- og maskinoperatørarbejde samt transport- og anlægsarbejde	Process and machine operator work, transport and civil engineering
8000	Proces- og maskinoperatørarbejde samt transport- og anlægsarbejde	Process and machine operator labor, and transportation and civil engineering
81	Arbejde med stationære procesanlæg	Working with the stationary process plants
8100	Arbejde med stationære procesanlæg	Working with the stationary process plants
811	Mine- og mineraludvindingsanlægsarbejde	Mining and mineral extraction works
8110	Mine- og mineraludvindingsanlægsarbejde	Mining and mineral extraction works
8111	Mineanlægsarbejde	Mine construction work
8112	Mineral- og stenbrudsanlægsarbejde, eksklusive varmebehandlingsanlæg	Mineral and quarry works, excluding thermal treatment plant
8113	Boreanlægsarbejde, olie, gas med videre	Bore construction work, oil, gas and so on
812	Jern-, metalværks- og støberianlægsarbejde	Iron, metal craft and foundry work
8120	Jern-, metalværks- og støberianlægsarbejde	Iron, metal craft and foundry work
8121	Smelteovnsarbejde	Smelteovnsarbejde
8122	Stålværksarbejde	Steelwork Work
8123	Støberiarbejde	Foundry Work
8124	Arbejde med tråd- og rørtrækning	Working with wire and rørtrækning
813	Glas-, keramik- og teglprocesanlægsarbejde	Glass, ceramics and brick process engineering

8130	Glas-, keramik- og teglprocesanlægsarbejde	Glass, ceramics and brick process engineering
8131	Operatørarbejde ved glas- og keramikovne	Operator Work in glass and ceramic kilns
8139	Glas-, keramik- og teglprocesanlægsarbejde i øvrigt	Glass, ceramics and brick process engineering in addition
814	Træ- og papirprocesanlægsarbejde	Wood and paper process engineering
8140	Træ- og papirprocesanlægsarbejde	Wood and paper process engineering
8141	Operatørarbejde ved træprocesanlæg	Operator Work at træprocesanlæg
8142	Operatørarbejde ved papirmasseprocesanlæg	Operator Work in pulp processing plants
8143	Operatørarbejde ved papirfremstillingsanlæg	Operator Work in the paper manufacturing plants
815	Kemisk procesanlægsarbejde	Chemical process engineering
8150	Kemisk procesanlægsarbejde	Chemical process engineering
8151	Operatørarbejde ved knuse- og blandingsanlæg med videre	Operator Work by crushing and blending with further
8152	Operatørarbejde ved varmebehandlingsanlæg inden for den kemiske industri og mineralindustrien	Operator Work by thermal plants in the chemical industry and petroleum industry
8153	Operatørarbejde ved filtrerings- og separeringsanlæg	Operator Work by filtering and separeringsanlæg
8154	Destilleringsarbejde	Destilleringsarbejde
8155	Arbejde med benzin- og naturgasraffinerings	Working with gasoline and natural gas refining
8159	Kemisk procesanlægsarbejde i øvrigt	Chemical process engineering in addition
816	Energi- og vandforsyningsanlægsarbejde	Energy and water supply works
8160	Energi- og vandforsyningsanlægsarbejde	Energy and water supply works
8161	Operatørarbejde ved elværk	Operator Work with power companies
8162	Arbejde med kedelpasning	Working with boiler care
8163	Operatørarbejde ved forbrændings- og vandforsyningsanlæg	Operator Work with digestion and water supply installations
817	Industrielt robotoperatørarbejde	Industrial robot operator job
8170	Industrielt robotoperatørarbejde	Industrial robot operator job
82	Betjening af industrimaskiner	Operation of industrial machinery
8200	Betjening af industrimaskiner	Operation of industrial machinery
821	Betjening af maskiner inden for metal- og mineralindustrien	Operating the machines for metal and mineral industries
8210	Betjening af maskiner inden for metal- og mineralindustrien	Operating the machines for metal and mineral industries
8211	Betjening af maskiner inden for metalindustrien	Operating the machines for metal industry
8212	Betjening af maskiner inden for mineralindustrien	Operating the machines in the mineral industry
822	Betjening af maskiner inden for den kemiske industri, eksklusive procesanlægsarbejde	Operating the machines for the chemical industry, excluding the process works
8220	Betjening af maskiner inden for den kemiske industri, eksklusive procesanlægsarbejde	Operating the machines for the chemical industry, excluding the process works
8221	Betjening af maskiner inden for medicinalvare-, sæbe- og kosmetikindustrien	Operating the machines for pharmaceutical, soap and cosmetics industry
8222	Betjening af maskiner ved produktion af ammunition og krudtværk	Operating the machines for production of ammunition and gunpowder mill

