European Foundation for the Improvement of Living and Working Conditions

After restructuring: Labour markets, working conditions and life satisfaction

ERM report 2012

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After restructuring: Labour markets, working conditions and life satisfaction

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For every tree felled, at least one new tree is planted.

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Executive summary

Introduction

The 2012 Report from the European Restructuring Monitor (ERM) analyses the consequences of restructuring for the individual employee. Specifically, it examines which employees lost their job at the onset of the recent economic crisis, which of them found a new job and how these events, job loss and subsequent re-employment, impacted on their overall personal situation and life satisfaction. It also looks at the impact on working conditions for the employees who continue to work at the restructured firm. The situations of these two groups – those who lost their jobs and those who stayed at the restructured workplace – have never before been analysed by using common, EU wide and representative, datasets.

Policy context

The overarching EU policy concern is that in 2012 there are 5 million fewer jobs in Europe than there were in 2008. Many of these jobs were terminated through the dismissal of employees following restructuring. The European Union has for decades provided support to mitigate the negative effects of restructuring for employees, mainly through the European Social Fund and more recently with the European Globalization Fund. Furthermore, the recent European Commission's *Green Paper on Restructuring* reflects policy concerns about the impact of restructuring for employees who stay at the company, not least from the perspective that 'poorly managed restructuring can have a significant negative long-term impact on the human resources of companies, thereby weakening this key resource for competitiveness'.

Key findings

- Several employment indicators show that while on average the labour market continues to deteriorate, there is wide variation among Member States. Countries such as Austria, Germany and Poland, in fact, continue to exhibit reasonably positive labour market developments.
- While job loss at restructuring has fallen from the high levels experienced at the start of the economic crisis, there are still overall more cases of job loss than job gain announced in the ERM.
- Employees with the highest probability to lose their jobs are generally less likely to find a new one. These people can be characterised as having low levels of education, belonging to a minority, having a foreign background, having significant health problems and low occupational status.
- Having long tenure protects against job loss, but when long-tenured workers lose their job, they are less likely to find a new one.
- Those who lose their job report a lower level of life satisfaction and significant depreciation of their life situation than those employees who do not lose their jobs.
- The job losers who subsequently find a new job report significantly higher life satisfaction than those who do not.
- Just over a third (37%) of EU27 employees reported that restructuring took place in the previous three years. These 'stayers' are most likely to be in higher occupational groups and working in larger establishments, as well as employees working in traditionally state-funded sectors.
- There is significant cross-national variation in the extent of reported restructuring, with employees in the Nordic cluster of Denmark, Finland and Sweden reporting the highest level of workplace

restructuring (between 55 to 62%). The lowest levels were recorded in some eastern Member States (Poland and Bulgaria) and southern Member States (Italy, Spain and Greece).

- On the positive side, work organisation features associated with high performance work systems were found to be more prevalent in restructured workplaces: higher levels of employee autonomy, more access to training, a higher incidence of teamwork, and employees having greater influence and involvement in how work is organised.
- On the negative side, the analysis also confirms associations between restructuring and higher work intensity as well as lower job security. Restructured employees, especially those in blue-collar occupations, were more likely to find themselves in 'high strain' work. They were also more likely to report higher exposure to workplace psychosocial risks, higher levels of psychosomatic disorders and of absenteeism.
- In general, the analysis signals potential negative associations between restructuring and employees' self-reported health. The fact that it does so consistently across a broad range of indicators suggests that these associations are not spurious even if specific causal mechanisms are necessarily complex and not so easy to demonstrate.

Policy pointers

The fact that those most likely to lose their jobs are least likely to find new ones strongly suggests that institutions and policies are not sufficiently developed to ensure that the external flexicurity model does not lead to negative distributional effects. It also highlights that active labour market policy regarding restructuring should focus on the needs of disadvantaged and vulnerable groups.

The high life satisfaction scores of persons who found a new job soon after losing their old job underscores the importance of activation policy for employees.

Some of the negative impact on stayers is almost certainly related to the restructuring process itself, as the reported restructuring event was to have taken place in the previous three years. This underlines the importance of a careful management of the change process, not least as regards the health and well-being of employees. The results further suggest that recent initiatives, mentioned in the Commission's *Green Paper on Restructuring*, undertaken by companies and social partners in some sectors undergoing particularly strong change to manage mental health issues at workplaces should be expanded further to cover all sectors.

Introduction

The theme of the 2012 Report from the European Restructuring Monitor (ERM) is the consequences of restructuring for the individual employee. Specifically it examines which employees lost their job at the onset of the recent economic crisis, which of them found a new job and how these events, job loss and subsequent re-employment, impacted upon their overall life situation and satisfaction (Chapter 2). In chapter 3 it analyses the impact on working conditions for those employees who remain at the restructured firm. Both these studies, of those who lost their jobs and those who stayed at the restructured workplace have never before been analysed by common, EU-wide and representative datasets.

Starkly diverging employment trends in Member States and sectors

Chapter 1 presents the standard overview of recent restructuring developments in the European Union based on an analysis of the European Labour Force Survey (EU:LFS) and the restructuring data as compiled by Eurofound's own European Restructuring Monitor (ERM). With 5 million less employed in 2012 than in 2008, the poor state of the European labour market as a whole is well known, but it should be underlined that the crisis has hit Member States very differently. For example, while Ireland has shed 16% of its pre-recession employment, Luxembourg has added a similar percentage of new jobs and in larger countries such as Austria, Poland and Germany, employment has grown modestly since 2008. The Baltic republics, in particular Estonia, which were initially very hard hit by the recession show positive signs of recovering from their steep recession slump, Sweden, while also initially strongly affected, has recovered significantly. Employment levels in the euro zone 'peripheral' countries and in Slovenia have continued to decline in the most recent two years. For Greece, Portugal and Slovenia, the bulk of recent employment declines have taken place in the last two years (2010–12) rather than during the initial crisis period. Compared to previous years there is now evidence that public sector employment that previously had maintained employment in several Member States has begun to decline, for example in the British and French public administrations. On a more positive note the decline in private sector employment at the start of the recession has stabilised somewhat in the last two years.

The bulk of the jobs lost between 2008 and 2012 were in manufacturing. The main employment-shedding subsectors within manufacturing were textiles (mainly in Italy and Poland), basic metals (mainly in the UK and Spain) and wood/paper production (mainly Spain and France). Pharmaceuticals was the only manufacturing subsector to grow and Austria was the only country where manufacturing employment increased. The divergent experiences in Member States is best exemplified in construction where in some the decline was modest but in others job loss was extremely high – 45% in Spain, 57% in Latvia and 60% in Ireland. Retail is the other sector accounting for much of the recent job loss.

Between 2008 and 2010 some of the labour market adjustment to declining GDP occurred through a reduction in average hours rather than in the number employed – and in Germany and Austria exclusively so. In this period average hours declined by 1%. Since then the 17 countries of the euro zone registered a headcount reduction of 0.22%, while average hours worked increased by 0.2% overall. In Germany, both average hours and headcount have increased recently while in Austria the headcount increase has been accompanied with a further decrease of average hours worked. It is also very striking that pre-2010 average hours worked in industry declined but post-2010 they have increased significantly.

Large restructuring cases in the European Restructuring Monitor

Eurofound's ERM database now contains over 14,000 individual company or organisation cases of restructuring dating back to 2002 and is the best available source of EU data on the employment

impacts of large-scale restructuring. The number of ERM cases surged during the year following the second quarter of 2008 and while it has subsequently returned to lower levels, reports of job loss still exceed those of job gain.

Of the 10 largest cases of restructuring job loss in the last 12 months, three concerned the public administrations of Member States. The largest case involved 30,000 announced job losses in the Greek public service. Nokia announced the loss of 10,000 jobs, including the closure of major production facilities in Finland and Hungary, while the mobile networking joint venture with Siemens – a bigger employer than the parent company – announced it would be cutting a quarter of its global workforce. Despite its economic resilience two of the bigger private sector announced job losses were in Germany – Schlecker (11,750), a large German drugstore chain and energy firm E.on (11,000 globally, half of which in Germany). The largest announced job gains were by service sector multinationals in retail, hotels and catering. Big new job gain announcements by UK supermarket chains Morrisons and Sainsburys were targeted at younger people and unemployed persons.

As usual, most of the job loss announcements were in manufacturing (48%). However, while the ERM recorded around 80,000 job losses in the manufacture of auto/transport equipment in both 2008 and 2009, it only reported 30,000 job losses in 2011–12. Moreover, announced job creation in the sector has been over twice as high during the same period, with most of these gains in central and eastern Europe. There are several cases of major restructuring in the banking sector in the UK, France and Italy. Over a third of new jobs announced in the ERM were in manufacturing, mostly in higher-tech sectors – computer, electronics and communication equipment as well as auto/transport manufacturing, as already noted. The retail sector's share of new jobs has increased in 2012 to around a quarter of the total.

Crisis in alternative energy sector?

In recent years the ERM has observed more and more cases of announced job loss in the renewable (solar and wind) energy manufacturing sector. This has become very prominent in the ERM now and particularly so in Germany, Spain and Denmark. Recent difficulties in the renewables sector in Europe are commonly attributed to a scaling back of subsidy regimes and declining prices based on the rapid mobilisation of China and Taiwan in both solar-cell/panel and wind turbine production. Both factors have been cited by employers for a spate of restructuring job losses since 2011 and the latter has given rise in summer 2012 to anti-dumping cases against Chinese producers in the USA and Europe. While prospects remain positive for renewables manufacturing worldwide, the international division of production in the sector has clearly shifted locus to developing economies. 'Green job' growth in this sector in Europe is less likely to be in manufacturing and more likely to be in R&D, installation and maintenance – potentially offering new employment possibilities for those who continue to lose their jobs in the construction sector.

Offshoring on the increase but still low

The share of job loss attributable to delocalisation (offshoring), outsourcing or relocation has also begun to rise during 2012 but is still well short of the levels recorded in the pre-recession period. These categories combined accounted for one in 10 job losses during 2002 to 2007. About 50 cases per year of offshoring/relocation or outsourcing have been recorded on ERM in 2010–12, compared to nearly 200 in 2006. An examination of multinationals with five different home bases – Peugeot in France, Volkswagen in Germany, Fiat in Italy, Ericsson in Sweden and Nokia in Finland show that the overall employee numbers in most of the companies have been stable or increasing recently (even in Europe). However, most of the growth is in their units in South America, India and China, and Europe accounts for a declining share of overall group employment.

Chapter 2 introduces the thematic part of this 2012 ERM Report on the impact of restructuring for employees by examining who lost their jobs at the onset of the recession, who found a new one and what impact both these occurrences may have had for overall life situation and job satisfaction. This is the first ever study of job loss at restructuring (displacement) based on a common questionnaire in all Member States.

Who lost their job at the start of the recession?

Displacement rates (jobs lost per employed person) varied widely among Member States, ranging from above 20% in the Baltics, Spain, Ireland, Portugal and Hungary to below 7% in the Netherlands and Luxembourg. Groups commonly viewed as disadvantaged (the low educated, migrants, minorities and the chronically ill) have higher displacement probabilities even when controlling for the basic human capital variables such as tenure, profession, education, etc. The job characteristics of profession and tenure were highly significant, and indeed, these two variables accounted for roughly half of the variation in the probability of displacement. The probability of displacement is three times higher for unskilled blue-collar workers than it is for professionals and workers with more than 4 years tenure are less likely to be displaced. There were no differences between the sexes. The middle aged were the least likely to be displaced.

Who got a new one?

The re-employment rate among those who were displaced averaged at 26% in the European Union. It exceeded 40% in Finland, Malta, Cyprus and the Netherlands and was lowest in Slovenia (14%), Spain (14%), Bulgaria (16%), Greece (16%) and Lithuania (16%). Re-employment was significantly higher among the middle-aged (around 40 years). The disadvantaged groups mention above also had lower re-employment probabilities. It was very striking that dismissed top professionals had an appreciably higher re-employment probability that unskilled blue collared workers. Those with long tenure in the lost job had significantly lower chance of getting a new job.

Perhaps the most original and interesting result of this chapter is that various measures of life satisfaction (current level and recent change) are strongly and negatively associated with displacement. However, those who are displaced and find a new job are significantly better off than those who remain jobless. This reinforces the importance of policy efforts to promote re-employment.

In chapter 3, the focus changes to those employees who remain at work after restructuring, so-called 'stayers' or 'survivors'. Just over a third (37%) of EU27 employees reported restructuring having taken place in the preceding three years. Those most likely to report restructuring were in higher occupational groups and those working in larger establishments and also those working in traditionally state-funded sectors.

In principle, these stayers are the lucky ones who have avoided the disruption of involuntary job loss. They continue to work in the same organisation. But what are the consequences of restructuring episodes for working conditions? The inclusion of a new restructuring related question in the latest 2010 wave of Eurofound's own *European Working Conditions Survey* (EWCS) survey allows us to explore this question for the first time, using an EU-wide representative and comparable dataset.

Restructuring has consequences also for those who remain in work

Restructuring involves organisational change and change is disruptive. Habitual work arrangements are revised, new objectives and targets are introduced and networks of colleagues are broken up. Previous research literature gives a mixed but on balance negative assessment of the impacts of restructuring on stayers' well-being. Comparing employees in workplaces where restructuring has

taken place in the preceding three years with those in non-restructured workplaces, the fifth EWCS data offers support to many of the findings of existing research and suggests some new possibilities.

On the positive side, work organisation features associated with high performance work systems were found to be more prevalent in restructured workplaces. Employee autonomy tends to be higher in restructured workplaces and this holds across different occupational groups. Greater access to training, especially on-the-job training, greater influence and involvement in how work is organised, a higher incidence of teamwork and of formal assessment of work were observed. These suggest a commitment to human capital development but employees in restructured workplaces were still more likely to report needing 'further training to cope well with their duties'.

On the negative side, the analysis also confirms associations between restructuring and higher work intensity as well as lower job security. Restructured employees, especially those in blue-collar occupations, were more likely to find themselves in 'high strain' work. They were also more likely to report higher exposure to workplace psychosocial risks (notably bullying/harassment), higher levels of psychosomatic disorders (especially depression, stress and sleeping problems) and of absenteeism as well as presenteeism (working when ill). In general, the analysis signals potential negative associations between restructuring and employee's self-reported health. The fact that it does so consistently across a broad range of indicators suggests that these associations are not spurious even if specific causal mechanisms are necessarily complex and not so easy to demonstrate.

These questions are not just relevant for the health and well-being of individual workers. As the success of a restructuring is largely dependent on the effectiveness of those remaining in the workplace, they also go some way to determining whether the organisational objectives of restructuring are likely to be satisfactorily achieved.

Over the longer term, organisational restructuring is an important component of the economic dynamism that has driven increases in living conditions over many generations. An awareness of its possible negative consequences for individual workers is a necessary condition of responsible and effective change management.

EU labour markets: Contrasting paths

1

Four years on, the Great Recession casts a lengthening shadow. The sovereign debt crisis undermines prospects of recovery. It also poses existential threats to the single currency itself and beyond that to the forms of European integration that have developed over the last two generations.

Five million fewer people are in paid employment in 2012 compared to 2008 – a multiyear contraction of employment levels unprecedented in recent history. Unemployment in the EU has started to rise again in the last year following a brief period of decline during the 2009–10 stimulus packages. The reliance on austerity measures to reduce levels of sovereign debt is beginning to impact on employment in the small number of sectors that continued to grow during the recession – predominantly state-funded sectors, notably health and education. For example, significant employment declines have been recorded in the core public administration in countries such as France and the UK.

The aggregate picture of weak growth continues to disguise large differences between Member States as labour market performance diverges based in large part on a core/periphery or creditor/debtor country divide. The impacts of the financial crisis and the 2008–09 recession have been amplified for the debtor countries during the subsequent eurozone crisis and associated retrenchment of public finances. Nowhere has this been clearer than in Spain and Greece. A quarter of the Spanish workforce is unemployed, including half of its 15- to 29-year-olds. In Greece, the unemployment rate has doubled to over 22% since the beginning of 2010. Meanwhile, labour markets in some countries were largely unaffected by the crisis (e.g. Luxembourg and Austria, where unemployment barely ever rose above 5%), while others have recovered successfully (e.g. Sweden, Finland and Germany, the latter enjoying its lowest unemployment levels in 20 years) or have recovered partially after particularly severe downturns (e.g. the Baltic republics).

The principal factor behind diverging employment performance between Member States has been the build-up of unsustainable levels of private or public debt in the pre-2008 period. The existence and size of the preceding asset booms and the consequences of their collapse have been notably severe in Spain, Bulgaria, the Baltic Member States and Ireland. In Italy and Greece, high existing sovereign debt levels have combined with weak or negative growth to jeopardise access to external funding. More generally, the unwinding of global debt excesses was also the proximate cause of the 2008 financial crisis in whose shadow all developed economies continue to operate.

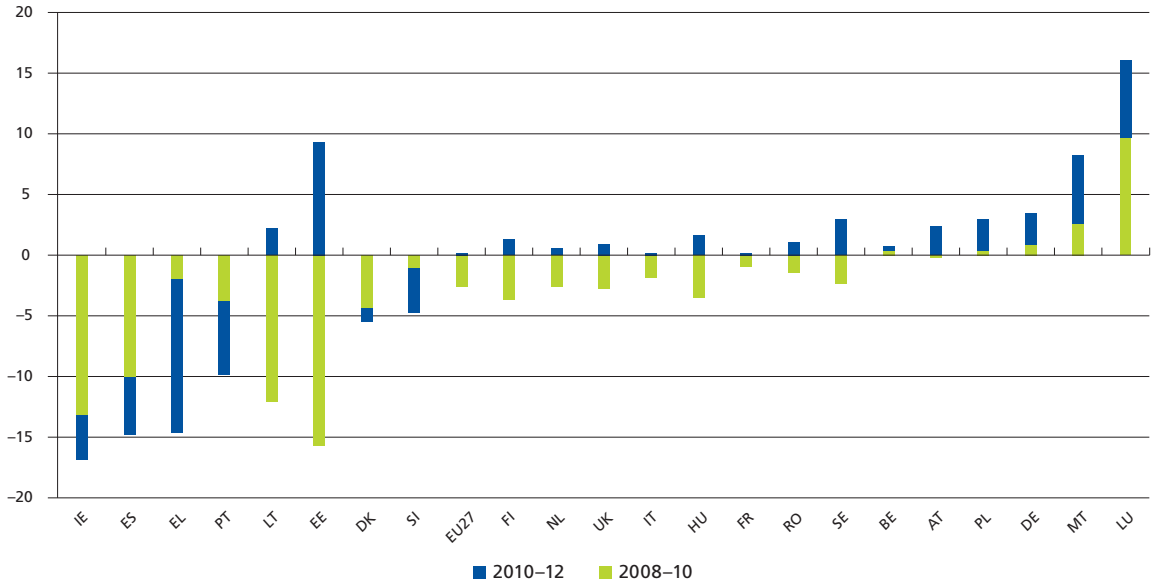
During the deleveraging phase, unemployment rates in the EU have risen since mid-2011 and are at their highest levels since the beginning of the millennium (10.3% for the EU27 and 11.2% in the eurozone). The severity of the recession has been such that output had yet to return to pre-crisis levels in 19 of the 27 Member States in 2011, including Spain, Italy and the UK. Further, the capacities of governments (or the EU) to give the recovery greater momentum are limited by high levels of indebtedness in public and private sectors and already historically low interest rates. Government debt in the EU27 was at 83% of GDP (88% in the eurozone) at the end of the first quarter of 2012 – compared to the upper limit of 60% that the Maastricht criteria implicitly assumed were consistent with sound public finances.

In this chapter, we will outline some of the employment impacts of the crisis and of the subsequent recovery in more detail. We will do so with reference to the European Labour Force Survey (ELFS) and the European Restructuring Monitor (ERM), two EU-wide data sources that allow for the development of an evidence-based portrait of the changes occurring in European labour markets. The ELFS is the principal source of comparable data on labour market outcomes in the European Union and provides, among other things, reliable information on net employment change by economic

sector and region. It does not, however, provide data on the extent of job losses and gains due to restructuring. For this reason, the ERM is a valuable source of complementary data, which capture both quantitative information – announced job losses or gains – and qualitative information – small case narratives about individual larger-scale restructuring events (generally involving at least 100 job losses or gains) in named companies or business units as well as details of the type of restructuring involved. In this section of the *ERM annual report 2012*, these two data sources are used to cast some empirical light on the extent of recent labour market structural change.

We use a full 13 quarters (2008 Q1 to 2012 Q1) of LFS data on employment levels amongst those of working age (15–64 years). For the ERM, we use a broadly similar timeframe but take advantage of the fact that this dataset is maintained dynamically and hence is more up to date. We use ERM data from 2008 Q1 to 2012 Q2.

Figure 1: Employment level shifts EU27, 2008 Q1 to 2012 Q1



Note: Sorted by total % employment decline (2008 Q1 to2012 Q1). BG, CY, CZ, LV and SK were omitted due to a break in series.
Source: ELFS (author's calculations)

The most striking aspect of the evolution of employment levels is the huge recent variation across the EU Member States. Ireland has shed 16% of its pre-recession employment while Luxembourg has added a similar share of new jobs. The Baltic republics, in particular Estonia, show positive signs of recovering from their steep recession slump, but employment levels in the eurozone 'peripheral' countries and in Slovenia have continued to decline in the most recent two years. For Greece, Portugal and Slovenia, the bulk of recent employment declines have taken place in the last two years (2010–12) rather than in the crisis period.

From a positive viewpoint, employment has at least stabilised in the EU27 in the last two years and more Member States have experienced employment increases than employment declines. In relative terms, the performance of the smallest Member States – Luxembourg and Malta – has been exceptional. In absolute terms, the main source of employment growth in the most recent two years have been Germany (+1.04 million), Poland (+0.38 million) and the UK (+0.28 million).

Employment shifts by sector

Five million net jobs were lost in the EU27 over the two-year period from 2008 Q1 to 2012 Q1, which encompassed the peak crisis period. The modest recovery in employment (+1.1 million, +0.5%) during 2010 Q1 to 2011 Q1 has been followed by a renewed phase of stagnation in the most recent 12 months. The two broad sectors that contributed most significantly to employment decline have been manufacturing and construction. Between them, they account for more than 7 million job losses, well over 100% of the total net employment decline during the recession and post-recession period.

Table 1: Sector employment totals and changes, 2008 Q1 to 2012 Q1

SECTOR (NACE code 1 digit)	Employed 2008 (000s)	Employed 2012 (000s)	Change	% change 2008-12	Share % 2012
A – Agriculture, forestry and fishing	9,967	9,382	–585	–5.9	4.5
B – Mining and quarrying	873	835	–39	–4.4	0.4
C – Manufacturing, of which	37,452	33,467	–3,985	–10.6	15.9
CA – Food, bev and tobacco	4,991	4,751	–241	–4.8	2.3
CB – Textiles, clothing, leather	3,266	2,462	–803	–24.6	1.2
CC – Wood, paper and printing	3,261	2,683	–578	–17.7	1.3
CD – Coke, petroleum products	242	201	–41	–17.0	0.1
CE – Chemicals	1,450	1,333	–117	–8.0	0.6
CF – Pharma	791	796	5	0.7	0.4
CG – Rubber, plastics, etc.	3,306	2,908	–398	–12.0	1.4
CH – Basic metals	5,636	5,023	–614	–10.9	2.4
CI – Computers, etc.	1,690	1,552	–138	–8.2	0.7
CJ – Electrical equipment	1,582	1,404	–178	–11.2	0.7
CK – Machinery, etc.	3,302	2,918	–384	–11.6	1.4
CL – Transport	4,187	3,982	–205	–4.9	1.9
CM – Other and repair	3,748	3,453	–295	–7.9	1.6
D – Electricity, gas, steam and air conditioning supply	1,475	1,691	217	14.7	0.8
E – Water supply; sewerage, waste management, etc.	1,543	1,591	48	3.1	0.8
F – Construction	18,202	15,059	–3,143	–17.3	7.2
G – Wholesale and retail trade; repair of vehicles, etc.	30,717	29,554	–1,163	–3.8	14.0
H – Transportation and storage	11,301	10,704	–597	–5.3	5.1
I – Accommodation and food service activities	8,963	9,103	140	1.6	4.3
J – Information and communication, of which	6,096	6,282	186	3.1	3.0
JA – Publishing, broadcasting	1,947	1,957	11	0.5	0.9
JB – Telecoms	1,440	1,211	–229	–15.9	0.6
JC – IT and info services	2,709	3,114	405	15.0	1.5
K – Financial and insurance activities	6,502	6,466	–37	–0.6	3.1
L – Real estate activities	1,621	1,663	43	2.6	0.8
M – Professional, scientific and technical, of which	10,132	10,565	433	4.3	5.0
MA – Legal, accounting, architecture, engineering, etc.	7,221	7,343	122	1.7	3.5

SECTOR (NACE code 1 digit)	Employed 2008 (000s)	Employed 2012 (000s)	Change	% change 2008-12	Share % 2012
MB – Scientific research/development	807	836	28	3.5	0.4
MC – Other professional scientific, technical	2,103	2,386	283	13.4	1.1
N – Administrative and support service activities	7,788	8,353	565	7.3	4.0
O – Public admin/defence; compulsory social security	15,331	15,111	–220	–1.4	7.2
P – Education	15,322	15,879	557	3.6	7.5
Q – Health, of which	20,548	22,339	1,791	8.7	10.6
QA – Human health services	12,284	12,964	681	5.5	6.2
QB – Residential care and social work activities	8,264	9,375	1,110	13.4	4.5
R – Arts, entertainment and recreation	3,246	3,303	57	1.7	1.6
S – Other service activities	5,203	5,053	–150	–2.9	2.4
T – Activities of households as employers	2,433	2,591	158	6.5	1.2
U – Activities of extraterritorial organisations	185	188	3	1.4	0.1
NA/NR	652	1,328	676	103.6	0.6
EU27	**215,552**	**210,505**	**–5,047**	**–2.3**	**100.0**

Source: ELFS quarterly data (author's calculations). NA/NR = no answer/non response

Manufacturing employment declined by nearly 4 million jobs between 2008 Q1 and 2012 Q1 and now accounts for less than one in six jobs in the EU27 (15.9%). The main employment-shedding subsectors within manufacturing were respectively textiles, basic metals and wood/paper and basic metals, in each of which at least half a million jobs were lost over the four-year period. The largest textile sector employment declines were recorded in Italy (–130,800) and Poland (–115,500), the largest basic metals declines were in the UK (–178,100) and Spain (–187,300) and those in wood/paper production were greatest in Spain (–83,700) and France (–63,700). Across the EU27, only one manufacturing subsector – pharmaceuticals – increased employment and in this case the gains were marginal (+5,200 jobs). While overall manufacturing employment grew in only one Member State – Austria – some CEE Member States recorded relatively significant increases in employment in specific subsectors, notably transport equipment (Slovakia, Hungary and the Czech Republic), computers (Romania) and pharmaceuticals (Poland). ERM data confirm the trend of a net shrinkage in auto/transport sector employment in western Europe as the sector continues to add jobs in eastern Europe.

The share of manufacturing employment varies from 6% in Luxembourg (the most heavily service-oriented Member State labour market) to 27% in the Czech Republic and remains above 20% in Hungary, Slovakia, Slovenia and Bulgaria.

The second main locus of employment decline was in the construction sector, where employment levels continue to decline and were 17% lower in 2012 Q1 compared to 2008 Q1. The unwinding of previous overinvestment in the sector remains a work in progress. Unlike employment losses in manufacturing, which were more evenly spread across countries, construction sector employment declines tended to be concentrated in specific countries where preceding real estate booms turned to bust at the onset of the Great Recession. Spain alone accounts for nearly half of the 3.1 million job losses in the sector. Construction sector employment declined by 45% in Spain, 57% in Latvia and 60% in Ireland. Less spectacular declines in construction employment have also been observed in the Netherlands (–13%) and Denmark (–27%).

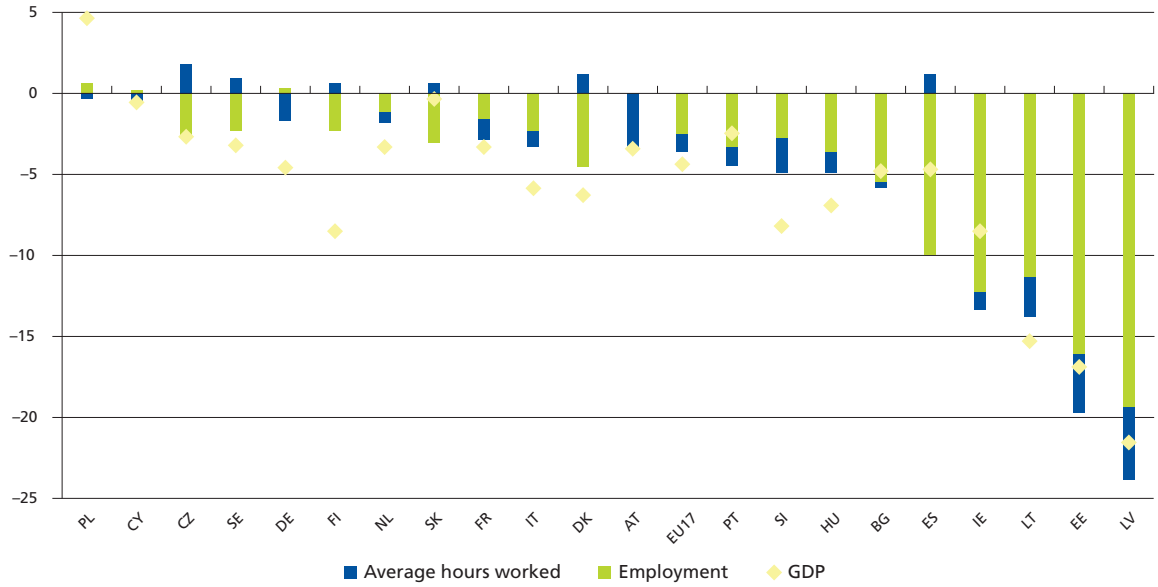
The retail sector was the other major contributor to overall net employment loss. Over 1.1 million jobs (nearly 4%) were lost in this sector. Nearly three-quarters of retail employment losses were attributable to three Member States – Spain (–356,000), the UK (–286,000) and Italy (–166,000).

Sectors where employment grew between 2008 Q1 and 2012 Q1 were largely the services sector, notably in predominantly state-funded sectors such as health and education. There was a 4% increase in employment in education and a 9% increase in health. Within the health sector, the majority (around two-thirds) of new employment was in residential care and social work activities, reflecting in part changing provision to deal with the consequences of demographic ageing. Employment declined marginally overall in the core public administration at EU level (–1.4%), but 10%+ declines were recorded in the UK, Bulgaria, Cyprus, Denmark and Latvia. Both the French and British civil services reduced headcount by over 200,000 in the four years up to 2012.

Changes in working hours and employment headcount

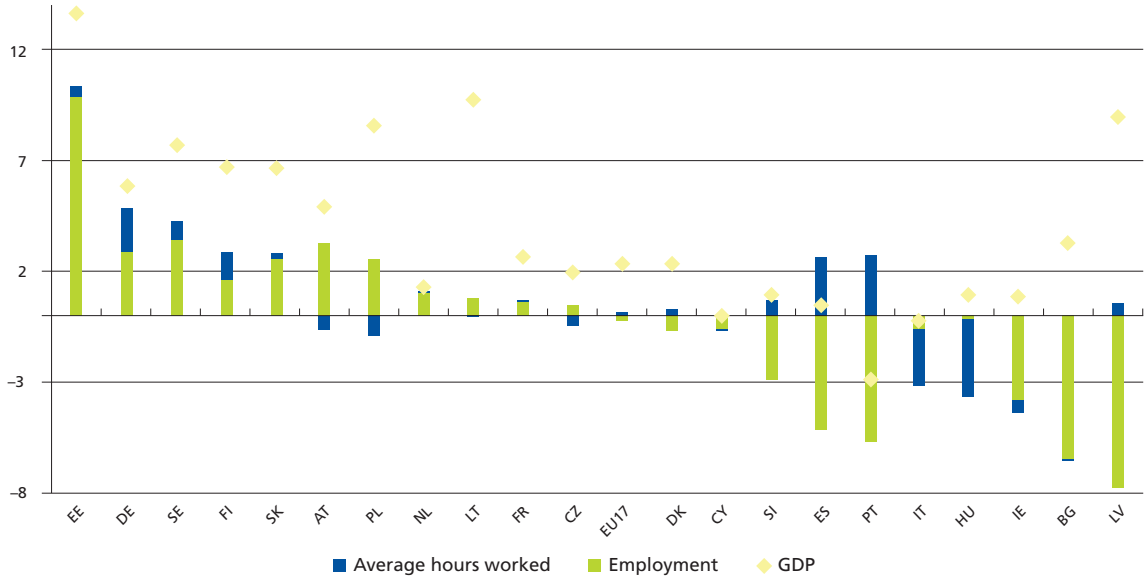
We can enrich the previous descriptions of employment changes during 2008 to 2012 by looking at changes in total hours worked and breaking down these changes into the total number of people in employment and the average number of hours they are working. In order to understand how variations in economic activity impacted on the labour market and total hours worked in the different countries and economic sectors, we refer to national accounts data. Figures 2 and 3 show the percentage change in employment levels and average number of actual hours worked, which are additive components of the percentage change in total hours worked. Two periods are presented: 2008 Q1 to 2010 Q1, characterised by decreases in total hours worked following declining levels of activity in most countries, and 2010 Q1 to 2012 Q1, when economic activity and total working hours started to expand again at aggregate level, albeit without much vigour. Institutional factors in the different European countries have a role in determining whether the adjustments to the business cycle are implemented by means of external flexibility (changes in the number of persons employed) or internal flexibility (changes in the working hours of employed persons).

Figure 2: Decomposition of change in total hours worked, 2008 Q1 to 2010 Q1



Source: National accounts, Eurostat.

Figure 3: Decomposition of change in total hours worked, 2008 Q1 to 2010 Q1



Note: Employment refers to the number of employed people. Average hours worked refers to total hours worked divided by the number of employed persons. GDP indicator measures difference between quarters in gross domestic product at market prices based on index, 2005 = 100. Data is seasonally adjusted and adjusted by working days. Data is missing for six countries: Belgium, Greece, Luxembourg, Malta, Romania and the UK.

Source: National accounts, Eurostat.

In the period 2008 Q1 to 2010 Q1, total hours worked in the eurozone-17 declined by 3.6%, more as a result of declining employment levels (–2.6%) than cuts in average hours worked, which were reduced by 1%. Total hours worked decreased in all countries following declining levels of economic activity, excepting in Poland, where GDP and total hours worked grew. In most countries the adjustment in total hours worked arose mainly through a reduction in employment levels: in the cases of Spain, Denmark, Slovakia, Finland, Sweden and the Czech Republic, average hours worked by those in employment actually increased. Germany and Austria, however, demonstrated divergent behaviour: decline in total hours worked arose exclusively through a cut in average hours worked.

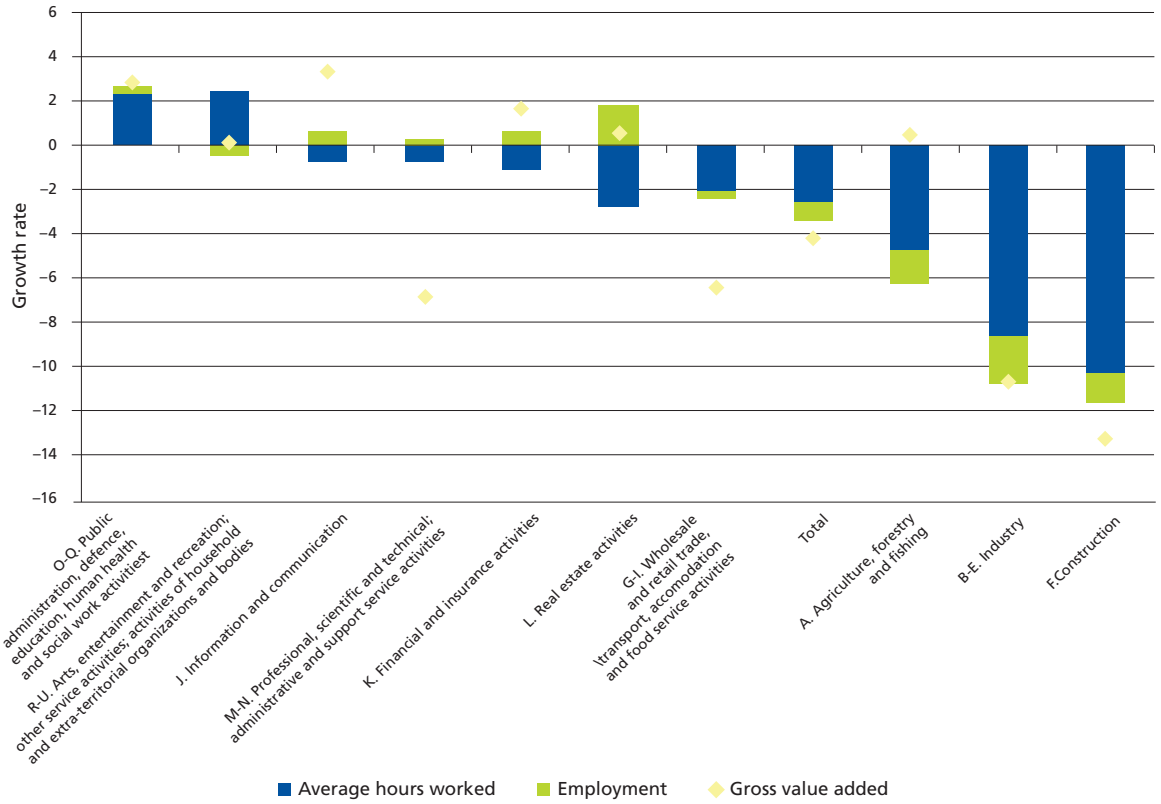
Economic activity recovered weakly from 2010 Q1 to 2012 Q1. This has led to increases in total hours worked only in about half of the countries. The eurozone-17 registered a headcount reduction of 0.22%, while average hours worked increased by 0.2%. Among the 11 countries where total hours worked increased, those countries that weathered the crisis in the period 2008 Q1 to 2010 Q1, mainly through a headcount reduction, extended total working hours in the most recent period, mainly by headcount gains. In Austria, average hours worked continued to decline, which resulted in strong headcount increases once economic recovery took place. In Germany, the reduction in average hours worked played a key role in absorbing potential headcount declines. During the comparatively robust recovery in Germany from 2010 Q1 to 2012 Q1, average hours worked rose more or less in tandem with headcount increases, contributing a similar share of overall increases in hours worked.

It is interesting to compare how an economic shock of a similar magnitude may have diverging impacts in countries characterised by different economic structures and labour market institutions. Germany and Austria adjusted total hours exclusively through a reduction in average working hours, which allowed them to increase employment in the period, reflecting high levels of internal flexibility

in their companies, probably due to the adoption of working time accounts, a strong culture of negotiated working time flexibility as well as publicly subsidised and widely used short-time working schemes[1]. On the other hand, Spain adjusted total hours exclusively through headcount reduction and average hours worked actually increased. In the second subperiod, characterised by strong economic growth in Germany and Austria and modest growth in Spain, the former two countries registered a significant increase in employment, while employment continues to be shed in Spain against a background of ongoing increases of working hours of those in employment.

The analysis of the evolution of total hours worked by economic sector for the whole EU27 allows us to show the diverging adjustments of each sector to the crisis. Figures 4 and 5 depict the percentage change in gross value added, employment levels and average number of actual hours worked in 10 economic sectors.

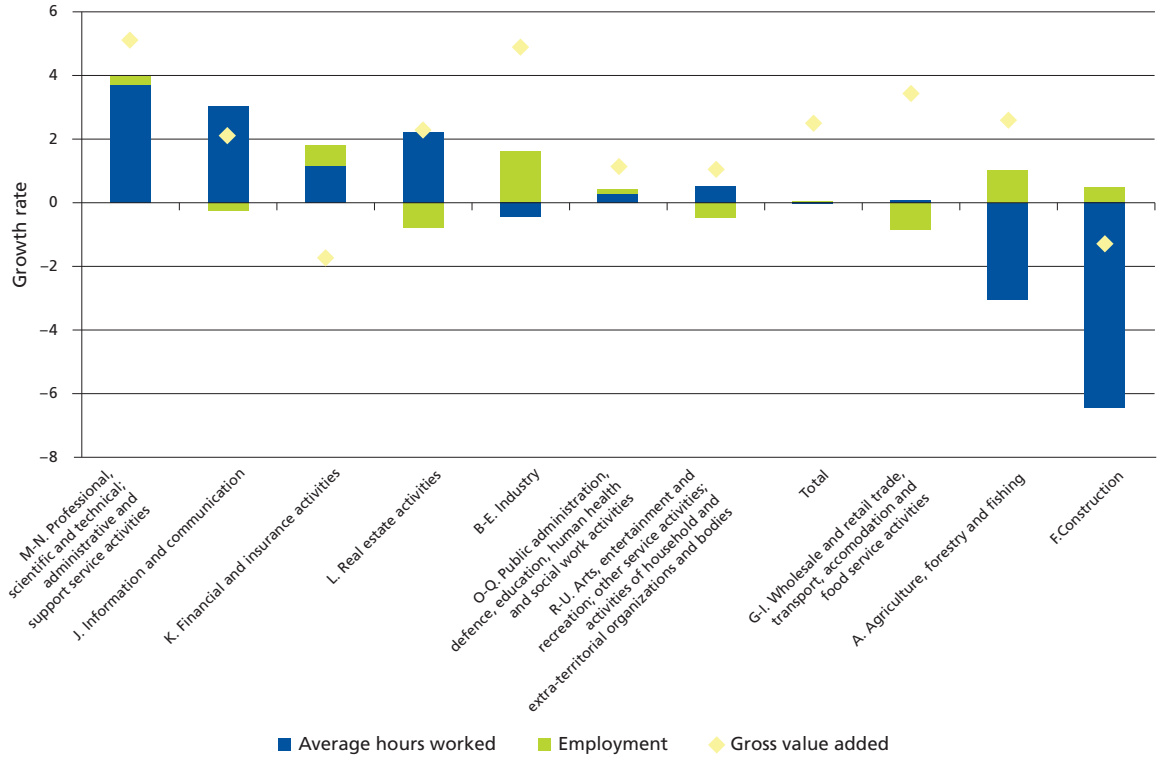
Figure 4: Decomposition of change in total hours worked by sector EU27, 2008 Q1 to 2010 Q1



Source: National accounts, Eurostat

[1] For more details on the German case, see Burda, M. and Hunt, J. (2011), *What explains the German labour market miracle in the Great Recession?*, IZA DP no. 5800, Bonn, Institute for the Study of Labor.

Figure 5: Decomposition of change in total hours worked by sector EU27, 2010 Q1 to 2012 Q1



Note: Employment refers to number of employed people. Average hours worked refers to total hours worked divided by the number of employed persons. GVA indicator measures difference between quarters in gross value added based on index, 2005 = 100. Data is seasonally adjusted and adjusted by working days. For employment and average hours worked, data refer to the whole EU27 but excluding Greece, Malta, Romania, the UK and for some sectors, either Bulgaria or Hungary. For gross value added, data refer to the EU27.

Source: National accounts, Eurostat

In the period 2008 Q1 to 2010 Q1, total hours worked were reduced in all sectors except public administration and arts and entertainment, mainly through headcount reductions. In the two sectors most affected by the recession, average hours worked accounted for a greater share of total labour input declines in industry, where labour hoarding is more common, than in construction.

In the most recent period, following gross value added increases, most sectors registered expansion in total hours worked. Increase in total working hours is mainly explained by headcount gains in the professional service activities, the information and communication sector and real estate activities, while increase in average hours worked plays a relatively important role in public administration and financial activities. In industry, where the reduction in average hours worked played a relatively important role in cushioning the impact of the crisis, average hours worked reverted their trend and greatly increased, probably reflecting the extension of working hours for those workers who had seen them cut during the crisis. Industry offers an example of a highly productive sector where an increase in average hours worked generates a large increase in gross value added. On the other hand, the construction sector is characterised by lower levels of productivity and therefore a relatively large reduction in total hours worked is needed to adjust to ongoing declines in gross added value in the sector. Moreover, labour hoarding does not seem to play an important role in the sector, since large headcount reductions are recorded against a background of increasing instead of decreasing average hours worked of those in employment.

Restructuring in a faltering recovery: The ERM data

A complementary view on labour market restructuring is provided by Eurofound's European Restructuring Monitor (ERM). Its main objective is to capture the employment impacts of large-scale restructurings based on media reports in all 27 Member States as well as Norway. In operation since 2002, the ERM database now comprises a dataset of over 14,000 individual company or organisation cases of restructuring, which, notwithstanding certain biases (see Annex 1), is the single best publicly available source of EU data on the employment impacts of large-scale organisational restructuring.

Criteria for inclusion in the ERM

To warrant inclusion in the ERM, an individual case of restructuring must meet certain qualifying criteria. The thresholds for inclusion are at least 100 job losses or job gains announced by an employer or cases of job loss involving sites employing more than 250 people and affecting at least 10% of the workforce.

The ERM defines job loss at restructuring in a similar fashion to the EU Directive on collective redundancies (98/59/EC) in that it refers to the number of intended or announced redundancies. However, the number of intended redundancies does not have to be registered with any public authority, but is based on company announcements covered in the major print and broadcast media in each country (between three and five sources are indicated for each Member State).

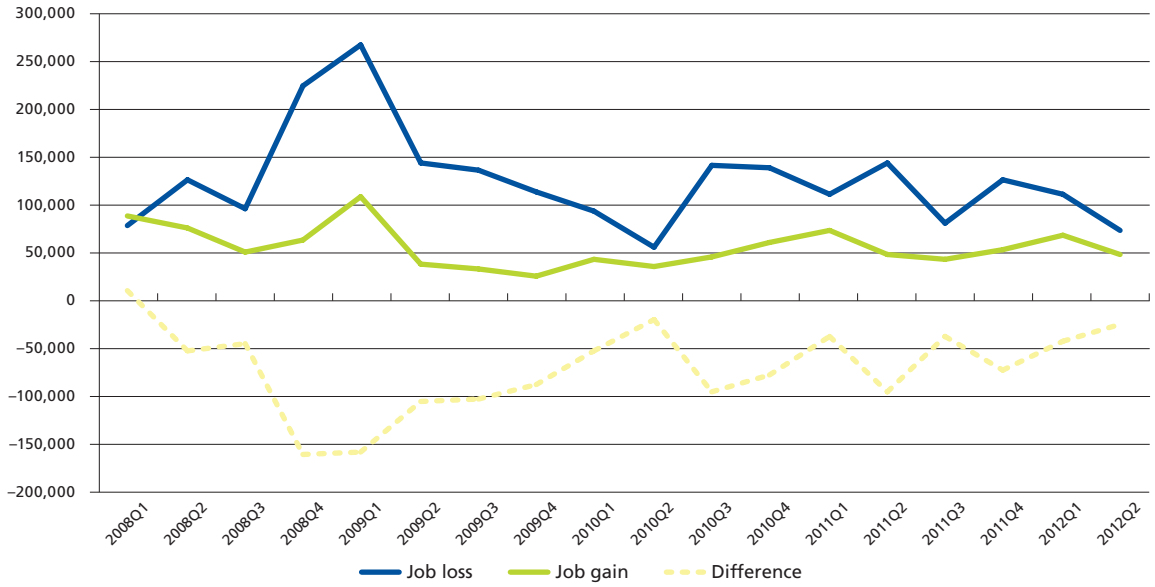
It is important to point out that ERM data on restructuring-related job loss is indicative rather than representative, given its relatively original method of data collection. The value of the dataset is that it provides access to a large number of identifiable and publicly reported cases of restructuring that have been collected, edited and published in a consistent fashion. It includes basic quantitative data on individual cases, such as announced job losses or creations or the total number employed in a business or geographical unit; at the same time, it offers qualitative information regarding the type of restructuring involved, e.g. offshoring, outsourcing or internal restructuring. It also provides a basic narrative on each case, including stated reasons for the restructuring, the types of jobs affected, social partner positions and other relevant contextual information.