8223	Betjening af maskiner ved galvanisering	Operating the machines for galvanizing
8224	Betjening af maskiner ved produktion af fotografiske artikler	Operating the machines for production of photographic supplies
8229	Betjening af maskiner inden for den kemiske industri i øvrigt	Operating the machines for the chemical industry also
823	Betjening af maskiner inden for gummi- og plastindustrien	Operating the machines for rubber and plastics industries
8230	Betjening af maskiner inden for gummi- og plastindustrien	Operating the machines for rubber and plastics industries
8231	Betjening af maskiner inden for gummivareindustrien	Operating the machines in the rubber product industry
8232	Betjening af maskiner inden for plastindustrien	Operating the machines in the plastics industry
824	Betjening af maskiner inden for træindustrien	Operating the machines for wood industry
8240	Betjening af maskiner inden for træindustrien	Operating the machines for wood industry
825	Betjening af maskiner inden for den grafiske industri og papirvareindustrien	Operating the machines for the graphic industry and paper products industry
8250	Betjening af maskiner inden for den grafiske industri og papirvareindustrien	Operating the machines for the graphic industry and paper products industry
8251	Betjening af trykkerimaskiner	Operation of the printing machines
8252	Betjening af bogbinderimaskiner	Operation of binding machines
8253	Betjening af papirbearbejdningsmaskiner	Operation of paper processing machines
826	Betjening af maskiner inden for tekstil-, skind- og lædervareindustrien	Operating the machines in the textile, leather and leather products industry
8260	Betjening af maskiner inden for tekstil-, skind- og lædervareindustrien	Operating the machines in the textile, leather and leather products industry
8261	Betjening af maskiner i garnforberedende arbejde, spinderiarbejde	Operating the machines in the yarn preparation, spinning work
8262	Betjening af væve- og strikkemaskiner	Operation of weaving and knitting machines
8263	Betjening af symaskiner	Operation of sewing machines
8264	Betjening af maskiner til efterbehandling	Operating the machines for finishing
8265	Betjening af maskiner til garvning og pelsberedning	Operation of machinery for tanning and fur dressing
8266	Betjening af maskiner ved produktion af sko	Operating the machines for production of shoes
8269	Betjening af andre maskiner inden for tekstil-, skind- og lædervareindustrien	Operation of other machinery for textile, leather and leather products industry
827	Betjening af maskiner inden for nærings- og nydelsesmiddelindustrien	Operating the machines for the food and beverage industries
8270	Betjening af maskiner inden for nærings- og nydelsesmiddelindustrien	Operating the machines for the food and beverage industries
8271	Betjening af maskiner inden for slagte- og fiskeindustrien	Operating the machines for meat and fish industry
8272	Betjening af maskiner ved produktion af mejeriprodukter	Operating the machines for production of dairy products
8273	Betjening af maskiner på møllerier	Operating the machines at mills
8274	Betjening af maskiner ved produktion af bage- og sukkervarer	Operating the machines in the production of bread and confectionery
8275	Betjening af maskiner ved produktion af frugt- og grøntkonserver	Operating the machines for production of fruit and vegetable canning
8276	Betjening af maskiner ved produktion af sukker	Operating the machines for production of sugar
8277	Betjening af maskiner ved produktion af te, kaffe og kakaoristningsprodukter	Operating the machines for production of tea, coffee and cocoa roasting products
8278	Betjening af maskiner ved produktion af drikkevarer	Operating the machines for production of beverages

8279	Betjening af maskiner inden for tobaksindustrien	Operating the machines for tobacco industry
828	Monterings- og samlebåndsarbejde	Mounting and production line work
8280	Monterings- og samlebåndsarbejde	Mounting and production line work
8281	Montering af mekaniske maskiner	Installation of mechanical equipment
8282	Montering af elektrisk udstyr	Installation of electrical equipment
8283	Montering af elektronisk udstyr	Installation of electronic equipment
8284	Monterings- og samlebåndsarbejde ved produktion af metal-, gummi- og plastvarer	Installation and assembly line work in the production of metal, rubber and plastic products
8285	Monterings- og samlebåndsarbejde ved produktion af trævarer	Installation and assembly work on production of wood products
8286	Samlebåndsarbejde ved produktion af papir- og tekstilvarer og lignende	Assembly line work in the production of paper and textiles and similar
8287	Monterings- og samlebåndsarbejde i øvrigt	Installation and assembly work also
829	Betjening af industrimaskiner i øvrigt	Operation of industrial machinery also
8290	Betjening af industrimaskiner i øvrigt	Operation of industrial machinery also
93	Manuelt arbejde inden for bygge- og anlægssektoren, transportsektoren samt fremstillingsvirksomhed	Manual work in the construction sector, manufacturing and transport
9300	Manuelt arbejde inden for bygge- og anlægssektoren, transportsektoren samt fremstillingsvirksomhed	Manual work in the construction sector, manufacturing and transport
931	Manuelt arbejde inden for bygge- og anlægssektoren	Manual work in the construction sector
9310	Manuelt arbejde inden for bygge- og anlægssektoren	Manual work in the construction sector
9311	Manuelt arbejde med grus og sten	Manual work with gravel and stone
9312	Jord- og kloakarbejde samt andet anlægsarbejde	Earth and sewer services and other engineering
9313	Medhjælp ved bygningsarbejde	Assisting in construction work
932	Manuelt arbejde inden for fremstillingsvirksomhed	Manual work in manufacturing
9320	Manuelt arbejde inden for fremstillingsvirksomhed	Manual work in manufacturing

Group O: other activities, misclassified or not defined clearly enough

3	Arbejde, der forudsætter færdigheder på mellemniveau	Work that requires skills for intermediate
3000	Arbejde, der forudsætter færdigheder på mellemniveau	Work that requires skills for intermediate
9	Andet arbejde	Other work
9000	Andet arbejde	Other work
912	Arbejde med skopudsning og lignende former for gadeservice	Working with shoe-cleaning and similar forms of street service
9120	Arbejde med skopudsning og lignende former for gadeservice	Working with shoe-cleaning and similar forms of street service