Overview of restructuring cases from 2008 Q1 to 2012 Q2

Between 2008 Q1 and 2012 Q2, 6,871 cases of large-scale restructuring in Member States were recorded by the ERM[2]. There were just over double the number of cases of announced job loss compared to announced job creation over the period. The cases recorded were associated with announced job losses totalling just above 2.26 million jobs and announced job creation of 1 million jobs.

[2] As in previous analyses of ERM data, cases of restructuring at 'world' or 'EU' level are excluded from all quantitative analysis in order to avoid double counting, except where explicitly noted otherwise.

Figure 6: Total ERM announced job losses/gains by quarter, 2008 Q1 to 2012 Q2



Source: ERM

On average, ERM records restructuring factsheets covering approximately 100 large-scale restructurings per month. As Figure 6 illustrates, these 'normal' levels of activity rose sharply during the last quarter of 2008 and the first quarter of 2009 almost immediately following the global financial crisis commencing in September 2008. In this period, monthly case totals climbed to over 300 and featured a much higher share of job loss cases. While ERM restructuring activity has declined since 2009 Q2 and there has been a modest pick-up in announced job creations, announced job losses have continued to outnumber announced job gains in each quarter.

Of the 10 largest cases of restructuring job loss in the last 12 months, three involved the public administrations of Member States, illustrating the pressures on public finances in the post-crisis period. The largest case – 30,000 announced job losses in Greece – arose as a direct result of commitments by the Greek government to the EU/ECB/IMF troika following the first Greek bailout in 2010. Nokia has endured a slump in fortunes in recent years as rival firms (notably Samsung and Apple) have dominated the emerging smartphone market, overturning the Finnish firm's previous market dominance. Nokia announced the loss of 10,000 jobs, including the closure of major production facilities in Finland and Hungary, while the mobile networking joint venture with Siemens – a bigger employer than the parent company – announced it would be cutting a quarter of its global workforce.

Table 2: Largest recent job loss restructuring cases, 2011 Q3 to 2012 Q2

Announced	Company/ organisation	Job losses	Notes	Sector	Country	Type of restructuring
10/10/2011	**Greek public service**	30,000	To meet the fiscal and development goals agreed with EU/IMF lenders in 2010 under a three-year austerity. Plan includes abolition/merger of 150 state agencies. Up to 30,000 Greek civil servants, mainly nearing retirement age, are to be placed on partial pay for 12 months before becoming redundant in the framework of a labour reserve programme.	Public administration	EL	Internal restructuring
23/11/2011	**Nokia Siemens Networks**	17,000	Major restructuring involving one-quarter of the global workforce amid declining sales and weaker demand for network equipment. The company (a joint merger of Siemens and Nokia) is repositioning itself to focus on mobile networks.	Manufacturing	EU	Internal restructuring
07/03/2012	**Schlecker**	11,750	German drugstore chain filed for insolvency in January 2012. The administrator announced the closure of half of the chain's stores in Germany and a loss of over a third of the company's workforce.	Retail	DE	Bankruptcy
08/08/2011	**E.On**	11,000	Energy firm announced the loss of 11,000 jobs globally, around half of which are likely to be in Germany. Company cited recent losses, weak energy and gas prices and the German nuclear policy volte face. HR/accounting functions are to be centralised in Berlin and Cluj, Romania.	Utilities	EU	Internal restructuring
14/06/2012	**Nokia**	10,000	One of a series of recent restructuring announcements by the Finnish mobile phone producer. Plan includes the closure of plants in Ulm (Germany) and Salo (Finland).	Manufacturing	EU	Internal restructuring
04/10/2011	**Czech public service**	8,000	Across all ministries, departments, government organisations and state institutions in order to cut public spending.	Public administration	CZ	Internal restructuring
23/06/2012	**Hewlett-Packard**	8,000	HP plans to cut about 8,000 positions across Europe, including 1,000 in Germany, by 2014, many through early retirement. Part of a global plan to reduce the workforce by 27,000 workers worldwide.	IT services	EU	Internal restructuring
02/02/2012	**AstraZeneca**	7,300	Global restructuring plan by Anglo-Swedish pharmaceuticals firm, the third since 2007. Half of the job losses are in sales, general and administrative divisions as well as 2,200 in R&D, many in Sweden. Increased use of call centres and digital channels for customer communications to generate savings. Smaller AstraZeneca teams to collaborate with external partners to increase flexibility. Increased competition and expiry of patents cited as reasons.	Manufacturing	EU	Internal restructuring
14/11/2011	**Unicredit**	7,290	Across western European units but with a majority (5,200) in the company's home market, Italy. Job cuts before the end of 2015. Around 8% of staff in its investment banking division will be cut. Shifting of activities to eastern Europe.	Financial services	EU	Internal restructuring
11/01/2012	**Hungarian public service**	6,719	Around 40% of job losses are to take place in the Ministry of Public Administration and Justice. Reduction of state budget deficit cited as reason. Unions criticised the lack of consultation prior to the announcement.	Public administration	HU	Internal restructuring

Source: ERM

The largest announced job creations were by service sector multinationals in retail, hotels and catering. Of the 8,500 new European jobs announced by US hotel group Hilton Worldwide, around half were in non-EU countries – Russia and Turkey, considered 'strategic growth markets'. New jobs announced by UK supermarket chains Morrisons and Sainsburys are targeted at younger people and unemployed persons.

Table 3: Largest recent job gain restructuring cases, 2011 Q3 to 2012 Q2

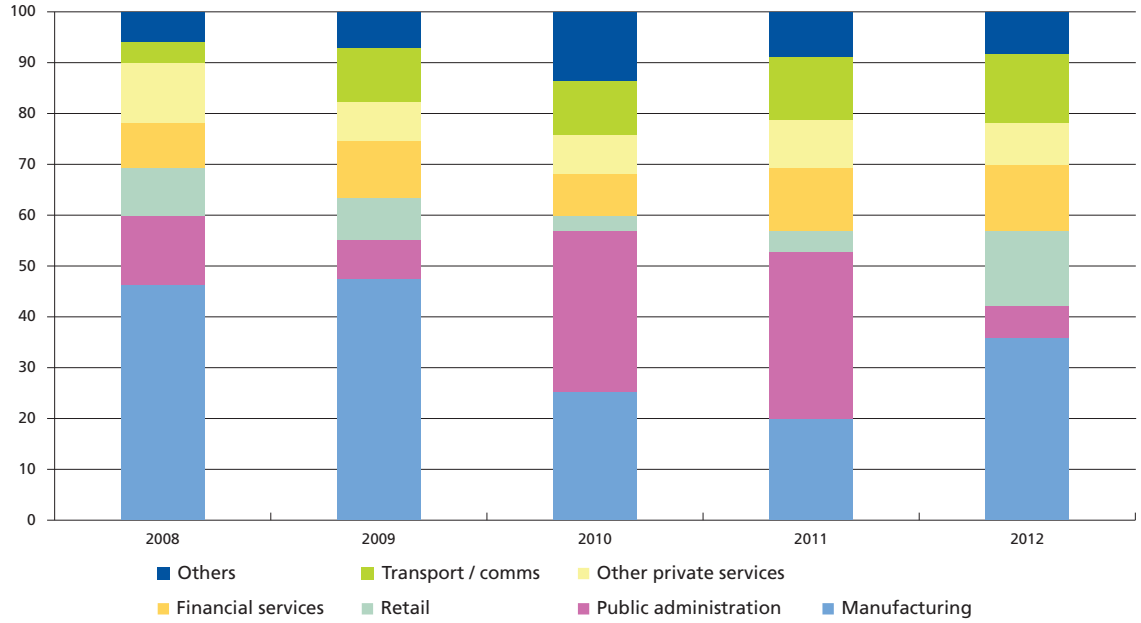
Announcement	Company	Job gains	Notes	Sector	
29/11/2011	**Hilton Worldwide**	8,500	US group to create more than 8,500 jobs in Europe, focusing on strategic growth markets: the UK (1,500 jobs), Germany (400), Poland (750), Russia (3,000) and Turkey (800). Youth recruitment targeted, e.g. links with UK's Get Britain Working programme.	Hotels	EU
14/12/2011	**Morrisons**	7,000	Jobs to staff 25 new outlets as well as a new distribution centre (300 jobs). Half the jobs to go to unemployed persons.	Retail	UK
26/01/2012	**Subway**	6,000	US-owned restaurant franchise to open 600 new branches in the UK and Ireland over the next three years.	Restaurants	UK/IE
23/05/2012	**Sainsburys**	6,000	UK-based supermarket chain announced the creation of 6,000 new jobs in the following year. Recruitment targeted at under-25s.	Retail	UK
16/12/2011	**EADS**	5,500	Aerospace group to create 9,000 jobs in 2012 due to strong growth and increase in orders, nearly half in temporary positions and a large share in France. Recruitment targeting young graduates, especially female graduates, to fill a third of the positions with objective to increase the share of women in the workforce to 20% by 2020.	Manufacturing	EU
21/01/2012	**Polish Police Force**	5,100	Recruitment to take place in several stages from March to November 2012.	Public administration	PL
04/01/2012	**EDF**	5,000	Recruitment during 2012, mainly to replace retiring workers. 2,200 jobs will be created in nuclear and engineering activities.	Utilities	FR
23/01/2012	**ASDA**	5,000	Walmart-owned UK retailer announced plans to open 25 new stores and three depots (at Rochdale, Falkirk and Elmsall) in 2012.	Retail	UK

Source: ERM

Large-scale restructuring by sector

Manufacturing was the sector most affected by large-scale restructuring job losses during the the economic crisis, in line with the estimates of employment decline already noted from the ELFS. State sector employment in general – including education and especially the health sectors – grew despite worsening public finances. However, public administration did suffer job losses at the EU27 level. This is reflected in the ERM data, where public administration's share of announced job losses rose sharply in 2010–11. The most recent data from first two quarters of 2012 have seen a decline in the share of job losses attributable to public administration.

Figure 7: Total ERM announced job losses by year, % by broad sector (NACE rev 2), 2008–12

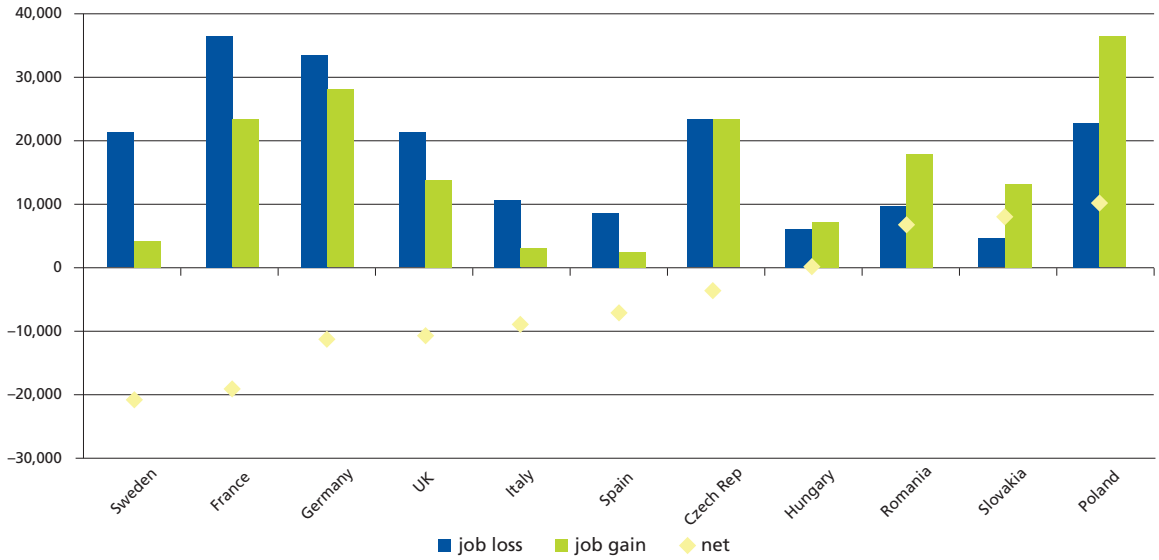


Note: 2012 data are for Q1 and Q2 only.

Source: ERM

Manufacturing accounted for nearly half (48%) of the announced job losses on ERM during the recession period (2008–09). This share declined to less than 20% in 2011 but has risen again amid stalling growth in 2012. Traditionally, one of the most important subsectors in manufacturing for ERM is auto/transport equipment manufacture, given its relatively large share of manufacturing employment and predominance of large establishments. The ERM records around 80,000 announced job losses in the manufacture of auto/transport equipment in both 2008 and 2009 but only 30,000 job losses in 2011–12. Announced job creation in the sector has been over twice as high during the same period, with most of these gains in central and eastern Europe.

Figure 8: Announced job losses and gains from auto/transport sector restructuring, 2008–12 Q2



Source: ERM

Given declining sales volumes and reported overcapacity, the relatively benign picture that emerges from recent ERM data is unlikely to persist. Some European carmakers have survived and prospered through the downturn; others are restructuring confronted with flagging demand in domestic markets. Volkswagen has taken over the mantle as the world's largest car producer from the Japanese giant, Toyota. It produced over 8.5 million vehicles last year and employs over half a million people worldwide and continues to grow, due in part to an established presence in growth markets such as China and Latin America. PSA Peugeot Citroën, on the other hand, announced in July 2012 the closure of its Aulnay-sous-Bois factory near Paris in 2014 as part of a restructuring that will reduce the French workforce by 8,000. The company has suffered in particular due to declining demand in southern Europe.

According to data from the international car trade body, OICA, manufacturers in eastern Europe – notably the Czech Republic, Slovakia, Hungary and Romania – now account for 19% of European car production, compared to 9% at the time of the 2004 EU enlargement. Peugeot and Volkswagen have contributed to this eastward shift of car production: 900 new jobs were created at Peugeot's Trnava plant in Slovakia over the last year, while Volkswagen's Bratislava plant now employs 7,500, having added over 1,000 jobs in 2010 and 2011.

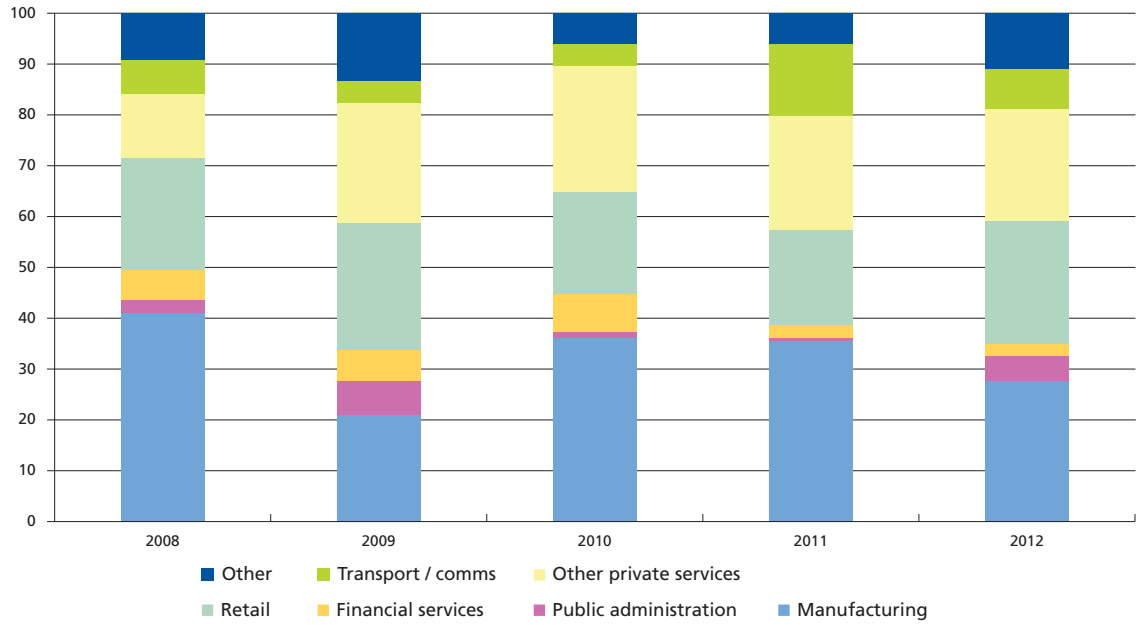
In financial services, the ongoing restructuring at Lloyds Banking Group (UK) is likely to have led to the cumulative loss of 40,000 jobs by 2014, the majority of these coming in its UK operations. Serial restructuring announcements have followed the UK bank's ill-starred merger with HBOS in the immediate aftermath of the 2008 financial crisis. The group will also phase out activities in half of the 30 countries in which it has a presence. The UK government currently holds a 41% stake in the bank.

A number of large restructuring cases have involved Italian banks. The world's oldest bank, Banca Monte dei Paschi di Siena, announced the loss of 4,600 jobs and the closure of 400 branches. The bank suffered losses of €4.69 billion in 2011 and has required Italian government funding to shore up its capital base. The restructuring plans, including notice of the government support, were announced in June 2012. Unicredit announced in November 2011 that it would cut 5,200 jobs in Italy and over 7,000 jobs overall in western Europe between 2011 and 2015. The Italian job cuts will come mainly via a hiring freeze and

early retirement. Previously, Intesa Sanpaolo, with 70,000 employees in Italy, announced that it would cut 3,000 jobs by 2014, mainly through voluntary departure. One feature of the originally announced restructuring was the inclusion of an intergenerational agreement that envisages both a progressive reduction of working time for workers close to retirement alongside the creation of new jobs for younger workers. The bank subsequently revised the figure for job losses upwards in November 2011 to 5,000. Both Intesa Sanpaolo and Unicredit announced quarterly losses of over €10 billion during 2011, arising out of write-downs in the value of several past acquisitions and of sovereign debt holdings.

Between November 2011 and January 2012, three large French banks announced significant job losses concentrated in their investment banking sections – Crédit Agricole (2,350 jobs), BNP Paribas (1,635) and Société Générale (1,580). These restructurings involve selling assets and withdrawing from some foreign markets as the banks seek to strengthen recession-damaged balance sheets. This pattern of financial services 'reshoring' has also been observed in many of the banks that benefitted from taxpayer support during and after the 2008–09 financial crisis; some divestment of foreign assets was a common requirement of receiving the aid in the first place. European banks also face a new stricter regulatory regime that will oblige them to hold capital equivalent to 9% of risk-weighted assets by the end of 2013. This too has prompted divestments from non-core activities and markets.

Figure 9: Total ERM announced job gains by year, % by broad sector, 2008–12



Note: 2011 data are for Q1 and Q2 only.

Source: ERM

Over the period 2008 to 2012 Q2, there were over 1 million new jobs announced in ERM-reported restructurings (Figure 9). Over a third of these were in manufacturing, with most of the announced job creation in higher-tech sectors – computer, electronics and communication equipment as well as auto/transport manufacturing, as already noted. The retail sector's share of accounted new jobs has increased in 2012 to around a quarter of the total. The largest cases tended to be expansion announcements by UK supermarket chains: Asda, Morrisons and Sainsburys will each add at least 5,000 jobs to their UK operations in 2012. Many mid-sized retail cases of job creation involved moves

by western European retailers to grow their businesses in eastern Europe. Small-scale shops continue to have a significantly higher share of retail sales in eastern Europe compared to western Europe (e.g. 150,000 small retailers account for around 40% of the Polish retail market[3]).

Portuguese retailer Jeromino Martins now employs over 30,000 in Poland in its chain of Biedronka stores. Tesco has a similar presence and hired 3,000 employees in 2011 in Poland and 900 in the Czech Republic, where it is the country's biggest retailer. More recently, in May 2012 Tesco announced the creation of 1,700 new jobs (mainly in new units) across Poland by the end of 2012, though the company simultaneously announced restructuring job losses of 980 in the same country. In Romania, retailers Mega Image (owned by Belgian group Delhaize), Lidl (Germany) and Carrefour (France) have each announced substantial expansions since December 2011, involving 900 to 1,600 new jobs in each case.

In Figure 9, some of the main sources of job creation in the combined category of 'other private services' are in IT/information services and professional services such as legal, accounting and management services. As already noted in the section based on ELFS data, these are amongst the sectors with strong structural employment growth, as evidenced by continued expansion before, during and after the 2008–09 recession. Some large recent job creation cases involve recruitment by the large international consultancy firms, often in their French operations. Over 1,000 new jobs were announced by both Accenture and Deloitte Touche in 2011. More specialised engineering services firms, such as Apave (risk control) and SGS (inspection, verification and certification), announced the creation of 650 and 600 new jobs, respectively, in France over the last year.

The biggest single job creation in 'other business services' involved the UK Co-operative Group, which announced 3,000 new, mainly legal, jobs as it expands its legal services portfolio. The expansion has been made possible by changes to UK legislation that allow other corporate entitites to offer consumer legal services (wills, personal injuries claims, etc.) formerly only available from private solicitors. The renascent Co-operative Group has diversified in recent years and now has pharmacy and funeral care as well as financial and legal services divisions in addition to its core retail business. The group employs 123,000 people in the UK and profits are redistributed each year via dividend to its 6 million members.[4]

Quo vadis 'green jobs'?

After a decade of rapid growth, the European renewable energy sector has begun to experience a divergence in fortunes between the firms generating and transmitting energy on the one hand and the manufacturers providing the equipment for the greening of our energy provision on the other. The scaling back of subsidy regimes within Europe and declining prices based on the rapid mobilisation of China and Taiwan in both solar-cell/panel and wind turbine production are two factors commonly cited by employers for a spate of restructuring job losses since 2011. Some of the most well-established European firms in the sector, including Danish turbine manufacturer Vestas, have scaled back production significantly; a number of solar panel and cell producers have entered administration in a context of excess capacity, market glut and declining prices.[5]

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[3] http://blogs.ft.com/beyond-brics/2011/08/01/tesco-on-deep-push-into-polish-retail/#axzz23ExYeSsM

[4] www.bbc.co.uk/news/uk-england-manchester-18189485

[5] Eurofound (2008), *ERM Report 2008 – More and better jobs: Patterns of employment expansion in Europe*, available online at http://www.eurofound.europa.eu/pubdocs/2008/50/en/2/EF0850EN.pdf; see also http://www.reuters.com/article/2011/11/28/us-energy-solar-idUSTRE7AR1JV20111128.

Nonetheless, renewables accounted for 71% of new electricity-generating capacity in the EU in 2011 and the background remains positive for the sector in Europe. After the US and China, Germany, Spain and Italy are the other top five countries in the world in terms of renewable power capacity (non-hydroelectric) and per capita levels of renewable energy in Europe are the highest in the world. In 2010, 48% of final energy consumption in Sweden was generated from renewables and over 30% in Latvia, Austria and Finland (12.4% for the EU27). The European lead in the rollout of solar photovoltaic (solar PV) energy is especially pronounced: it accounts for nearly three-quarters of global installed solar PV capacity.

At a policy level, the current EU2020 strategic blueprint includes a commitment to generating 20% of EU energy consumption from renewable sources by 2020 as part of one of its five flagship objectives, with higher targets in first-mover Member States. Renewable energy targets and support policies are now in place in every EU Member State, with varying levels of subsidy to facilitate the development of durable renewable energy capacity. In 2010, 12.5% of final energy consumption was generated from renewable sources, compared to 9% five years earlier. Given the increasing urgency of climate change considerations, more demanding targets are already under consideration. The European Renewable Energy Council, a representative lobby, has proposed a 45% target for 2030 and a recent Commission Communication moots the advantages of 'early policy clarity on the post 2020 [renewables] regime'.

One potentially carbon-free source of energy, nuclear power, had been enjoying something of a renaissance in the 2000s and had been proposed by some as the clean energy solution to global warming. However, nuclear power is likely to diminish in importance following the disaster at the Japanese Fukushima plant in February 2011. The decision by the German government in 2011 to phase out nuclear power by 2022 was directly attributed to Fukushima but also reflects that country's faith in the future of renewables. Italy voted in referendum to stay non-nuclear in 2011 and Spain has vetoed the construction of any new reactors.

Energy security has been another powerful motivation for developing renewable power sources in Europe. The EU/Continent relies on external providers for over 50% of its energy needs and as a result is vulnerable to the vagaries of global market pricing for increasingly prized essential resources and reliant on supply networks largely under the control of third countries, notably Russia for gas and the Gulf states for oil. The development of renewables contributes to a greater measure of energy self-sufficiency, even if they remain at present mainly complementary to and not substitutes for established fossil fuel sources due to weather-varying patterns of supply.

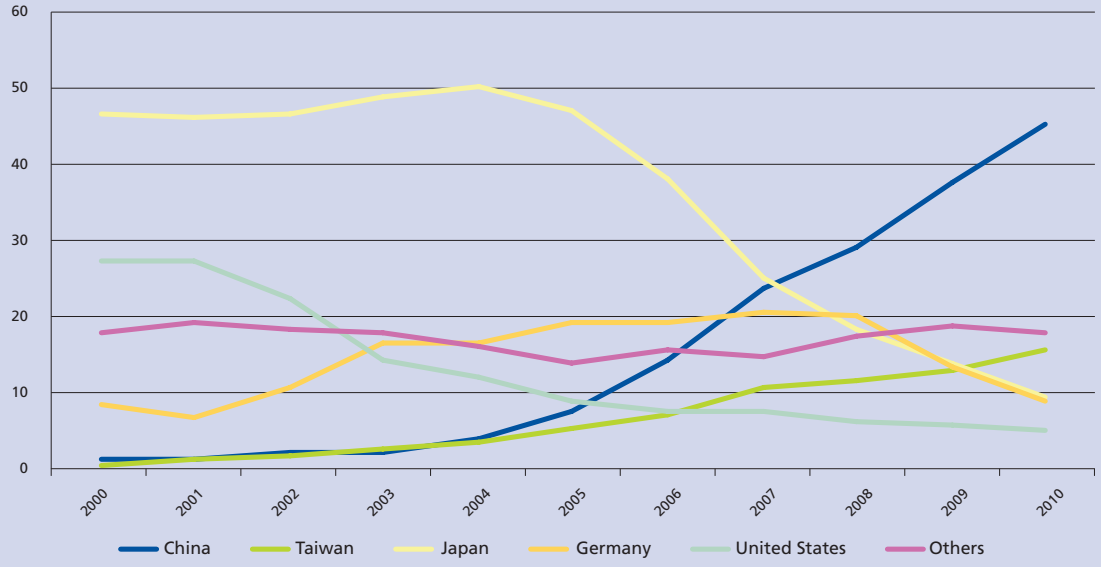
Despite this positive backdrop, renewables manufacturing in Europe appears to have entered the bust phase of a boom-bust cycle that began 10 years ago. Solar photovoltaics recorded growth levels in global capacity of 58% annually between 2007 and 2011, but most major European manufacturers have experienced difficulties more recently, faced with a sharp fall in prices, excess inventory and reduced subsidies for installation. According to a report on renewables for the German DIW, 'the massive collapse in the price of PV systems has had dire consequences for many companies. Job losses,

bankruptcy, negative annual results – the picture deviates from the rosy prospects of past years to an alarming degree.'

National feed in tariff (FiT) regimes have partly contributed to the recent travails in the European solar PV sector. Over-generous FiTs in the mid-2000s are one factor behind higher than anticipated growth levels. 7.5 GW of PV capacity was installed in Germany in 2011, more than double the level foreseen by the policy's creators. In some ways, the industry has been a victim of its own success. FiTs incentivised rapid development of production capacity and the resulting economies of scale have driven prices down faster than anticipated. Many FiT regimes are being revised to make tariffs less advantageous. Before long, the renewables sector may no longer require the support of FiTs to facilitate its expansion as market prices for renewable energy converge on those from other sources (so-called 'grid parity'). This could well spur a second major leap forward in solar PV production. Whether or not European producers will be best placed to take advantage remains an open question.

Costs of solar panels have fallen by more than 75% in the last four years. Chinese panel makers can now make solar panels at 10% less than the average industry cost, according to Bloomberg New Energy Finance. Currently, 12 of the top 15 solar cell manufacturers are Asian. Chinese SunTech is now the world's biggest solar cell producer. Q-Cells, the German firm that led the industry in market share as recently as 2008, announced in April 2012 that it would file for insolvency, one of many German producers suffering as prices decline.

Figure 10: World's largest solar PV producers, % of global production (2000–10)



Source: Earth Policy Institute

The rapid growth in market share of Chinese solar PV manufacturers has triggered below-cost selling allegations, which have resulted in the US imposing tariffs on Chinese

producers in May 2012[6]. The German company, SolarWorld, that prompted the US action reportedly filed a similar complaint with the European Commission in July 2012. The EU remains the biggest world market for solar PVs and tariffs would clearly offer some protection to EU-based manufacturers and their employees. On the other hand, more expensive solar panels would also slow down the rate of rollout in a sector where much of the product line has shifted quickly from hi-tech to commodity status. Installation and servicing of renewables equipment employs around four persons for every one in manufacturing in Germany[7]. Possible reprisals in a 'solar trade war' may also damage those firms, many German, providing capital equipment to Chinese solar PV factories.

It is not easy to estimate employment in the renewable energy sector or in one subsector such as solar power. The categories of the standard international sectoral classification (NACE) cannot usefully identify green jobs. According to UNEP's *Renewables Global Status Report*, there were just over 1.1 million jobs in the EU renewables sector in 2010, half of which were employed in either solar PV or wind power. One-third of these jobs were in Germany. The same report points to 20,000 sector job losses in Spain from 2008 to 2010, while German trade association BSW Solar claimed in March 2012 that 100,000 German jobs were at risk in the country's beleaguered solar PV sector and that 20,000 jobs had already been lost since the end of 2010.[8]

During 2011 to 2012, the ERM recorded an increased number of renewable sector job loss cases, reflecting troubles in both solar PV and wind power manufacturing. Of the 36 large-scale restructurings recorded, 27 were cases of job losses. Over three-quarters of these cases were in the solar PV sector.

The ERM records nine restructuring cases for Germany. In April 2012, US manufacturer of solar panels First Solar announced 1,300 redundancies in Germany as part of its worldwide restructuring programme affecting 2,000 workers. Other job cuts in the German solar sector were announced by Schott, a German solar wafer manufacturer, with 220 job losses; Solarworld, a German photovoltaic system manufacturer, with 250 job losses; Conenergy, a German manufacturer of solar cells and solar modules, with up to 140 job losses; Odersun, a German developer and manufacturer of solar panels, with 260 job cuts; and Centrotherm, a technology and equipment provider for the photovoltaic sector, with 320 job cuts. In line with the overall trends in the solar industry, the majority of the companies announcing job cuts cited a downsizing in state subsidies and increasing competition from China as reasons for the announced job cuts.

Other countries are also seeing decreases in their 'green jobs'. Baekert, a Belgian company specialising in the processing of metals, cut 600 jobs in several plants in Belgium, quoting the fast and structural change of the worldwide market of solar energy as one of the reasons, while Photovoltech, specialising in the production of photovoltaic panels, announced 267 redundancies in Belgium. The Renewable Energy Corporation, a Norwegian solar power company, cut up to 900 jobs in two waves of restructuring in 2011–12. In Spain, Silicio Solar announced 295 redundancies, downsizing its solar ingot and wafer production. Solar cell

[6] http://www.economist.com/node/21555958
[7] http://www.map.ren21.net/GSR/GSR2012_low.pdf
[8] http://uk.reuters.com/article/2011/12/14/uk-germany-solar-idUKLNE7BD02B20111214

producer UK BP Solar admitted in December 2012 that 'it can't make any money' from manufacturing solar panels and has successively closed its factories, leading to 1,750 job losses.

Declining fortunes in the European solar PV industry has also had knock-on impacts on related sectors. UK construction firm Carillion warned that planned solar energy subsidy cuts could lead to up to 4,500 redundancies[9], but has so far only cut 150 jobs. Carillion installs and manages solar panels in the UK.

To a lesser extent, the European wind energy sector is hit by the downward trend. The world's biggest manufacturer of wind turbines, Danish Vestas, announced 2,335 job cuts worldwide (about 10% of its workforce), which includes 1,800 job cuts in Europe. Citing increasing Chinese competition as a reason for the restructuring, Vestas had already cut 1,900 jobs in April 2009 and another 3,000 in October 2010. Equally, Siemens Wind Power cut 270 jobs in Denmark; Moventas, a Finnish producer of gears for wind turbines, announced 120 redundancies in Finland; and LM Wind Power made 209 people redundant at its wind turbine blade factory in Ponferrada, Spain. Moreover, wind turbine manufacturer Nordex announced 120 redundancies in Germany in November 2011 and Siemens's subsidiary Winergy is restructuring part of its wind energy business as it had failed to meet expectations, affecting 150 jobs.

However, not all news in the renewable energy sector is bad news. Offshore wind parks are seeing employment growth, with the Offshore Group Newcastle, which builds foundations for wind farms, announcing plans to create 1,000 jobs in the UK after receiving a government grant to build a subsea foundation for offshore wind farms. Eolenvest, producer of renewable energy, announced it would hire 880 employees for three new wind parks in Romania.

Even in the troubled solar energy sector, we have seen some job creation in 2011–12, mainly in R&D activities. In July 2011, an Italian joint venture, 3Sun, opened a manufacturing plant for innovative photovoltaic cells and panels. The project was financed with the support of the Italian government. German Bosch is currently setting up an extensive joint research and production facility in Arnstadt, Germany, which will create up to 1,000 new jobs. In France, Adixen Vaccum Products has announced the hiring of 110 people for its research and innovation-based facility, Lab Fab.

The worldwide demand for renewable energy manufactures will continue to grow rapidly in the coming years as installation expands in developing countries – many with climates more suited in particular to solar PV technologies – and as the price of renewable energy declines. The international division of production in the sector has been transformed radically in recent years, leading to the high volume of restructuring activity noted above. Continuing employment attrition in European renewables manufacturing is likely through 2012 and 2013. But even in Germany, where many of these restructurings are taking place, the DIW estimates that the renewables sector will continue to add jobs, estimating growth from 360,000 at present to 500,000 to 600,000 by 2030. The likelihood is that a declining share of these jobs will be in direct production and a growing share in R&D, installation and maintenance.

[9] http://www.guardian.co.uk/environment/2012/jul/17/renewable-energy-subsidiy-decision-delayed?INTCMP=SRCH

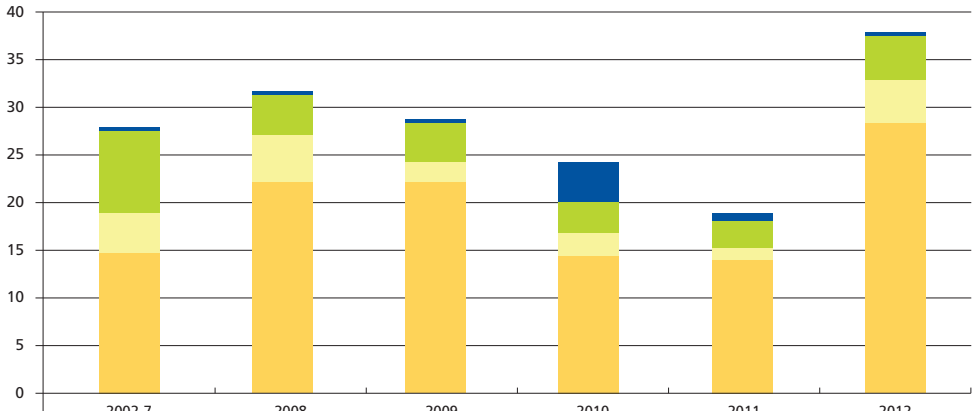
Types of restructuring

The catch-all category of 'internal restructuring' continues to describe a large share of restructuring job loss (62% in the first two quarters of 2012). The share attributable to bankruptcy/closure rose during the recession (2008–09), fell back somewhat during the initial recovery phase and has climbed again during 2012. The most prominent recent cases of bankrupcty-related restructuring have been at German retail group Schlecker (January 2012, 11,750 job losses) and Swedish auto manufacturer Saab (December 2011, 3,600 job losses).

Meanwhile, the share of job loss attributable to delocalisation (offshoring), outsourcing or relocation has also begun to rise during 2012 but is still well short of the levels recorded in the pre-recession period. These categories combined accounted for one in 10 job losses during 2002 to 2007. About 50 cases per year of offshoring/relocation or outsourcing have been recorded on ERM in 2010–12, compared to nearly 200 in 2006.[10]

Finnish mobile telecoms company Nokia – consistently one of the most active European MNCs in terms of restructuring activity – accounts for the biggest recent offshoring cases. In February 2012 it announced 2,300 job losses at its Hungarian plant in Komarom and 1,000 at its Finnish plant in Salo following the September 2011 announcement of the closure of its Kluj plant in Romania (2,200 job losses). The company is transferring some of its phone production closer to component makers in Asia. It has production facilities in China, India, South Korea and Vietnam (under construction).

Figure 11: Share of announced job losses (%) by type of restructuring, 2002 to 2012 Q2



	2002-7	2008	2009	2010	2011	2012
Other	0	0	0	4	1	0
Offshoring	9	4	4	3	3	5
Merger/aquisition	4	5	2	3	1	5
Bankruptcy/closure	15	22	22	15	14	29

Notes: The main category, 'internal restructuring' (not shown), accounts for the remaining share of announced job losses. Offshoring includes relocation and outsourcing as well as delocalisation.

Source: ERM.

Finally, the share of job losses attributable to mergers/acquisitions has begun to pick up in 2012 after declining markedly during and just after the 2008–09 recession.

[10] Each ERM case has only one 'type of restructuring' descriptor – internal restructuring, bankruptcy, closure, outsourcing, relocation or offshoring/delocalisation. In practice, restructuring events can have elements of two (or more) such restructuring types, e.g. where a firm offshores some production while closing some plants as part of an overall group restructuring.

Shifts in multinational employment in the EU

There is an ongoing debate about the development and direction of the EU labour market and in particular the impact of the (re)location decisions of EU-based multinational companies (MNCs). These decisions are partly based on costs, particularly labour costs, and partially on the desire to expand and develop new markets. Media reports fuel the fear of jobs being offshored away from Europe. MNCs, particularly in the manufacturing sector, have tended to relocate their activities away from the EU15 towards the central and eastern European (CEE) Member States over the past two decades (Eurofound, 2009b). Some MNCs have relocated even further away, into Asian markets, where labour costs are even lower and companies can expand into faster-growing markets. In the case of some companies, their journey in recent decades can be traced from the EU15 countries into the CEE countries, to the candidate countries and then to countries in the Far East as they repeatedly relocate to where costs are lower and markets are growing. Although such shifting of activities between countries can have widely distributed job losses in some companies, there is limited evidence of employment levels actually declining in large companies in western Europe as a whole (Morley, 2009).

This section attempts to describe pathways of relocation for selected multinational companies. Using data from the ERM restructuring case database and company annual reports, it is possible to track changes in employee numbers by global region and examine the sequence of individual restructuring events over a period of time. Looking at multinationals with five different home bases – Peugeot in France, Volkswagen in Germany, Fiat in Italy, Ericsson in Sweden and Nokia in Finland – it is clear that the overall trend appears to be upwards or stable in terms of total employee numbers in the company, while the number of employees working in the home country and Europe as a whole tends to be either stable or falling. Employee numbers outside Europe – in the US, South America, India, Asia and China – are growing as companies expand their investment into these markets. Figures can be uneven, as they reflect acquisitions or divestments in particular countries, which will have an effect on employee numbers in the countries concerned.

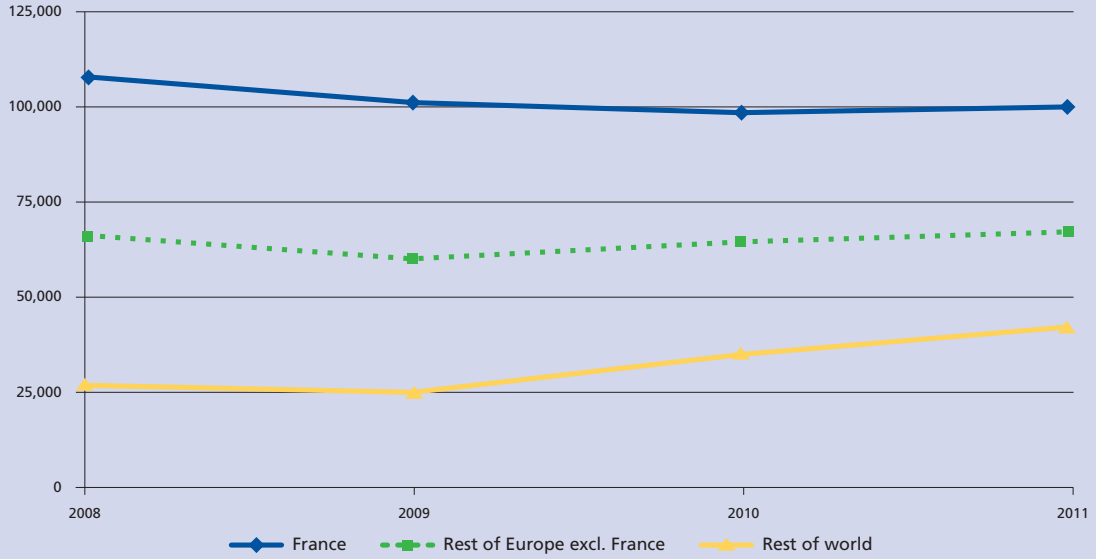
Peugeot

At the French car manufacturer Peugeot, the overall workforce has increased over the past few years, from 201,700 in 2008 to 209,068 in 2011, according to the company's annual reports. However, this increase largely accounts for an expansion of the workforce in non-European countries. Although a majority of Peugeot employees still work in France and Europe, their share is falling: the number of the group's employees in France has fallen from 108,620 in 2008 to 101,330 in 2009 and 98,845 in 2010, although with a slight increase to 100,357 in 2011.

While Peugeot's French workforce accounted for around 54% of the overall workforce in 2008, this dropped to 48% in 2011, while the employment share and numbers for the rest of Europe remained rather stable.

Employment growth, in contrast, can be found in the rest of the world. While Peugeot employed 27,030 outside Europe in 2008, this number increased to 41,801 in 2011 – a large increase both of share and total numbers. The majority of these employees work in South America and North and Central America (see Figure 12).

Figure 12: Employee numbers at Peugeot by geographical region, 2008–11



Source: Peugeot annual reports

The European trend can be underlined with ERM data. Regarding Peugeot's employment changes in Europe, the ERM records 29 cases of jobs losses and job gains, with close to balanced job gain and job loss numbers. This is in line with the overall stability of employment numbers in Europe. However, job losses exceed job gains in France by nearly 6,000. Large-scale restructuring in 2007, 2009 and 2011 and recently announced 8,000 job cuts in 2012 have hit France particularly hard, leading to an overall reduction of French employment levels. Interestingly, the ERM record none of the restructuring cases for PSA as offshoring.

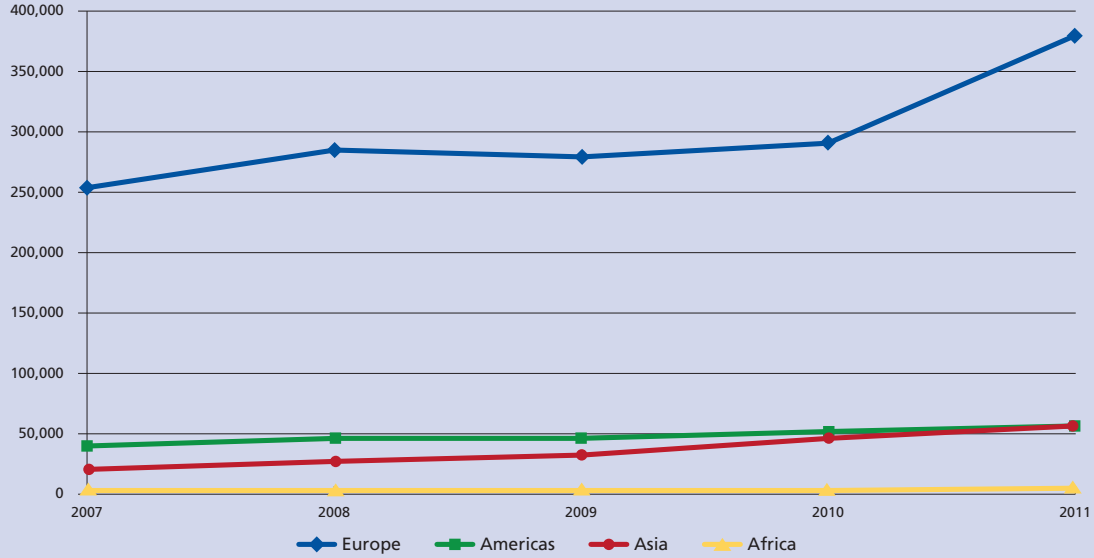
Volkswagen

Looking at another European carmaker, German multinational Volkswagen has seen its total workforce numbers increasing significantly, from 336,843 in 2003 to 329,305 in 2007 and 501,956 in 2011. By region, staff numbers have increased in all areas in which the organisation operates. The majority of the company's employees work in Europe, where numbers have increased, from 256,119 in 2007 to 378,030 in 2011. The share of Europe-based employees has only seen a slight drop, from around 78% in 2007 to 75% in 2011.

Staff numbers in the Americas have also increased, from 42,814 in 2007 to 58,072 in 2011, while in Asia, numbers have more than doubled, from 24,544 in 2007 to 58,540 in 2011.

Staff numbers in Africa are relatively small but growing, from 5,664 in 2007 to 6,602 in 2011 (see Figure 13).

Figure 13: Employee numbers at Volkswagen by geographical region, 2007–11



Source: Volkswagen annual reports

ERM data paints a more negative picture of employment trends for Europe, with job losses clearly outweighing job gains in the 14 cases recorded since 2002. Interestingly, job creation seems to be focused mainly on VW in Slovakia, with minor job gains in Germany, indicating a trend of expanding into lower-wage European countries. The ERM also records two unusual offshoring cases for VW since 2002. Both times (2005 and 2006), jobs were offshored from outside of Germany (Belgium and Poland) back into the country of origin (Germany).

Fiat

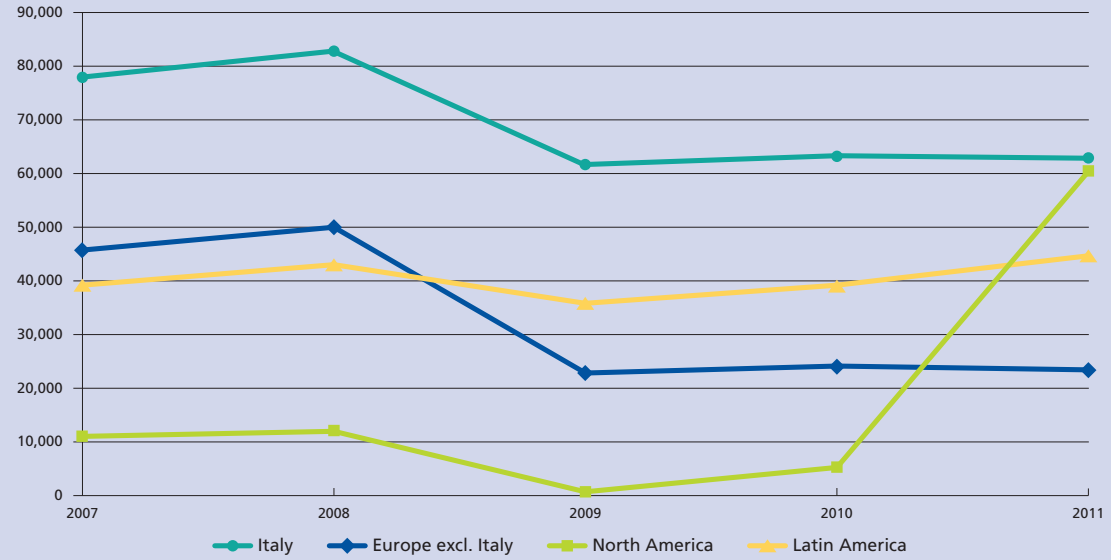
As a third example of European car manufacturing, Italian carmaker Fiat's workforce has remained stable over the past few years, with expansion primarily in North America and Latin America and substantial shrinkage in Italy and Europe. As of 31 December 2011 the company had 197,021 employees, compared with 198,348 at the end of 2008.

Although total numbers have remained rather stable, different regions have seen different employment effects. By region, Fiat continues to employ the largest proportion of its workforce in Italy (62,583 at the end of 2011), although this is down from the level of 82,371 in 2008. Today, the Italian workforce accounts for only around 32% of the global workforce; this share was still 42% in 2008. Similarly, the rest of Europe employed 25% of Fiat's workforce in 2008 (50,159), while share and totals dropped significantly to about 12% in 2011 (23,596).

However, the number of employees in the North America region has increased significantly, from 11,364 in 2007 to 60,336 by 2011. This reflects Fiat's acquisition of Chrysler in 2011, following which, according to Fiat, nearly 45% of the Fiat Group's ongoing revenues are now generated in the NAFTA region.

The next largest group of employees is in the Latin American region (44,668 in 2011), where the workforce has grown from 39,324 at the end of 2007 and now outnumbers workforce levels in Europe excluding Italy (see Figure 14).

Figure 14: Employee numbers at Fiat by geographical region, 2007–11



Note: For North America, the 2010 and 2011 figures include NAFTA countries.

Source: Fiat annual reports

Looking at the ERM, jobs losses clearly outweigh job gains in the 15 Fiat cases recorded since 2002. Restructuring activity is solely recorded for Fiat in Poland and Italy, with Polish cases reporting exclusively job gains, while the picture for Italian plants is more mixed. No offshoring cases beyond the EU have been reported.

Ericsson

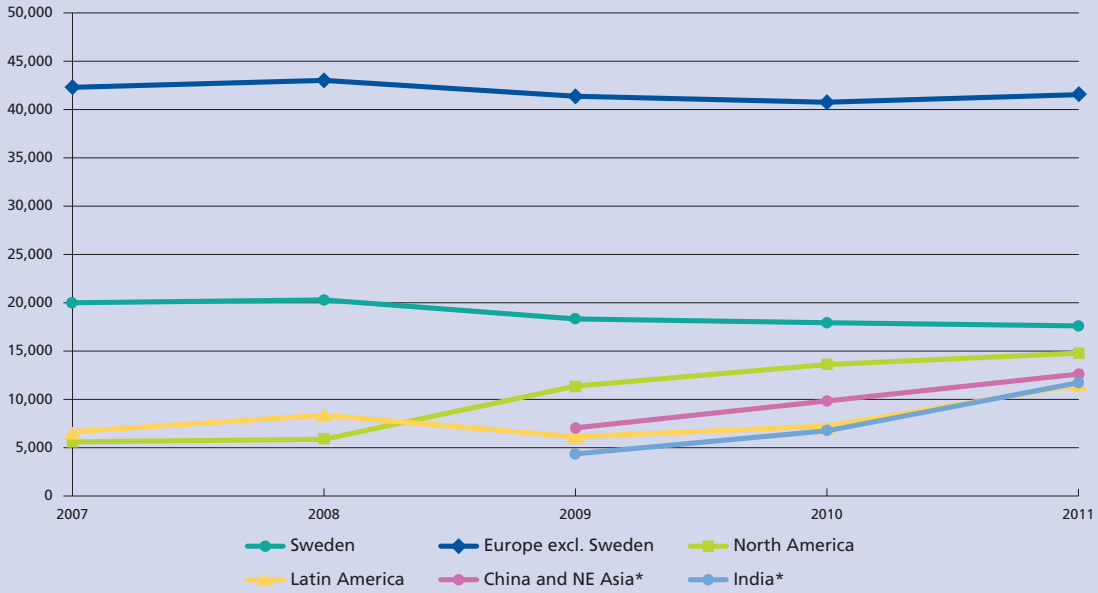
Going beyond European carmakers, other EU manufacturing businesses have seen similar trends. Telecommunications multinational Ericsson, headquartered in Sweden, has grown its workforce significantly over the last 10 years. While the total headcount at the end of 2011 was 104,525, Ericsson employed 90,261 in 2010 and 74,011 in 2007. Falls in employment in the company's home country have been offset by increases in North America, Latin America, China, north-east Asia and India.

By region, Ericsson's employee numbers in Sweden fell from 20,155 in 2008 to 17,500 in 2011 and their share of the total workforce has decreased significantly, from 26% to 17%.

Although numbers in the rest of the EU have remained relatively stable over that period – 43,093 in 2008 compared with 41,596 in 2011 – their share of the total has seen a sharp drop, from 55% to 40% of its global workforce. The growth in employee numbers has therefore come from other regions in which the company operates. Ericsson's employee numbers in North America have risen significantly, from 5,734 in 2008 to 14,801 by 2011. Similarly, employee levels in Latin America rose from 8,247 in 2008 to 11,191 by 2011.

Comparisons of other regions over this time period are difficult due to the way in which the company presents its data. However, according to data relating to 2009–11, the number of employees in China and north-east Asia is rising rapidly, almost doubling from 6,894 in 2009 to 12,567 by 2011. Similarly, employee numbers in India rose sharply over this two-year period, from 4,184 in 2009 to 11,535 by 2011 (see Figure 15).

Figure 15: Employee numbers at Ericcson by geographical region, 2007–11



*Note:** Data not comparable before 2009.

Source: Ericsson annual reports

Looking at the ERM, 35 cases of restructuring have been recorded for Ericsson since 2002. It seems that job losses are clearly dominating Ericsson's European workforce and Sweden in particular, while two cases mention the offshoring of Irish and Swedish jobs to China. Business expansion cases with job creation are mainly related to the eastern European Member States Poland, Romania and Hungary, with limited job gains in Finland.

Nokia

Another European telecommunications multinational, Finnish Nokia, has seen its total workforce explode over the last 10 years. While the company employed 57,716 people in 2001, it had a workforce of 134,171 in 2011.

Similarly to Ericsson, Nokia's home market, Finland, did not profit from this positive development. While in 2001 around 41% of the global workforce (23,653) was employed in Finland, this share dropped to 19% in 2008 (23,478) and 14% in 2011 (18,715). The share of employees in the rest of Europe first rose from around 24% in 2001 (14,045) to around 31% in 2008 (37,714), but dropped to 26% in 2011 (34,737). As seen at Ericsson, the employment growth can be attributed to other regions. Between 2008 and 2011, employment numbers in China rose from 14,099 to 22,082 and the workforce in the Asia-Pacific region increased from 20,359 to 29,611 in the same time period. Latin America also saw growth, with a workforce there increasing from 12,614 (2008) to 15,238 (2011).

The ERM paints a negative picture of the employment effects of Nokia's restructuring in Europe. In the 38 cases recorded to date, job creations were very limited and were almost exclusively reported for Nokia's plant in Romania in 2007 to 2009 (where jobs were later cut) and earlier for Nokia's plants in Finland. Nokia has been frequently criticised for following a strategy to relocate wherever wage costs are cheapest. The ERM cases illustrate this claim: in 2008, a decision was made to relocate 2,300 jobs from the German manufacturing plant of Bochum to Jucu, Romania. In September 2011, the company moved on and the Romanian town of Jucu saw 2,200 jobs go again, as part of a global restructuring plan involving 3,500 redundancies and the move of production activity to Asian plants in China, South Korea, India and Vietnam. While cases before mid-2009 saw some business expansion of Nokia in the EU, more recent restructuring events in Finland, Hungary and worldwide were dominated by offshoring to Asia and the closure of Nokia's facilities in Europe.

Conclusion

Multinational companies are complex organisations that need to keep evolving in order to survive in a competitive and ever-changing business environment. The past two decades have shown an overall trend of MNCs shifting investment within the EU from west to east, both on cost grounds and in order to access new markets and be geographically closer to their clients in these markets. There has also been a trend for MNCs to look further afield, to the Asian markets, both to access faster-growing markets in the context of business expansion, but also to cut costs, especially labour costs. This trend towards investment in eastern European and non-EU countries has raised fears that this may have a detrimental impact on the labour market of western European countries – that jobs are being shifted away from western Europe towards the newer EU Member States and even further afield.

However, this section suggests that this is not necessarily the case. For those companies examined, numbers of jobs in Europe have been flat lining or slightly decreasing. A widespread sell-off of European jobs in favour of an expansion beyond Europe has not been observed. Nonetheless, Europe does represent a decreasing share of the global employment levels in multinationals. Growth is happening elsewhere – both for employment levels and markets as companies expand their investments, especially in emerging markets in South America, India and China.

2 Labour market consequences of job loss and implications for living conditions

Introduction

Despite the crucial part that work plays for economic and social well-being, it is quite striking that there is no EU-wide data that can ascertain how many or which employees lose their job. Furthermore, it is not possible to trace their path back to employment and relate reintegration rates to active labour market or other policies. There are numerous studies at national level that show that job loss has wide-ranging consequences for employees, not only as regards labour market outcomes such as earnings and employment, but also on health and other measures of well-being.[11]

However, international comparisons of job loss and reintegration would be useful for policy-makers at European level in order to better understand the importance of institutions for these key transitions on the labour market. The debate on flexicurity, for example, would benefit greatly from solid compatible evidence on actual job and employment security. The very few existing comparative studies utilise national sources but are limited by country coverage and the capacity to do reliable comparative analysis is constrained by different definitions of job loss, control variables and post-job loss labour market outcome data. Kuhn (2002) is probably the most thorough attempt to date, which compared job loss and re-employment in the 1980s and 1990s. Since Kuhn (2002), national sources have improved considerably and ongoing work at the OECD, which is based on more recent and richer national data, may provide a better basis for international comparative analysis.

This chapter is based on (to our knowledge) the only, and as yet unexploited, single dataset covering all 27 Member States of the European Union. In the second quarter of 2009, Eurobarometer 71.2 (European Commission, 2009) asked a representative sample of around 1,000 people in each country the question, 'Please tell me whether or not each of the following situations has happened to you, as a result of the economic crisis'. One possible response to this question was 'You lost your job'. The interviews were conducted between 25 May and 17 June 2009. 'Lost job due to the economic crisis' is interpreted as meaning that the job was lost due to 'economic reasons' between mid-2008 and the time of the survey.

The full sample analysed in this chapter are all those who responded that they had lost their job or who had a job at the time of the survey. As the Eurobarometer also asks about labour market status at the time of the survey, it thus provides information on who subsequently found a new job. Moreover, the survey also asks about current level and recent change of life satisfaction. Using the information on individual characteristics of the respondents (age, sex, education, family circumstances, etc.) and some information on the type of job lost, it is possible to analyse not only the probability of experiencing job loss and the determinants of subsequent re-employment, but also to compare the life satisfaction of those who did not lose their jobs and those who did. The latter group can also be broken down into those who found a new job, those who retired and those who remained inactive or unemployed.

While the data is unique and useful, it does have its limitations. The country sample sizes are quite small and the definition of job loss is specific to this survey. Nevertheless, this is the first single dataset that captures job loss in the same way throughout the European Union. The EU27-wide sample

[11] There is extensive literature from the US. The early literature such as Podgursky and Swaim (1987), Hammermesh (1987) and Ruhm (1991) is reviewed in Fallick (1996). More recent US research, often based on administrative data, reviewed in von Wachter (2012) consistantly finds substantial and long-lasting negative effects on earnings. European evidence is scarcer. Some of this literature, such as Burda and Mertens (2001) for Germany and Bender et al (2002) for France and Germany, find only small consequences for earnings and employment. Others, such as Huttunen et al (2006) and Eliason and Storrie (2006), find similar results as in the US, i.e. substantial and persistent. The literature generally finds substantial negative health effects of job loss. See, for example, Sullivan and Von Wacheter (2009) for the US and a Swedish study in Eliason and Storrie (2009).

size (employed at the beginning of the recession) amounts to 14,070 individuals, 2,396 (17.3%) of whom lost their job due to the crisis. While the definition of job loss is very specific and may not be compatible with other measures in the research literature, it surely still is the case that there should be significant interest in who lost their jobs at the onset of the Great Recession, who subsequently found a new one and how both job loss and subsequent labour market status impacted on life satisfaction.

This chapter is organised as follows. The next section presents descriptive data on incidence of job displacement by Member State and various individual and job characteristics. It then estimates the probability of displacement The third section examines the probability of re-employment after displacement at EU level. The fourth section examines the association of job loss with self-reported life satisfaction both overall and with respect to post-displacement labour market status.

Displacement

The 'displaced' are defined as those who responded that they lost their job due to the economic crisis. Those 'at risk of displacement' are those who were displaced due to the crisis plus those who were employed at the beginning of the survey but did not report job loss. The displacement rate is defined as *(number displaced)/(number at risk of displacement)*. While the total sample in the Eurobarometer survey was comprised of 14,070 individuals, of whom 2,396 were displaced, this sample is adjusted to eliminate people younger than 18 and those with less than one year tenure in order to better conform with the previous research literature.[12] This reduces the sample to 11,863, of whom 1,671 (i.e. 14.1%) were displaced. The displacement rate among the Member States at the onset of the 2008–09 recession is presented in Table 4.

Table 4: The displacement rate in the 27 Member States, 2008–09

Country	Not displaced	Displaced	Displacement rate
Lithuania	307	116	27.4%
Spain	373	121	24.5%
Latvia	347	108	23.7%
Portugal	365	107	22.7%
Hungary	266	77	22.4%
Ireland	385	110	22.2%
Estonia	335	79	19.1%
Bulgaria	407	77	15.9%
Romania	368	65	15.0%
Poland	285	44	13.4%
Finland	418	62	12.9%
Slovakia	479	67	12.3%
UK	401	53	11.7%
Germany	629	83	11.7%
Slovenia	335	44	11.6%
Malta	134	17	11.3%
Czech Republic	506	63	11.1%
Cyprus	185	22	10.6%
France	397	46	10.4%
Belgium	389	43	10.0%
Austria	523	55	9.5%

[12] Another reason for the exclusion of those with short tenure is that one of the survey questions asks about tenure in current or previous job. For those with short tenure it may have been the case that they were not employed at the start of the economic crisis but subsequently got a job. Strictly speaking, these people were not then at risk of displacement for the same period.

Country	Not displaced	Displaced	Displacement rate
Sweden	430	45	9.5%
Italy	493	51	9.4%
Denmark	394	39	9.0%
Greece	349	32	8.4%
Netherlands	486	32	6.2%
Luxembourg	206	13	5.9%
EU27	10,192	1,671	14.1%

Source: Eurobarometer 71.2 (European Commission, 2009)

The countries with the highest displacement rates were the Baltic countries Latvia and Lithuania as well as Spain, which corresponds roughly with what we know about the increase in unemployment and the decrease in employment rates in the Member States from the Eurostat ELFS data. The Greek figure may appear to be rather low, but unemployment only started to grow there at the end of 2009. All Continental core countries are below the EU27 average and so are the Nordic countries. The Netherlands and Luxembourg (both at 6%) have been the least affected by the crisis in terms of economically motivated redundancies.

Table 5: The displacement rate in the EU by individual and job characteristics, 2008–09

	Not displaced	Displaced	Displacement rate
Sex			
Male	4,938	830	14.4%
Female	5,254	841	13.8%
Age			
19–24 years	472	126	21.1%
25–34 years	2,189	340	13.4%
35–44 years	2,929	414	12.4%
45–54 years	2,992	489	14.0%
55–64 years	1,610	302	15.8%
Foreign background			
Foreign background	1,151	258	18.3%
Local born nationals	9,041	1,413	13.5%
Minority status			
Not minority	9,256	1,409	13.2%
Minority status	936	262	21.9%
Health			
No chronic health issues	9,367	1,416	13.1%
Chronic health issues	825	255	23.6%
Children in the household			
No children	4,720	875	15.6%
Children	5,472	796	12.7%
Cohabitation status			
Couple	8,241	1,255	13.2%
Single	1,951	416	17.6%
Lone Parent			
Not lone parent	9,481	1,534	13.9%
Lone parent	679	133	16.4%

	Not displaced	Displaced	Displacement rate
Highest level of education attained			
Below Upper Secondary	2,383	681	22.2%
Upper secondary + PSNT	4,882	738	13.1%
Tertiary	2,927	252	7.9%
Professional status			
Professionals	2,954	237	7.4%
White collar	4,471	525	10.5%
Skilled blue collar	2,085	595	22.2%
Unskilled blue collar	682	314	31.5%
Tenure with last/current employer			
2 years	1,229	381	23.7%
3 years	978	259	20.9%
4 years	740	119	13.9%
5+ years	7,201	883	10.9%

Note: The results are weighted by population weight, i.e. to take account of country size and using post-survey stratification weights.

Source: Eurobarometer 71.2 (European Commission, 2009)

Table 5 presents the displacement rates by various individual and job characteristics in the EU as a whole. Fourteen per cent of those questioned reported that they had lost their job due to the economic crisis, with a slightly higher rate for men (14.4%) compared to women (13.8%). The displacement rate by age has a U-shaped distribution, with the lowest displacement rate of 12.4% for the 35- to 44-year-olds and the highest rate for the youngest group. (Young males were by far the most exposed age/gender category.) Non-nationals (i.e. themselves or one of parents born abroad) have a 5 percentage point higher displacement rate than others. Those with a chronic illness were appreciably more likely (almost double) to have experienced job loss than others. A subjectively perceived minority status, be it ethnic, religious, sexual or other, is highly associated with displacement.[13] Displacement incidence for respondents with a minority status is appreciably higher than for the others. In addition, education levels exhibit the expected displacement rates, as those with the least education were most likely to experience job loss, while those with the highest level of education were the least likely. The differences in the family variables (being a lone parent, having children in the household and cohabitation) are, at least in part, attributable to age.

Larger differences of displacement rates are found for various categories of the job characteristic variables. The profession variables rank the likelihood of experiencing job loss according to unskilled blue collar (31.5%), skilled blue collar (22.2%), medium and low-skilled white collar (10.5) and, with the lowest displacement probability, skilled white collar (higher professionals and managerial occupations) (7.4%). The tenure variables show that displacement rate falls with longer tenure.

Multivariate analysis allows the examination of the effect of a specific individual or job characteristic on the probability of displacement while holding the variables constant. Logistic regression is an appropriate method when the dependent variable can be interpreted as a probability. Table 6 presents the predicted probability of being displaced for three age groups by individual and job characteristics.

[13] Minority status is asked as follows: 'Where you live, do you consider yourself to be part of any of the following? Please tell me all that apply: An ethnic minority, a religious minority, a sexual minority, a minority in terms of disability … any other.' Being a member of any of them is considered as a minority status.

Table 6: Predicted probability of displacement by individual and job characteristics for three age categories

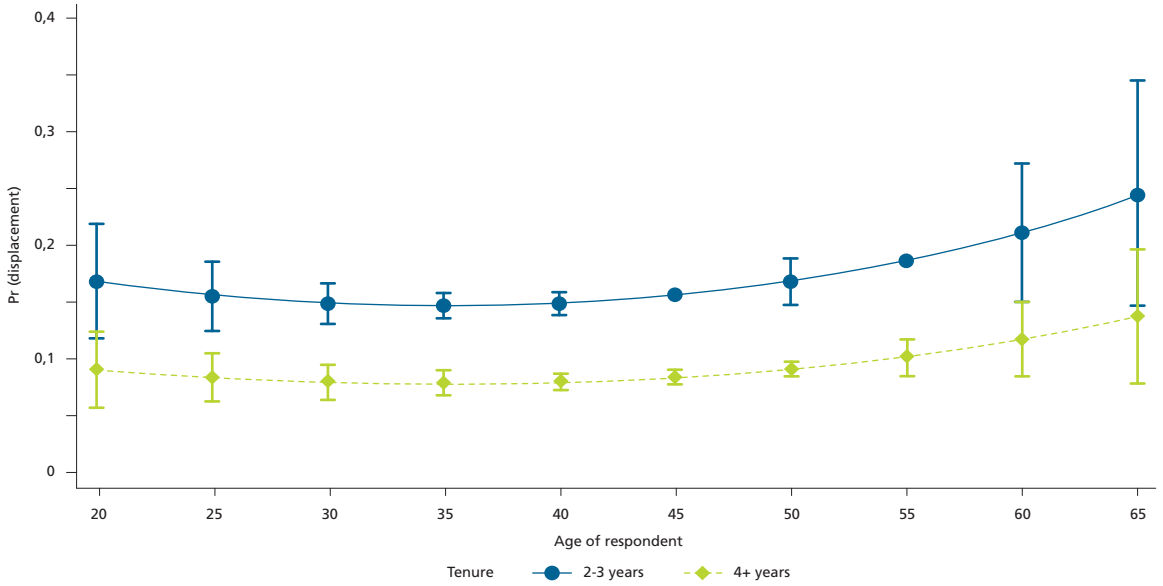
Age	20		40		60	
	Probability	SE	Probability	SE	Probability	SE
Sex						
Man	0.10	0.02	0.09	0.01	0.13	0.02
Woman	0.11	0.02	0.09	0.01	0.14	0.02
Foreign background						
Foreign background	0.14	0.02	0.12	0.01	0.18	0.03
Local born nationals	0.10	0.02	0.09	0.00	0.13	0.02
Minority status						
Not minority	0.10	0.02	0.09	0.00	0.13	0.02
Minority status	0.15	0.03	0.13	0.01	0.18	0.03
Health						
No chronic health issues	0.10	0.02	0.09	0.00	0.13	0.02
Chronic health issues	0.20	0.03	0.18	0.02	0.25	0.03
Children in the household						
No children	0.11	0.02	0.10	0.01	0.14	0.02
Children	0.10	0.02	0.09	0.01	0.13	0.02
Cohabitation status						
Couple	0.10	0.02	0.09	0.00	0.13	0.02
Single	0.11	0.02	0.10	0.01	0.14	0.02
Lone parent						
Not lone parent	0.10	0.02	0.09	0.00	0.13	0.02
Lone parent	0.11	0.02	0.10	0.02	0.15	0.02
Highest level of education attained						
Below upper secondary	0.14	0.03	0.13	0.01	0.18	0.01
Upper secondary + PSNT	0.10	0.02	0.09	0.00	0.13	0.02
Tertiary	0.08	0.01	0.07	0.01	0.10	0.02
Professional status						
Professionals	0.07	0.01	0.06	0.01	0.09	0.01
White collar	0.10	0.02	0.09	0.01	0.12	0.02
Skilled blue collar	0.15	0.02	0.13	0.01	0.19	0.04
Unskilled blue collar	0.23	0.03	0.20	0.02	0.28	0.04
Tenure with last/current employer						
Tenure 2–3 years	0.17	0.03	0.15	0.01	0.21	0.03
Tenure 4+ years	0.09	0.02	0.08	0.00	0.12	0.02

Note: SE = standard error

The probabilities in Table 6 can be understood as follows. The predicted probability of displacement of a 20-year-old man is equal to 0.10, holding all other factors constant at their mean. In comparison, a woman has a probability of 0.11 of being displaced, all else held constant at the mean. The difference is not significant. This probability decreases to 0.09 for both sexes if they are 40 years old and is highest for respondents of both sexes at the age of 60 (0.14). Thus, Table 16 shows that there is no significant difference in the probability of displacement between men and women when account is taken of other individual and job characteristics. This is roughly in line with the

descriptive statistics in Table 5. This correspondence does not hold as well for age, however, as the multivariate results show a higher displacement probability for the old compared to the young. An examination of the tenure results explains this discrepancy. Short tenure workers are much more likely to experience displacement and young workers generally have shorter tenure than older ones. Thus, when controlling for tenure one finds a much smaller impact of youth on displacement probability.[14] Figure 16 plots the relationship between age and tenure with displacement probability.

Figure 16: Predicted probability of displacement by age and tenure in last job



Longer tenure does tend to protect workers from displacement (but not significantly so for the very youngest and the older ages) for all ages. The age profile of displacement is similar for both tenure groups. It declines until the age of 35 and then increases to a maximum for the oldest age group.

Table 6 also shows a significantly higher displacement probability for migrants, minorities and the chronically ill for all age groups. Education is the other individual characteristic with the expected and statistically significant effect. The displacement rates for the family variables (children in the household, cohabitation status and single parenthood) that showed some variation in the descriptive statistics are very similar and exhibit no statistically significant differences in the multivariate model.

For most of the individual characteristic variables, the interpretation of different displacement rates is reasonably straightforward. Groups commonly viewed as disadvantaged have higher displacement probabilities even when controlling for the basic human capital variables such as tenure, profession, education, etc. The job characteristics of profession and tenure were highly significant, and indeed, in the underlying logistic regression model, these two variables accounted for roughly half of the variation in the probability of displacement. It is very striking, for example, that the probability of displacement is three times higher for unskilled blue-collar workers than it is for professionals. That long tenure protects against displacement is well established in the national research literature as well. It is commonly attributed to the acquisition of job-specific capital accumulated during

[14] The labour market for young people in this recession has, of course, been much worse than for older workers. This is mainly due to the fact that they were not able to enter the labour market at all. Moreover, the exclusion of the under-19-year-olds and individuals with low levels of tenure to avoid including churners usually frequent among youth, attenuates the effect of young age on displacement.

long tenure that is of value to the employer and makes such workers less likely to be selected for displacement. Long tenure may also be the manifestation of a good (productive) job match and so is less likely to be broken.

Re-employment

The question on labour market status at the time of the survey allows an examination of the subsequent reintegration rate. Table 7 shows the re-employment rate per country.

Table 7: Re-employment rate of the displaced by country, 2008–09

Country	Did not find a new job	Did find a new job	Re-employment rate
Finland	32	30	48.4%
Malta	10	7	41.2%
Cyprus	13	9	40.9%
Netherlands	19	13	40.6%
Slovakia	41	26	38.8%
Sweden	28	17	37.8%
Denmark	25	14	35.9%
Czech Republic	41	22	34.9%
Germany	55	28	33.7%
UK	36	17	32.1%
Portugal	73	34	31.8%
Luxembourg	9	4	30.8%
France	32	14	30.4%
Estonia	57	22	27.8%
Hungary	56	21	27.3%
Italy	39	12	23.5%
Belgium	33	10	23.3%
Poland	34	10	22.7%
Latvia	85	23	21.3%
Austria	44	11	20.0%
Romania	53	12	18.5%
Ireland	90	20	18.2%
Lithuania	97	19	16.4%
Greece	27	5	15.6%
Bulgaria	65	12	15.6%
Spain	104	17	14.0%
Slovenia	38	6	13.6%
EU	1,236	435	26.0%

The small country sample sizes do not permit reliable comparative country analysis. However, they do appear to correspond somewhat with the state of labour demand in these countries. For example, Germany, the Netherlands and all the Nordic countries are in the top 10 and Ireland, Lithuania, Spain and Greece are in the bottom 10.

Table 8: Re-employment of the displaced by individual and job characteristics, 2008–09

Re-employment	No job found	Found a new job	Re-employment rate
Sex			
Male	620	210	25.3%
Female	616	225	26.8%
Age			
19–24 years	109	17	13.5%
25–34 years	239	101	29.7%
35–44 years	299	115	27.8%
45–54 years	347	142	29.0%
55–64 years	242	60	19.9%
Foreign background			
Foreign background	190	68	26.4%
Local born nationals	1,046	367	26.0%
Minority status			
Not minority	1,032	377	26.8%
Minority status	204	58	22.1%
Health			
No chronic health issues	1,038	378	26.7%
Chronic health issues	198	57	22.4%
Children in the household			
No children	666	209	23.9%
Children	570	226	28.4%
Cohabitation status			
Couple	916	339	27.0%
Single	320	96	23.1%
Lone parent			
Not lone parent	1,130	404	26.3%
Lone parent	103	30	22.6%
Highest level of education attained			
Below upper secondary	536	145	21.3%
Upper secondary + PSNT	540	198	26.8%
Tertiary	160	92	36.5%
Professional status			
Professionals	147	90	38.0%
White collar	357	168	32.0%
Skilled blue collar	468	127	21.3%
Unskilled blue collar	264	50	15.9%
Tenure with last/current employer			
2 years	279	102	26.8%
3 years	191	68	26.3%
4 years	96	23	19.3%
5+ years	648	235	26.6%

Table 8 presents the re-employment rate for the European Union by various individual and (previous) job characteristics. The average reemployment rate is 26%. There are only very marginal differences between men and women. Re-employment rates are lower for the youngest and oldest age category. Belonging to a minority group or having poor health are associated with low re-employment probabilities. The better-educated are more likely to find a new job and the professional classes are appreciably more likely to find a new job than unskilled blue collar workers. Short tenure workers have higher re-employment rates.

Table 9: Predicted probability of re-employment by individual and job characteristics for three age categories

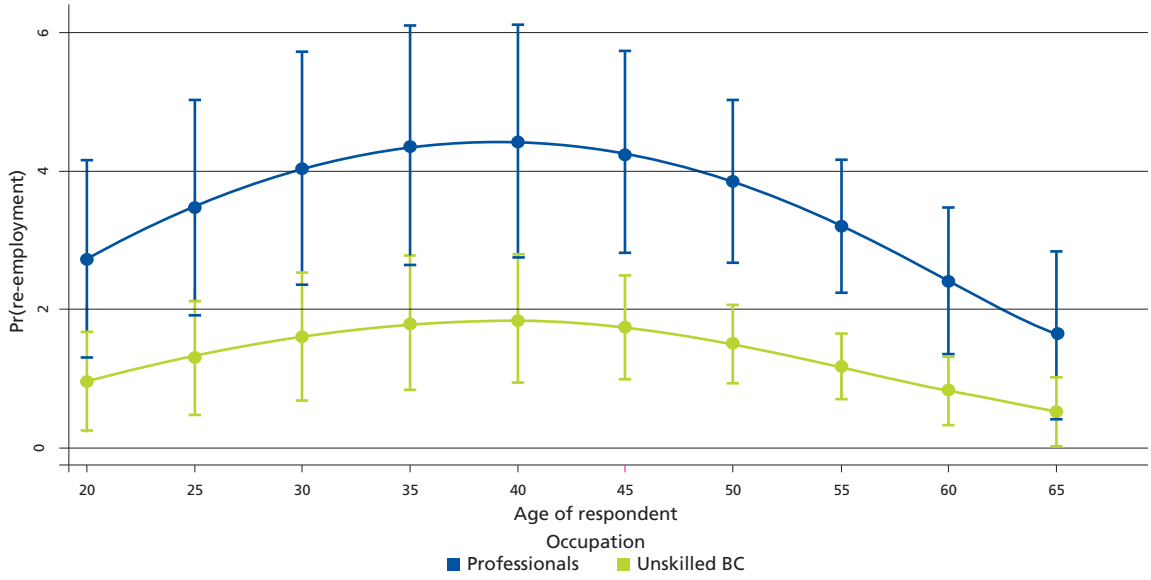
Age	20		40		60	
	Probability	SE	Probability	SE	Probability	SE
Sex						
Male	0.15	0.03	0.27	0.03	0.13	0.04
Female	0.17	0.05	0.31	0.04	0.15	0.04
Foreign background						
Foreign background	0.14	0.03	0.26	0.05	0.12	0.04
Local born nationals	0.16	0.04	0.30	0.02	0.14	0.04
Minority status						
Not minority	0.17	0.04	0.30	0.03	0.15	0.04
Minority status	0.12	0.05	0.23	0.05	0.10	0.05
Health						
No chronic health issues	0.17	0.04	0.30	0.03	0.15	0.04
Chronic health issues	0.13	0.03	0.24	0.03	0.11	0.03
Children in the household						
No children	0.16	0.04	0.29	0.04	0.14	0.03
Children	0.17	0.04	0.30	0.02	0.14	0.05
Cohabitation status						
Couple	0.16	0.04	0.28	0.04	0.14	0.03
Single	0.17	0.05	0.31	0.03	0.15	0.07
Lone parent						
Not lone parent	0.16	0.04	0.29	0.03	0.14	0.04
Lone parent	0.15	0.04	0.27	0.03	0.13	0.05
Recent training						
No training	0.16	0.04	0.28	0.03	0.14	0.04
Had training	0.18	0.05	0.32	0.02	0.16	0.06
Highest level of education attained						
Below upper secondary	0.16	0.04	0.28	0.04	0.14	0.03
Upper secondary + PSNT	0.16	0.04	0.29	0.02	0.14	0.05
Tertiary	0.19	0.03	0.33	0.05	0.16	0.07
Professional status						
Professionals	0.24	0.05	0.41	0.07	0.21	0.06
White collar	0.17	0.04	0.31	0.03	0.15	0.05
Skilled blue collar	0.15	0.05	0.28	0.04	0.13	0.04
Unskilled blue collar	0.12	0.03	0.23	0.03	0.10	0.04
Tenure with last/current employer						
Tenure 2–3 years	0.20	0.04	0.35	0.03	0.18	0.07
Tenure 4+ years	0.14	0.04	0.26	0.04	0.12	0.03

SE = standard error

As discussed regarding the displacement probability above, multivariate methods are required to disentangle the independent impact of specific variables on the re-employment rate. Table 9 presents predicted probabilities generated from a logit regression model. It shows the highest re-employment probability for the middle age group (around 40 years old). After controlling for tenure, the age estimates indicate a slightly lower re-employment probability for younger compared to older employees. The other significant individual characteristics – bad health and belonging to a minority status – are the largest effects on the re-employment probability. And as with the probability of displacement estimates, the two job characteristics variables explain much of the variation in the logit regression and long tenured workers are less likely to find a new job. This is a common finding in the national literature. It is commonly interpreted as indicating that the rewards for long tenure as regards wages and working conditions in the internal labour market are difficult to attain in the external labour market and thus imply significant frictional unemployment.

The profession variables are highly significant. This is explored in more detail in Figure 17 which shows the association between re-employment and age, controlling for professions. The highest re-employment probability is found for prime age workers in higher professional or managerial occupations. The re-employment probability for this group declines after the age of 40. Before the age of 40, re-employment probabilities are not significantly different between different types of professions. It is only after the age of 40 that re-employment probabilities are significantly higher for high-level professionals and managers than for unskilled blue collar workers until the age of mandatory retirement.

Figure 17: Re-employment predicted by age and professional background for professionals and unskilled blue collar workers



Displacement, re-employment and life satisfaction

The Eurobarometer data also permits an analysis of the impact of displacement on life satisfaction. The questions used in this analysis were:

- On the whole, how satisfied or not are you with the life you lead? Are you very, fairly, not very or not at all satisfied? (This variable is measured on a Likert scale which is summed and normalised with mean 0.)
- Compared with five years ago, would you say things have improved, gotten worse or stayed the same when it comes to your life in general? (The situation got worse variable is coded as a dichotomous variable.)

Table 10: Life situation (level and change) by displacement and subsequent labour market status

	Currently very satisfied	Situation became worse in last five years
Employed – not displaced	24.8%	25.7%
Displaced of which	12.0%	66.5%
Displaced: Employed	18.4%	46.9%
Displaced: Unemployed or inactive	8.9%	70.8%
Displaced: Retired	8.4%	57.9%
Displaced: Other	17.6%	51.1%
Total	23.0%	30.9%

Source: Eurobarometer 71.2 (European Commission, 2009)

Table 10 shows that those who were not displaced (i.e. were employed at the start of the recession and at the time of the interview), both as regards level and change, score the highest in terms of the two life satisfaction variables: 25% among those not displaced stated that they were 'currently very satisfied', compared to 12% of the displaced. It is likely that recent displacement may be more directly related to a recent change in life situation, so one might expect this variable to better pick up the impact of the displacement event. As 67% of the displaced state that their situation became worse compared to 26% of the non-displaced, this indicates that this is the case. It is also very interesting to observe that both satisfaction variables vary appreciably by subsequent labour market status. This is clearest in the change in situation in the last five years variable, where only 47% of the displaced who subsequently became re-employed report a deterioration, compared to 71% of those who were unemployed or similarly inactive. The other categories are in between these two extremes. This highlights the importance of policy efforts to promote re-employment, as a new job does soften the impact of displacement and leads to higher reported life satisfaction. It is also highly interesting to note that those who became retired reported a much lower rate of deterioration compared to those who were jobless.

Tables 11 and 12 present predicted values on the satisfaction scores and the probability that their situation has deteriorated, respectively, based on regressions using the same individual and job characteristics as before. Table 12 shows the results for the deterioration of life and general variable.

Table 11: Predicted current life satisfaction score by displacement and subsequent labour market status – ordinary least squares regression

Current life satisfaction	Not displaced		Displaced, employed, carers, retired, students		Displaced, jobless	
	Probability	SE	Probability	SE	Probability	SE
Sex						
Male	0.07	0.01	–0.21	0.09	–0.54	0.09
Female	0.09	0.01	–0.13	0.07	–0.49	0.07
Foreign background						
Foreign background	0.09	0.04	–0.16	0.06	–0.51	0.07
Local born nationals	0.08	0.01	–0.17	0.05	–0.52	0.07
Minority status						
Not minority	0.09	0.01	–0.16	0.05	–0.51	0.07
Minority status	0.00	0.05	–0.26	0.04	–0.60	0.08
Health						
No chronic health issues	0.10	0.01	–0.16	0.05	–0.50	0.07
Chronic health issues	–0.12	0.03	–0.38	0.05	–0.72	0.08
Children in the household						
No children	0.09	0.02	–0.24	0.08	–0.55	0.06
Children	0.07	0.02	–0.11	0.06	–0.48	0.09
Cohabitation status						
Couple	0.11	0.01	–0.15	0.05	–0.49	0.07
Single	–0.02	0.03	–0.27	0.06	–0.62	0.07
Lone parent						
Not lone parent	0.09	0.01	–0.16	0.05	–0.50	0.06
Lone parent	–0.11	0.04	–0.37	0.07	–0.71	0.09
Recent training						
No training	0.06	0.01	–0.19	0.05	–0.54	0.07
Had training	0.12	0.02	–0.13	0.05	–0.47	0.06
Highest level of education attained						
Below upper secondary	0.04	0.02	–0.22	0.05	–0.56	0.06
Upper secondary + PSNT	0.06	0.01	–0.19	0.05	–0.54	0.06
Tertiary	0.17	0.01	–0.09	0.05	–0.43	0.07
Professional status						
Professionals	0.19	0.03	–0.06	0.05	–0.40	0.05
White collar	0.08	0.02	–0.17	0.05	–0.52	0.07
Skilled blue collar	0.01	0.02	–0.24	0.05	–0.58	0.08
Unskilled blue collar	–0.10	0.05	–0.35	0.06	–0.69	0.10

Both sets of estimates show that the non-displaced fare much better than the displaced and that those displaced who have a job or are retired fare better than those who are jobless. This was also the picture painted by the descriptives in Table 10. This holds for each of the various job or individual characteristics. The impact of displacement on change of life situation appears to be very strong and the displacement event dominates the scores for the individual and job characteristics. For example, among the non-displaced, the highest predicted probability of reporting a worse life situation is for the chronically ill, at 0.37. While this probability for the jobless chronically ill increases to 0.78, the

predicted probability for every single job and individual characteristic among the jobless displaced is appreciably higher than the 0.37 for the non-displaced chronically ill.

Table 12: Predicted probability that life in general has got worse in the last five years by displacement and subsequent labour market status – logit regression

Worse life situation	Not displaced		Displaced, employed, carers, retired, students		Displaced, jobless	
	Probability	SE	Probability	SE	Probability	SE
Sex						
Male	0.25	0.01	0.46	0.08	0.70	0.05
Female	0.27	0.01	0.50	0.04	0.67	0.03
Foreign background						
Foreign background	0.27	0.01	0.50	0.04	0.70	0.03
Local born nationals	0.26	0.01	0.48	0.04	0.68	0.03
Minority status						
Not minority	0.25	0.01	0.47	0.04	0.68	0.03
Minority status	0.31	0.02	0.55	0.04	0.74	0.04
Health						
No chronic health issues	0.25	0.01	0.47	0.04	0.68	0.03
Chronic health issues	0.37	0.01	0.61	0.03	0.78	0.03
Children in the household						
No children	0.25	0.02	0.47	0.04	0.67	0.04
Children	0.27	0.02	0.49	0.05	0.70	0.03
Cohabitation status						
Couple	0.24	0.01	0.46	0.04	0.67	0.04
Single	0.31	0.03	0.55	0.05	0.74	0.03
Lone parent						
Not lone parent	0.25	0.01	0.47	0.04	0.68	0.03
Lone parent	0.34	0.04	0.58	0.05	0.77	0.05
Recent training						
No training	0.28	0.01	0.51	0.04	0.71	0.03
Had training	0.22	0.01	0.43	0.04	0.64	0.04
Highest level of education attained						
Below upper secondary	0.29	0.01	0.52	0.04	0.72	0.03
Upper secondary + PSNT	0.27	0.01	0.50	0.04	0.70	0.03
Tertiary	0.20	0.02	0.41	0.04	0.62	0.05
Professional status						
Professionals	0.21	0.01	0.42	0.06	0.73	0.07
White collar	0.25	0.01	0.55	0.05	0.64	0.04
Skilled blue collar	0.30	0.02	0.45	0.06	0.69	0.03
Unskilled blue collar	0.33	0.02	0.40	0.07	0.75	0.04

Note: All regressions are weighted by survey weights, countries considered as PSU.

Conclusion

This chapter was based on a Eurobarometer survey in 2009 that included a question on job loss since the start of the recession. It is the first dataset that asks the same question on job loss in all EU Member States. Sample size, however, limits analysis only to the EU aggregate level.

Groups commonly regarded as disadvantaged, such as those with serious health problems, belonging to a minority or of foreign background, are associated with a high risk of losing their job and a low chance of getting a new one. There is a similar association between these probabilities and education level, as those with high education are least likely to be displaced and most likely to get a new job. The same applies for occupational status. Unskilled blue collar workers are the most likely to be displaced and to have the lowest re-employment rate. The association of these probabilities with the other higher-status occupational groups is also very strong. Thus, one important finding of this chapter is that those with high displacement probability are also those with a low re-employment probability. Furthermore, these are people with a weak position on the labour market in terms of occupational status, minority status, foreign background, short tenure, low education and bad health.

The results have relevance for the flexicurity debate. The external flexicurity model envisages easy firing but in turn easy rehiring. The results here suggest that many of the groups of employees that are most likely to be fired are those that are least likely to be subsequently hired. This suggests that at the onset of the recession and in average throughout the EU, flexicurity was not sufficiently developed to correct the regressive distributional consequences of job loss.

One exception to this rule of high displacement probability and low re-employment probability is that while long tenure protects against displacement, it is also associated with low re-employment probability.

The probability of displacement is affected to a relatively low extent by the many available individual worker characteristic variables. The two job-related characteristics of profession and tenure explain most of the variation in displacement probability. While the country level analysis is severely limited by country sample size, the data suggests that the state of the labour market is of paramount importance for both displacement and re-employment.

Perhaps the most original and interesting result of this chapter is that various measures of life satisfaction (current level and recent change) are strongly and negatively associated with displacement. However, those who are displaced and find a new job are significantly better off than those who remain jobless. This reinforces the importance of policy efforts to promote re-employment.

3 Restructuring: Working conditions for 'stayers'

Introduction

Restructuring occurs in all organisations and firms as they respond to changed market or financial circumstances, adopt new technologies and serve new customers or clients. In this broad sense, restructuring is a synonym for change management and is commonplace in structures of production in all modern societies. Some argue that contemporary capitalism, especially in the latest phase of globalisation, has led to a greater restructuring intensity and an establishment of workplace restructuring as a permanent, ongoing dimension of work organisation rather than an occasional or periodic phenomenon. If this is the case, there are likely to be many contributing factors – the quickening pace of technological change, the shift of developed economies from an industrial to a knowledge- and service-based economy, the speed of dissemination of new knowledge, ever-integrating and expanding global capital and labour markets and supply chains, and new modes of production and management ('just in time' and lean production) and of financial and corporate governance (e.g. private equity). Each of these factors require firms and organisations to be increasingly adaptive.

In addition to structural vectors of change, our societies also face the challenges that arise in the aftermath of the 2008–09 recession. Recessions in particular are times of heightened restructuring activity. The net employment decline of over 5 million jobs at the EU27 level attests to the severity of the employment impact of the Great Recession. Over 10% of European manufacturing and construction sector employment was lost in less than two years. Four years later, employment levels have failed to recover to pre-recession levels, growth remains subpar and sovereign debt problems and efforts to resolve them are shifting the locus of restructuring from the private to the public sector.

Organisational restructuring often involves employment gains or losses. There is extensive research on the labour market consequences at individual level of involuntary job loss arising from a restructuring event (for a review of the literature, see von Wachter, 2012). These consequences include both immediate spells of unemployment and loss of wage income as well as longer-term 'scarring' effects in terms of discontinuous labour market attachment and cumulative earnings losses over the life-work course. The abrupt and unanticipated nature of many restructuring events can sharpen the consequences for those workers affected. These impacts are not restricted to labour market status or earnings, but also extend to health (Eliason and Storrie, 2009a, 2009b) and psychological well-being (as evidenced by reduced self-esteem, reduced motivation, depression), linked in many cases to the social disconnectedness or exclusion that result from job loss.

In this chapter we take advantage of an existing cross-national data source – Eurofound's Fifth European Working Conditions Survey (henceforward 5EWCS) – to focus on the workers who remain at their workplace after restructuring, the restructuring 'survivors' or 'stayers' (Wiezer et al, 2011). The inclusion of a new restructuring-related question in the latest 2010 wave of the survey allows us to perform the analysis for the first time on an EU-wide comparable dataset. We will also refer to another cross-national data source – the European Social Survey wave 5 (henceforward 5ESS), whose 2010 wave included related questions on downsizing/employment shifts at establishment level as well as some similar questions on working environment outcomes. Findings from this other representative cross-national survey will serve as a useful check for the findings derived from the 5EWCS.

In principle, restructuring 'survivors' or 'stayers' (Wiezer et al, 2011) are the lucky ones who have avoided the fate of their former colleagues. They do not face the disruption of involuntary job loss

and they continue to work in the same organisation. But what are the consequences for working conditions in restructured companies? In cases of job loss, does a similar workload fall on the shoulders of a reduced group of workers with consequent work intensification? If so, is this reflected in higher levels of stress, burnout, musculoskeletal disorders or other work-related health pathologies? Are restructured organisations more likely to offer training and other development possibilities as reconfiguration of work tasks necessitates upskilling? Do changes in work organisation lead to a higher share of teamwork? Does restructuring impact on employees' sense of commitment to or belonging to an organisation? Do workers in restructured organisations enjoy higher levels of autonomy or control over their work, assuming that the jobs that have been shed may tend to be lower-skilled and more routine and that those that remain require greater initiative and higher skill levels? Or does the standardisation of work processes that may result from restructuring imply a loss of individual autonomy?

These questions are not just relevant for the health and wellbeing of individual workers. As the success of a restructuring is largely dependent on the effective agency of those remaining in the workplace, they also go some way to determining whether the business objectives of restructuring are likely to be satisfactorily achieved.

The following section briefly outlines the European policy background and introduces some of the findings of recent relevant research. The third section summarises some relevant recent European research and sets out research questions to be tested. The fourth section describes the data and discusses some potential shortcomings of the core variable on restructuring in the 5EWCS used for much of the analysis. The fifth section summarises the results before a concluding section highlights the main findings.

Policy background

In 2012, both the European Commission and the European Parliament have addressed or are addressing the consequences of restructuring for employees. On the 17th of January 2012, the European Commission published a Green Paper entitled *Restructuring and anticipation of change: What lessons from recent experience?* The outcome of the consultation process has not yet been presented by the European Commission. The European Parliament is expected to vote in late 2012 on a legislative initiative report 'Information and consultation of workers, anticipation and management of restructuring processes' which, if adopted, it would task the European Commission to come forward with a proposal for a draft Directive within three months under the new powers granted by the Treaty of Lisbon.

The main subject of the Commission Green Paper is 'company restructuring and its social consequences'. The paper emphasises the twin challenges of ensuring the 'adaptability of businesses and employability of workers' in order to recover from the crisis and to respond to the internationalisation of world production as well as major demographic and technological changes. This will involve 'job transformation (in terms of new tasks, new skill profiles and new working arrangements' as well as job creation and destruction.

The Green Paper notes the 'social and health effects of employment insecurity, adaptation, loss of employment, and long-term unemployment' but also draw attention to health consequences of restructuring in a broader sense encompassing both job losers and stayers:

> *It has been shown that, through its human and psychological consequences, poorly managed restructuring can have a significant negative long term impact on the human resources of companies, thereby weakening this key resource for competitiveness. Companies and social partners from some sectors undergoing particularly strong change have therefore agreed on guidelines to manage mental health issues at workplaces.*

The emphasis on mental health and psychological wellbeing in the wake of restructuring is not misplaced, as survey evidence from the remainder of this chapter bears out. According to the Commission, the results of the Green Paper consultation will feed into 'the revived flexicurity agenda... with a view to steering a renewed debate at EU level on a possible approach to and framework for restructuring'.

In its response to the Green Paper, the European Trade Union Confederation (ETUC) was critical of both form and content. It lamented its lack of ambition, its lack of concrete proposals to tackle 'the ever more urgent situation regarding restructuring in Europe' and its emphasis on good practice dissemination rather than EU legislative action in the form of a directive on the anticipation and management of change and restructuring. ETUC also drew attention to recent research in EU-funded projects such as HIRES and MIRE, highlighting the linkage between restructuring and health problems.

BusinessEurope, on the other hand, favoured local rather than European solutions and indicated that existing EU directives on European Works Councils, information and consultation, transfer of undertakings and collective redundancies constituted a 'comprehensive and sufficient legal framework' for restructuring. 'Social consequences of restructuring, if they occur, are managed locally. Employers and employees at company level are best placed to discuss and negotiate effective solutions.'

The European Parliament legislative initiative report, currently under discussion at the European Parliament, includes a detailed proposal for a Directive with measures to promote socially responsible management of restructuring, including recognition of employees' rights to 'appropriate training' and counselling for employees affected by restructuring, both leavers and stayers.

Employers in the EU have a duty of care to safeguard the health of their employees under longstanding provisions of the EU health and safety at work directive (EU/89/931). Although there is no explicit reference to restructuring in the text of the directive, the employers' obligations extend to 'developing a coherent overall prevention policy which covers technology, organization of work, working conditions, social relationships and the influence of factors related to the working environment'. To the extent that the above work dimensions are themselves affected by restructuring, when restructuring, employers ought to be aware of and make provision for potential negative health impacts for those remaining on the payroll.

European Commission DG-EMP circulated a questionnaire to national authorities prior to the Green Paper regarding the legal framework for restructuring in place at national level. One of the questions related to monitoring and legal provisions regarding the health impacts of restructuring. In practice, only one Member State – Sweden – indicated that it had provisions of this type.

> *According to [Swedish national] provisions employers shall assess whether any planned restructuring may entail risks of ill-health (including psycho-social health) or accidents which may need to be remedied. Both the health of redundant employees and those staying in the company shall be monitored in accordance with the provisions. The risk assessment shall be documented in writing and indicate which risks are present and whether or not*

> *they are serious. The employer is obliged to carry out follow-ups of the performed risk assessment. The employer shall give the employees, trade unions and safety delegates the possibility of participating in the systematic work environment management (including the above mentioned assessments in connection to the restructuring process).*

The emphasis on risk assessment and preventative measures to safeguard employee health reflects that of the existing EU framework directive. The question remains whether the 1989 directive adequately addresses employers' duty of care to employees following restructuring.

Recent European research

There is a significant body of recent European research on the impacts of restructuring on workers' health that can help to frame research questions to be tested using the 5EWCS data.

The HIRES project funded by the European Commission DG-EMP reviewed literature on the health impacts of restructuring with a view to developing recommendations for policymakers in what it described as 'a widely neglected area of research, intervention and public concern'. One conclusion of the HIRES overview (Kieselbach, 2009) is that 'restructuring can have a significant detrimental effect on the health of employees who are affected, including the so-called survivors of restructuring' and that the negative effects of restructuring for survivors generally outweigh the positive ones, notably via a worsening of the psychosocial work environment.

The starting observation of Westgaard and Winkel's (2011) systematic review of the health impacts related to 'production system rationalisations' is that musculoskeletal and mental disorders are a major cause of sick leave (accounting, for example, for 60% of certified long-term (> 90 days) work absences in Sweden), that these disorders are substantially work related in many cases and that workplace ergonomic interventions have had little discernible effect in 'combatting [this] serious societal problem'. Their hypothesis is that there is an 'elephant in the room' in the form of 'production system rationalisation' and that this has a dominant 'negative impact on risk factors and health', i.e. its negative impact 'drowns out' any positive impacts of occupational health interventions.

In their meta-analysis, they differentiate between five different types of rationalisation: downsizing, restructuring, lean practices, parallel vs. serial production and high-performance work systems. Of these, the first two are of most relevance to our analysis and account for over 60% of the individual studies identified (101 of 162). As the authors indicate, the distinction was in many cases 'a borderline decision' for some studies. The determining factor was whether quantitative information on job loss was reported or not; where it was, the case was considered 'downsizing', and where it was not, the case was considered 'restructuring'. In practice, 'restructuring' serves as the most non-specific, catch-all category in their typology and so is most readily comparable with the concept of restructuring we will operationalise using the 5EWCS.

Westgaard and Winkel's review ends up documenting 'mainly negative effects of rationalisation on musculoskeletal and mental health and the corresponding risk factors' and find that their 'potential to cause health problems is large'. Nonetheless, they conclude that 'performance is a prerequisite for the survival of organisations, making rationalizations a continuous and all-embracing process'. Restructuring is a necessary and unavoidable part of work life. Their main policy- (and practitioner-) relevant conclusions relate to the necessity of adapting occupational health interventions to meet the challenges posed by permanent organisational restructuring. They conclude that 'sustainable

production systems' require workplace health interventions that operate at the system level rather than traditional ergonomic interventions that target the individual worker.

Most forms of restructuring – crisis-based or not – have as a declared objective the enhancement of organisational performance and efficiency. A commonly identified trend of increasing work intensification (Burchell et al, 2002) is often explicitly associated with the increased demands on firms arising from increased competition. The pressures on firms to adapt to external market conditions end up channelling into increased pressures on individual workers. This may, for example, take the form of work reorganisation intended to minimise redundancy or slack and maximise measurable effort. Where personnel reductions are also involved, a further potential vector of intensification is added with the redistribution of redundant staff's tasks.

New public management style reforms can be considered the extension of these rationalisation tendencies into public services. These tend to emphasise market mechanisms and privatisation as conduits for public sector restructuring. Green (2001), citing WERS data, shows that work intensification was greatest in the UK in the 1980s in manufacturing but greater in the public sector in the 1990s. The part-privatisation of large state-owned organisations such as France Telecom and La Poste has been an important dimension of a national debate on work intensification in France in recent years. In 2008–09 there were over 30 suicides of France Telecom staff, many of them attributed to changes in work organisation in the wake of a major restructuring that began in 2006 (Chrysafis, 2011).

Downsizing – restructuring with job losses – is particularly associated with negative health outcomes. In Finnish research, it has been associated with increased rates of cardiovascular mortality (Vahtera et al, 2004) and (psychoactive) drug prescriptions for survivors. Downsizing is also associated with increased reporting of musculoskeletal disorders, especially among older workers, can serve to uncover and worsen existing health problems and was associated with a doubling in the rate of disability pensions among employees who kept their jobs. As well as higher levels of stress-related absenteeism, downsizing may also lead to an increase in sickness 'presenteeism' – where workers continue to work despite being sick – associated with sharpened fear of future job losses.

Workplace bullying may also pose additional threats in restructured workplaces. By their nature, restructurings involve coercive change and often reduced job security. Such circumstances – stressful in themselves – may also provide opportunities for the misuse of organisational power, especially by managers over subordinates. An increased incidence of bullying or harassment could therefore be one possible second-order effect of restructuring. Regardless of manager/subordinate relations, decisions about who are retained and who leave in restructurings involving involuntary job losses are likely to be divisive in character and may be associated with negative psychosocial work environment outcomes (Einarsen et al, 2010).

The focus thus far has mainly been on the negative consequences of restructuring for those who remain in the workplace. But restructuring is not of itself negative. It is one important component of the economic dynamism that has driven increases in living standards over recent generations. Ultimately, as consumers and citizens, many people benefit from restructuring even if the traumas of involuntary job losses in particular are more obviously disruptive at an individual worker or workplace level.

If we take restructuring in its more customary employment-negative meaning, even then restructuring may have positive dimensions. In most cases, improvements in organisational efficiency or performance are a principal employer motivation for undertaking restructuring. Restructuring may lead to improvements in collective productivity as lower-quality and less productive jobs give way to

better-quality jobs and this shift in the composition of employment may have benefits for restructuring 'stayers'. In more extreme restructuring cases, survival of the firm may be at stake. Finally, in some cases the alternative to restructuring may be firm bankruptcy or closure and even greater job losses.

To take account of some of the potential quality of work and work organisational outcomes that may be associated with restructuring, we refer to the case study findings in Di Nunzio et al (2009). The source material for their analysis was 58 organisational case studies in five sectors (textiles, food, IT, public administration, and services of general interest (post and rail)) across 14 countries as well as 33 occupational case studies. While they identify many of the potential psychosocial health risks already discussed above, they also catalogue positive outcomes by systematically outlining 'new possibilities' as well as 'new problems' in the five sectors covered by their case studies.

New possibilities vary from sector to sector, particularly in relation to occupational profile and skill level, but the following summarises some of the positive changes to working conditions highlighted in the restructuring case examples:

- skills upgrading and specialisation;
- greater task diversity, job enrichment;
- more flexibility of working time;
- bureaucratic workload reduced by introduction of new technologies;
- more balanced workload within organisation;
- better internal communication and knowledge-sharing;
- more teamwork.

However, restructuring impacts quite differently depending on a worker's place on the 'value chain'. Positive consequences of restructuring tend to accrue to those with high-skill profiles, while negative consequences are more likely for those with lower-skill profiles. For example, standardisation of work tasks tends to lead to lower levels of job control, autonomy or opportunities for creative work intervention for production workers. At the same time, it may simplify managerial or supervisory responsibilities, freeing up time and energies for less mundane and more strategic activities. For higher-skilled workers, restructuring may crystallise new opportunities for career advancement or skills advancement while undermining job security for lower-skilled workers. Jobs may become more meaningful and enriching after restructuring, but primarily for workers whose jobs were already cognitively rich, varied and satisfying in the first place. And numerically, the types of jobs retained and shed during restructuring tend to vary by skill profile and these differential impacts on job security tend to favour higher-skilled workers.

The authors confirm that work intensification is a commonly reported trend across each of the sectors covered. Increased specialisation and greater skills demands (not always met by increased training provision) also co-exist with increased task variety, two trends that in appearance at least go in opposite directions. They find that intensification of work is associated with greater 'individualisation of responsibility' for work tasks and targets, even if work is increasingly organised in teams. Finally, in all sectors work is increasingly characterised by the high frequency of organisational change, with consequences generally framed negatively: increased uncertainty and demands and decreased influence over work and social support.

In summary, recent research provides evidence of negative health impacts of restructuring for survivors arising from higher physical and psychological work demands, work intensification, anxiety regarding future job losses as well as stress symptoms. These findings are consistent with a body of earlier work. Different positive moderators of the negative health impacts of restructuring are identified, including voice/consultation/representation of workers as well as clarity of communication and management decision-making in the restructuring process. To the extent that work organisation is transformed by restructuring processes, 'stayers' or 'survivors' may benefit from more extensive training possibilities, greater autonomy, increased responsibilities and career advancement possibilities, though the latter benefits are more likely to accrue to higher-skilled workers.

Despite the different approaches of the above research, there are a number of common findings that can serve as orientation for the empirical analysis of the 5EWCS. From these findings we can derive some hypotheses to guide our own approach. .For example, employees in restructured organisations are more likely to report the following.

Work organisation features

- work intensification;
- greater external constraints on pace of work;
- increased/decreased levels of job autonomy/control as well as influence over decisions affecting work;
- greater task variety or more specialisation;
- working in teams;
- greater access to training.

Employment relation features

- greater job insecurity.

Health risks

- perceptions of high work-health risk;
- higher levels of psychosocial risk exposures;
- higher levels of work-related musculoskeletal (physical) exposure.

Health outcomes

- higher general negative health indicators, including absenteeism/presenteeism;
- higher self-reported stress;
- higher specific negative health outcomes, both of a psychosocial nature and a physical nature.

Overview of data used

In the main analysis that follows, we use data from the 5EWCS dataset focusing on EU27 Member States. For some outcomes, we have been able to retest our hypotheses using the 2010 ESS survey data (for 20 EU Member States only), given some overlap in the thematic coverage of the two surveys.

For the 5EWCS analysis we restrict our focus to employees with three or more years of tenure in their current jobs. The latter exclusion is based on the timeframe of three years in our core variable:

> *Q15b: During the last three years have the following changes occurred at your current work place which affected the immediate working environment:*
>
> *B: Substantial restructuring or reorganisation was carried out.*

Our rationale is that employees with less tenure are likely to be less aware of any 'substantial restructuring or reorganisation' that may have predated their employment at the workplace, leading to a higher share of item-response error. We carry out our main descriptive analysis using this subsample (n = 21,723), primarily at EU27 level, as small samples at Member State level preclude a more cross-country comparative approach.

As there is a significant variation in the average level of reported restructuring between countries – employees in the Nordic Member States report the highest shares of restructured workplaces and those in southern and eastern Member States report generally lower shares – we include country controls in the multivariate analysis that follows.

It is important at the outset to draw attention to some shortcomings of the 5EWCS and the core restructuring question (Q15b) in particular as bases for analysing the survivor experience and impacts of restructuring. The question is cognitively rich and could conceivably be answered affirmatively by workers in a variety of work situations. For example, it is not made explicit that 'substantial restructuring or reorganisation' imply employment losses or downsizing and we have no way of verifying this using other survey variables. We assume in many cases that a positive answer to the question does indeed signify restructuring involving job losses, but equally in some cases it could signify internal restructuring with limited or no employment consequences, or indeed business expansion.[15]

The timeframe indicated – three years – is quite long and may introduce possible recall problems on the part of respondents. It also makes it impossible to locate the restructuring episode more specifically in time. This may be an important drawback, as we can assume that some of the workplace changes that result from restructuring and their impacts on workers tend to manifest themselves during or immediately after a restructuring event. Time elapsed after the restructuring event is therefore likely to be an important variable but is not one that the 5EWCS allows us to capture. The three-year timeframe also raises the possibility that workers were exposed to multiple rather than single restructuring episodes. Finally, the long timeframe may also generate selection effects in that disappointed employees quit, leaving behind a selected sample in which more positive outcomes are prevalent.

So while we can reasonably ask what a positive response to our core 5EWCS variable actually signifies, our working assumption in this paper is that those answering 'yes' to this question are in firms/organisations that have at least undergone major changes in internal organisation or work organisation and in a large share of cases these changes have involved reductions in headcount.

The ideal data source would be a longitudinal linked employer-employee survey with substantial national samples for all EU27 Member States where we had access to individual-level data from a large number of employees in both downsized and non-downsized, identified organisations and

[15] The comparable ESS question is simpler and deals explicitly with the employment consequences of the restructuring and offers some further insights (see Annex 4a).

with a more precisely formulated series of restructuring questions. But – as is often the case – this ideal data source does not exist at present and we have to make do with imperfect substitutes.

Nonetheless, we should note some advantages that the EWCS dataset has for the purpose in hand. Compared to many of the more targeted surveys covered in the restructuring and health literature, where the population studied is either a sample or all employees of a restructured organisation, the 5EWCS provides a comparatively large cross-national sample (21,700+ respondents, even in our restricted subsample) representative of the working population in each Member State covered. The focus of the surveys is not restructuring per se but a much broader set of quality of work issues. In the case of the 5EWCS, this broad thematic coverage may be considered a strength rather than a weakness. Potential selection or acquiescence biases in smaller surveys with a restructuring focus or conducted solely in restructured companies may tend to inflate associations between restructuring and hypothetically related outcomes, such as self-reported stress. Individual respondents may be more prone to report negative outcomes if they feel that the aim of the survey is precisely to identify and quantify such linkages. Whatever associations we find in a more broad-based working conditions survey are less likely to be bias induced. The comparatively large samples also offer benefits in terms of statistical power and allow us to compare associations across subcategories such as sector. And, finally, broader based working conditions surveys by definition offer thematic variety and possibilities of identifying associations between restructuring and a richer sub-set of work environment variables.

We are confident that the 5EWCS can provide at least interesting pointers in this exploratory analysis of the individual impacts of restructuring. The 5EWCS includes other questions that deal with quality of work dimensions – work intensity, autonomy, job satisfaction, access to training, training-skill mismatches – which are identified in the research literature as being associated with or affected by restructuring. In most cases, these other questions are more simply formulated, have been 'roadtested' in previous survey editions and are clear(er) in their significance.

In a first phase, a preliminary analysis of the 2010 EWCS data identified which categories of workers (by occupation, sector, skill level, age/tenure, etc.) were most likely to be working in workplaces reported as having undergone 'substantial restructuring' in the previous three years. The fact that our core variable is dichotomous makes this summary fairly straightforward. In a second phase, we analysed whether the subpopulation having experienced restructuring was more exposed than a control group of those who reported not having experienced restructuring to some of the outcomes documented in the literature: increased work intensification, workload or working hours, or negative health risks and health outcomes, in particular stress or related symptoms. Estimating a series of multivariate models (logits) allowed us to control for differences in composition of the two comparison groups and to more effectively isolate specific associations between reported restructuring and work organisation aspects as well as self-reported health risks and outcomes.

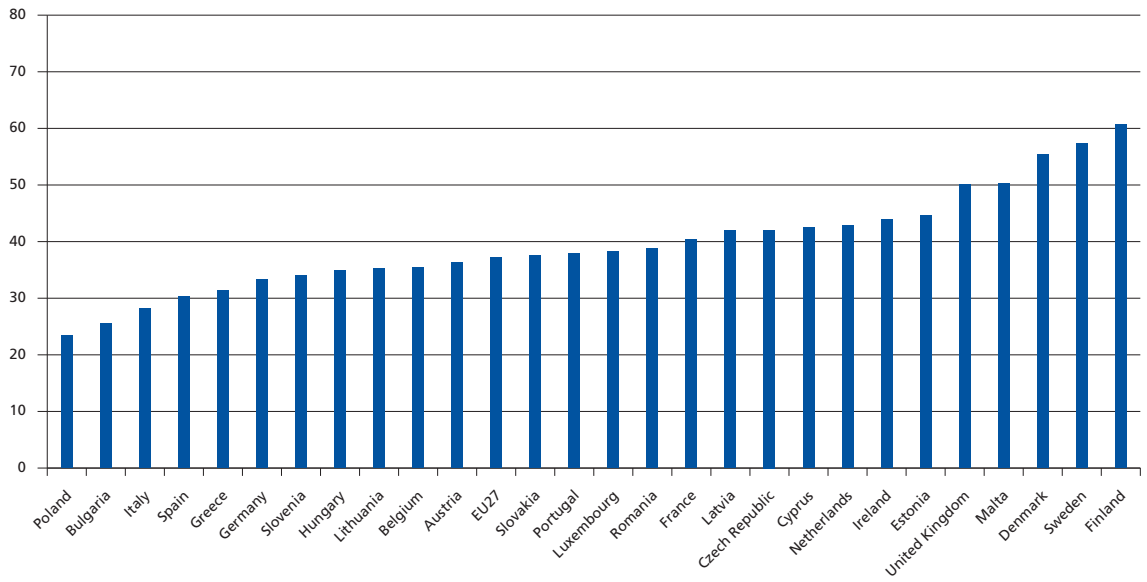
Where we found positive associations, we have been appropriately cautious about their significance given the issues already discussed in relation to the formulation of the core restructuring question, i.e. the timeframe involved, the vagaries of recall in self-reported data and a potential host of unobserved workplace or individual characteristics that may be contributing to these outcomes. As restructuring does not directly *cause* stress or work absenteeism or any other individual-level outcome, the case for or against restructuring as an antecedent of positive or negative work outcomes will necessarily be subject to many qualifications.

Descriptive results

To begin our analysis, we report the extent to which restructuring is reported as having occurred in the previous three years. Thereafter, we will look at what background variables may be associated with reported restructuring. The main body of the analysis is based on using restructuring as an independent variable along with a series of control variables and seeing to what extent restructuring is associated with the range of work outcomes suggested by the literature.

Overall, 37% of employees reported working in substantially restructured or reorganised workplaces. There is significant cross-national variation in the extent of reported restructuring. Employees in the Nordic cluster of Denmark, Finland and Sweden report the highest level of workplace restructuring (between 55% and 62%). Lowest levels were recorded in some eastern Member States (Poland and Bulgaria) and southern Member States (Italy, Spain and Greece). Germany also figures near the low end of the list as regards the share of workers reporting working in restructured workplaces. Some of the above patterns are repeated if we cross-tabulate data from the 'downsizing' question in the ESS 2010 survey; Sweden and Denmark have the lowest share of workers reporting 'no change' in organisation employment levels, while southern and eastern Member States tend to have higher shares (see Annex 3).

Figure 18: Substantial restructuring reported in the last three years, by country (EU27)



Source: 5EWCS

It is not easy to draw any inferences from the country data on our core variable. Self-reported levels of 'substantial restructuring or reorganisation' appear to be largely independent of unemployment trends at national level.[16] However, the high shares of reported restructuring in the three Nordic Member States (Denmark, Finland and Sweden) is noteworthy. This suggests that restructuring may be associated with

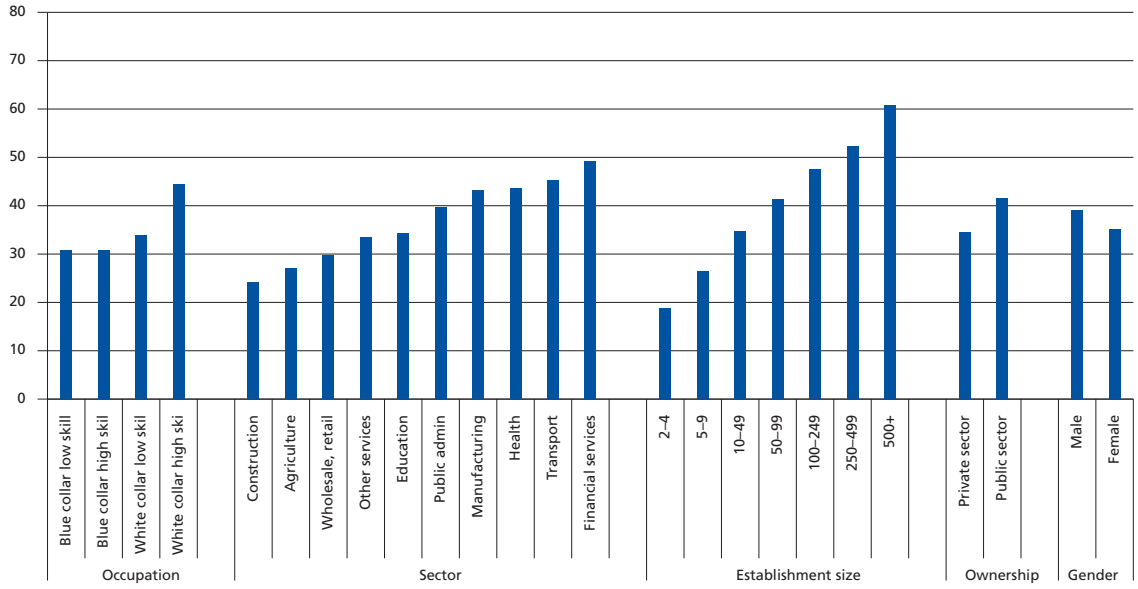
[16] Low levels of reported workplace restructuring could be consistent with greater overall stability of the labour market at national level. The evidence is supportive in the case of Poland, which reports the lowest level of restructured workplaces and whose labour market was the least affected by rising unemployment of all EU27 Member States during the Great Recession. The evidence is less supportive in the case of Bulgaria and Spain.

positive outcomes at the macro level given that these countries also tend to rank highly in cross-national comparisons across a range of measures, including per capita income, quality of work and quality of life.

Which categories of employee are more likely to report working in restructured workplaces? Male workers are somewhat more likely than females. The strongest association, however, is with organisation size, with employees in larger organisations much more likely to report restructuring than those in smaller organisations. The relationship is simple and monotonic. The bigger the workplace, the more likely restructuring is reported to have taken place.[17] Less than 20% of employees working in workplaces with less than five workers report restructuring, compared to over 60% of those employed at workplaces with more than 500 employees.

Those working in the public sector are more likely to report restructuring than private sector workers (41% vs. 35%). Given the previous statistic, this may in part relate to the large organisation bias of public sector workplaces. The pervasiveness of new public management (NPM)-style reforms in recent years is also a likely contributing factor. The broad sectors in which the highest level of restructuring is reported include both employment-gaining sectors such as health care and employment-losing sectors such as manufacturing as well as financial services and transport. The construction sector, which suffered the greatest proportionate job losses during the 2008–09 recession, is the one in which the smallest share of workers reported substantial restructuring. This should alert us to possible selection effects for at least some of the categories presented. For example, construction firms are more likely to be small and may go out of business rather than restructure and survive. Our survey source includes only existing workers in existing workplaces. To the extent that restructuring in a sector tends to lead to closures rather than headcount adjustments, sectors with high overall employment destruction may also be those where low shares of existing workers report recent restructuring.

Figure 19: Employees reporting restructuring in previous three years by sector, occupation, gender and firm size, %, EU27



Source: 5EWCS

[17] Though since ours is a selected sample of those in firms that have survived for at least three years, and restructuring in smaller, newer firms is more likely to lead to closure, there are likely to be selection effects that lead to an underestimation of restructuring in smaller firms.

Those in higher-level, white collar occupations are more likely than their blue collar counterparts to report working in restructured workplaces. Again, this may appear surprising to the extent that white collar workers have been much less exposed to the risk of job loss than their blue collar counterparts prior to and during the Great Recession (Eurofound, 2011). But the paradox may be more apparent than real, attributable again to a selection effect – the workers in our sample are by definition those that have survived restructuring and those with higher-level occupations are more likely to fall into that group given the disproportionate impact of the recession on blue collar workers. Another possible contributing factor might be a greater awareness about company-level developments amongst higher occupational grades. As with all EWCS questions, we have to be aware of the limitations of self-reported data, in particular in relation to questions as cognitively rich as this new restructuring-related question. It seems probable that higher-educated workers as well as those with management responsibilities are more likely to report restructuring, perhaps in part because they are often closer to decision-making about restructuring events and are likely to be better informed as a result.

Restructuring and work organisation: Main findings

In the sections that follow, we investigate whether a number of facets of work organisation – task complexity/diversity, teamwork, supervision via quality control or performance assessment processes – were more likely to be reported by employees in restructured workplaces. Thereafter, we look at physical and psychosocial risk exposure and related health outcomes in order to see if the employees in restructured workplaces differed systematically in reporting such exposures and related health outcomes; the extent to which patterns differ by sector; and the relative strength of the 'restructuring effect' for specific exposures and health outcomes.

As we have already seen, however, the incidence of reported restructuring itself varies according to a number of background variables, including sector, occupation and establishment size. A multivariate approach to analysing the impacts of restructuring is necessary if we are to control for these composition effects, allowing us to more effectively isolate possible associations with reported restructuring. In what follows, we will present estimates from these multivariate regressions (logits) where the main independent variable of interest is whether or not the worker has reported substantial restructuring in his/her workplace over the previous three years and where dependent variables are working conditions outcomes suggested in the literature that can be proxied using questions in the 5EWCS.

Work intensity

There is no direct variable measuring work intensity in the 5EWCS, but we follow earlier analysis (Eurofound, 2007) by proxying it using questions on working to tight deadlines and working at very high speed. Based on responses to these two Likert-scaled questions, we calculated a self-reported work intensity variable.

Table 13 summarises the reported incidences as well as the odds ratios for a number of outcomes related to work intensity and working time based on whether or not restructuring was reported. Forty-two per cent of employees in restructured organisations report having high work intensity, i.e. working at least half their time to tight deadlines as well as at high speed, compared to 34% in non-restructured organisations. When we control for individual and workplace characteristics, this effect persists. The odds of reporting greater overall work intensity are 45% higher for those in restructured workplaces and the odds of reporting working to tight deadlines are 53% higher than for employees who have not reported restructuring. The increases are reported across each of the work intensity variables and are highly significant in each case (at the 0.1% level).

Table 13: Work intensity/working time and reported restructuring

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
Work intensity	**High work intensity**	42.1	33.7	1.447	***	19,866
	Working to tight deadlines	58.6	45.0	1.527	***	19,869
	Working at high speed	50.8	44.7	1.347	***	19,881
	(Not) enough time to get the job done	31.5	23.0	1.416	***	19,894
	Working in free time to meet work demands	33.8	23.2	1.415	***	19,651
Working time	Long weekly hours	11.6	10.2		NS	19,739
	Long working days	36.3	25.7	1.240	***	19,541
	Regular schedule: same days per week	79.0	83.5	0.769	***	19,959
	Regular schedule: same hours per day	60.2	66.7	0.835	**	19,955
	Fixed starting and finishing times	64.5	72.9	0.780	***	19,949
	Shift work	23.0	17.4	1.295	***	19,883

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting. DVs in bold are composite indicators (see Annex 4a for composition).

Co-variates: Sex, age, education level, firm size, supervisory status, sector, occupation and country.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

Restructured employees are also significantly more likely to report not having enough time to get the job done. In a comparable ESS question, those in organisations where employment levels had declined were more likely to report 'never having time to get everything done' in their job. But responses to another ESS work intensity question – 'my job requires that I work very hard' – did not vary in any statistically significant manner between workers in downsized, upsized and stable organisations (see Annex 3).

As regards work duration, there are differences in weekly working hours too, but these are mainly accounted for by the lower share of part-time employees in restructured workplaces. If we compare full-time employees, the differences are not statistically significant. This suggests that the main workload differences between employees in restructured and non-restructured workplaces are in terms of intensity of work rather than duration of work (working hours).

One possible contributor to higher levels of work intensity, however, is that working time schedules are more irregular in restructured workplaces, with a greater likelihood of working long days and working shifts and a lower likelihood of regular working week or working day patterns. This suggests more flexible and changeable working time patterns in restructured organisations. Whether or not such working time flexibility is considered positively by employees is largely dependent on whether it is primarily influenced by employee or employer requirements, but such irregular working time patterns have also been associated with lower work–life balance satisfaction (Eurofound, 2007).

Job control

According to the job control-demand model of Karasek and Theorell, greater job demands need not necessarily be conducive to negative health outcomes and depend on the level of task authority and skill discretion that an individual worker enjoys.

In the Karasek matrix of job control and job demands, the optimal combination – from an organisational perspective – is one of high demands with high control, which the model denotes as 'active jobs'. Working more intensively is compensated for by increased levels of autonomy, where the worker has greater discretion on how work is carried out in terms of content, task order, pace, etc. Indeed, the combination of high demands and high control may tend to generate 'positive stress', as growth and learning stimuli are more likely to be present in such 'active jobs'. According to Karasek, 'only average psychological strain is predicted for the active job because much of the energy aroused by the job's many stressors ('challenges') are translated into direct action – effective problem solving – with little residual strain to cause disturbance'. In this way, organisational and employee interests may coincide. Organisations with a high share of 'active jobs' will tend to be high-performance, 'learning' organisations if we borrow the terminology of work organisation research. The corollary is that high-demand, low-control work – referred to as 'high strain' work – is characterised by 'negative stress' with negative health impacts, as the compensatory dimension of employee discretion is less present. This has the potential to undermine employee wellbeing, with possible follow-on consequences for organisational performance.

Table 14: Work autonomy and reported restructuring

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
Autonomy/control	**High work autonomy**	51.8	46.4	1.126	*	19,625
	Can choose pace of work	69.4	65.7	1.147	*	19,816
	Can choose method of work	68.7	62.4	1.266	***	19,833
	Can choose order of work	68.5	61.0	1.184	**	19,847
	Can take a break when wishes	45.8	40.2		NS	19,924

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting. DVs in bold are composite indicators (see Annex 4a for composition).

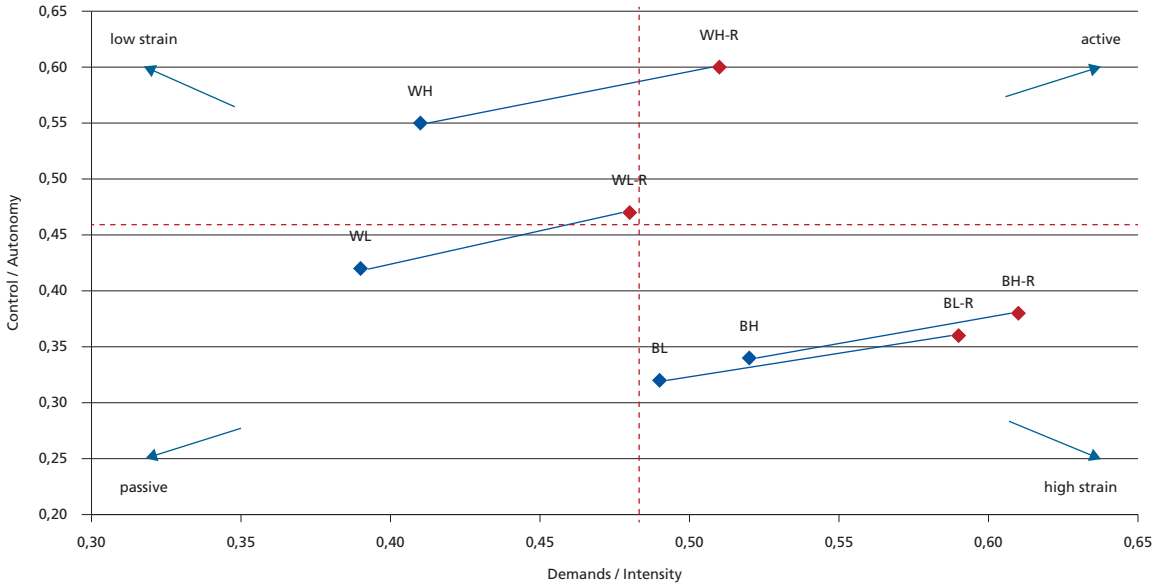
Co-variates: Sex, age, education level, firm size, supervisory status, sector, occupation and country.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

Previous studies strongly emphasise the intensification impacts of restructuring, but case-based studies are less consistent as regards the consequences of restructuring for worker autonomy as well as for responsibility and task diversity. While the majority of cases draw attention to reduced autonomy and greater external control, supervision and assessment, other restructurings appear to have resulted in increased employee discretion. As we can see in Table 14, the 5EWCS data support the hypothesis of greater autonomy in restructured workplaces, though the differences are not dramatic (odds ratios of 1.1 to 1.27 for variables where the difference is significant). The ESS data support the hypothesis that increased autonomy mainly accrues to employees of upsizing organisations (see Annex 3), i.e. where 'substantial restructuring or reorganisation' has a positive rather than a negative connotation. There is no significant difference in reported autonomy for those in downsizing firms.

Figure 20: Predicted probabilities of being in high/low intensity, high/low control work by occupational grouping



Note: Four occupational categories: white collar high skill (ISCO1d 1-3) = WH, white collar low skill (ISCO1d 4-5), blue collar high skill (ISCO 6-7), blue collar low skill (ISCO 8-9). Armed forces excluded. Suffix '-R' (red diamonds) indicates workers in restructured workplaces. No suffix (blue diamonds) indicates workers in non-restructured workplaces. The dotted red lines indicate the mean predicted probabilities for all employees for both autonomy and intensity. Predicted probabilities are from logit models with controls for sex, age, education level, firm size, supervisory status, sector and country.

Source: 5EWCS

In Figure 20, we have combined information from the autonomy and intensity composite variables for four different occupational groupings to see where they are predicted to lie in a Karasek control-command matrix. The group comparison demonstrates a negative correlation between autonomy and intensity. White collar occupational groups tend to report higher levels of autonomy and lower levels of intensity than their blue collar counterparts and vice versa. In other words, blue collar workers are the most exposed category of workers in terms of work organisation forms that are likely to produce psychological strain ('high strain').

This is counter to the common perception that higher white collar professional jobs are inherently more stressful – but is consistent with one of the general findings of the Whitehall studies regarding occupational and social gradients in work-related health risks: it was employees in lower, not higher, grades in the British civil service, with lower levels of control over their work, that had higher risks of early death, developing coronary heart disease as well as other negative health outcomes despite lower levels of work demand (Ferrie, 2004).

It also confirms that those in restructured workplaces report higher levels of work autonomy as well as work intensity and that these associations are consistent across broad occupational groupings. The increases in work intensity are greater than those for work autonomy, suggesting that some of the compensatory effects implied by the Karasek model may not materialise. Blue collar workers in restructured workplaces still belong very much to the profile of 'high strain' work organisation despite increased levels of control. Employees in restructured workplaces are more likely to belong to

the active work category but are also more likely to be in the high strain category, suggesting higher exposure to stress than those in non-restructured workplaces.

We should also note that the greater autonomy enjoyed by employees in restructured workplaces is subject to important qualifications (see Table 15). They are more likely to report a series of external constraints on their pace of work, for example being subject to numerical production or performance targets. Similarly, their work is more likely to involve meeting precise quality standards and their performance to be subject to formal assessment. These can be considered as mechanisms to ensure that any increase in employee discretion is an increase in 'responsible autonomy' with inbuilt constraints.

Table 15: Work performance monitoring and reported restructuring

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
Performance monitoring	Work subject to formal assessment	55.7	35.7	1.742	***	19,554
	Work involves meeting precise quality standards	81.6	73.2	1.484	***	19,660
	Work involves assessing quality of own work	79.7	69.9	1.486	***	19,674
	Pace of work depends on production/performance targets	52.9	37.3	1.679	***	19,722

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting.

Co-variates: Sex, age, education level, firm size, supervisory status, sector, occupation and country.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

Higher levels of scrutiny of individual employee performance – via formal assessment or evaluation or compliance with performance targets – therefore go hand in hand with increased employee task discretion. This is not a contradiction but an indication of shifts in the way that management exercises control in modern organisations. Again, the increased emphasis on quality and performance monitoring is another hallmark of high-performance work systems. The constrained form of enhanced employee autonomy that results is more likely to be found in workplaces that have restructured.

Influence on decision-making

Work autonomy relates to the relationship between employees and their tasks and responsibilities. A broader, but related, issue is that of the involvement and influence of employees in decisions affecting the organisation of work. To what extent is there consultation regarding changes in work organisation and can employees influence the relevant processes both at an individual level and by means of collective representation?

Research on changes in work organisation tends to contrast traditional and modern modes. The traditional, industrial model of work organisation features centralised, top-down decision-making with rigid hierarchical distinctions and limited autonomy, especially at lower levels. More modern forms of work organisation – borne in part of the shift to a more knowledge-intensive, service-oriented employment structure – emphasise the value of more distributed authority, flatter hierarchies, teamworking and higher levels of operational and decision-making autonomy at all levels. One implication of this (admittedly crude) contrast is that as organisations adapt to more modern forms of work organisation, individual discretion and influence over work will increase for employees at

various levels and will be less concentrated in senior management. General educational upskilling will contribute to the necessary human capital endowments, and the benefits in terms of increased flexibility, adaptability and creativity will be felt at both organisational and individual employee level. This, then, is the positive prognosis of post-Fordist approaches to work organisation. To the extent that restructuring is linked to organisational modernisation and change, and that change is oriented in the positive way outlined, we might expect to observe higher levels of employee influence or involvement in restructured workplaces.

Table 16: Influence over work organisation and reported restructuring

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
Influence/ involvement	Has influence over choice of working partners	25.8	21.0	1.155	*	18,760
	Can make input to improvements in work organisation	51.2	41.1	1.265	***	19,341
	Can influence decisions that are important for work	37.9	31.5	1.121	*	19,782
	Consulted before targets for work are set	50.2	44.2		NS	19,091

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting.

Co-variates: Sex, age, education level, firm size, supervisory status, sector, occupation and country.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

We find that employees in restructured workplaces were more likely to report higher levels of influence over decisions important to their work as well as involvement in changes affecting work organisation. But these differences are likely at least in part to be attributable to greater access to employee representation (61% vs. 41% for those reporting no restructuring).

Teamwork and access to training

Modern forms of work organisation emphasise the value of teamwork and training as well as employee involvement and autonomy. These are amongst the key elements of 'learning organisations' (Eurofound, 2009a) as well as 'high-performance work systems' or 'high-involvement work systems' (Tomer, 2001). In part, such developments reflect the growing cognitive challenges of high-end work tasks. Training endows individuals with new skills that capitalise on their existing competences and equip them to respond to new workplace demands. Working in teams may be a means of engaging different skill sets to work on complex tasks. Such work is likely to lead to mutual learning and may bring about other positive complementarities, such as increased loyalty, cohesiveness and commitment to broader goals at team and organisation level.

Table 17: Teamwork/training and reported restructuring

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
Teamwork	Works in group or team with common tasks and that can plan its work	70.5	60.3	1.352	***	19,757
Training/ development	Training paid for or provided by employer	50.0	31.9	1.650	***	19,953
	On-the-job training	47.5	29.6	1.740	***	19,930
	Underqualified	14.0	10.9	1.260	**	19,840
	Overqualified	33.9	28.9	1.192	**	19,840
	Job involves learning new things	79.7	62.5	1.876	***	19,838
	Job involves complex tasks	71.0	55.0	1.535	***	19,759
	Computer use	56.6	37.1	1.700	***	19,959

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting.

Co-variates: sex, age, education level, firmsize, supervisory status, sector, occupation and country.

*Significance levels: * p<0.05, ** p<0.01, *** p<0.001.*

Source: 5EWCS

Restructuring may be associated with these learning organisation dimensions to the extent that the explicit goal of restructuring is to adapt and modernise the work organisation in order to secure broader organisational objectives. Also, such adaptations may involve new tasks, functions and roles and therefore require training.

According to Table 17, employees in restructured workplaces were significantly more likely to report these learning organisation dimensions, notably in relation to teamworking, the cognitive content of their work ('learning new things') and computer use – though we note that the comparatively strong associations noted here between restructuring and stimulating work content are not observed in the ESS data (see Annex 3).

Restructured employees also enjoyed greater access to training, particularly on-the-job training, and this result was mirrored in the ESS, where workers in both upsized and downsized organisations were much more likely to have had training paid for by their employer. At the same time, employees more likely to report needing 'further training to cope well' with their duties, i.e. to report being underqualified, which implies that the additional training provided or available may not necessarily have equipped them to carry out their functions confidently. This may be considered a further potential stressor.

Employee wellbeing

Despite the fact that work organisation in restructured workplaces appeared positive from a learning and autonomy point of view and offered greater possibilities for training and individual development, being in a restructured workplace was associated with higher levels of perceived job and employment insecurity as well as lower levels of job satisfaction (see Table 18). Data from similar questions in the ESS 2010 survey also show sharply lower job-related wellbeing and higher job insecurity for employees in downsized firms (see Annex 3).

Table 18: Employee wellbeing/remuneration and reported restructuring

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
Employee well-being	Satisfied with working conditions	82.8	86.7	0.619	***	19,844
	Satisfied with work–life balance	79.7	84.4	0.696	***	19,904
	Wellbeing (WHO-5)	46.7	50.9	0.789	***	19,881
	Job security	68.7	72.7	0.675	***	18,763
	Employment security	29.0	29.3	0.871	*	18,911
	Good career development prospects	35.4	27.5		NS	19,438
	Feel 'at home' in organisation	69.2	70.6	0.797	***	19,839
Remuneration	Well paid	66.1	54.9	1.135	*	17,392
	Considers themselves well paid	44.5	41.7		NS	19,864
	Benefits from profit-sharing	19.1	10.4	1.447	***	19,678
	Overtime pay	37.7	34.3	1.162	**	19,735

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting.

Co-variates: Sex, age, education level, firm size, supervisory status, sector, occupation and country.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

Employees in restructured workplaces were more likely to report that they may lose their jobs in the next six months. Our assumption is that in many cases, previous episodes of restructuring were likely to have been accompanied by job losses, so it is perhaps predictable that post-restructuring 'stayers' are more likely to anticipate future similar episodes affecting them.

A second finding was that the positive employability-enhancing aspects of restructured workplaces indicated above were not adequate to give 'stayers' confidence in their powers to secure equivalent alternative employment. They were somewhat less likely than their counterparts in non-restructured workplaces to report that it would be easy for them to secure a job of similar salary were they to lose or quit their job ('employment security' in Table 18). They were, however, more likely to report that their job offered good prospects for career advancement. Thus, restructured workplaces offered some upsides but had greater downside possibilities: less secure employment and greater incentives to remain at the current employer given the reduced likelihood of securing equivalent alternative employment, but greater career development potential for those with prospects of remaining employed in their current firm/organisation.

Restructuring was also significantly associated with lower scores on basic measures of employee well-being. Those in restructured workplaces were less satisfied with their working conditions, less content with the fit of work and non-work activities and less likely to report they felt 'at home' in their organisation.

Finally, remuneration of restructured employees fits the high-performance work system template. They were more likely to be in above-median salary pay bands, to receive overtime payments and to benefit from profit-sharing payments based on the overall performance of their company. Despite these advantages, they were no more likely than those in non-restructured workplaces to consider themselves well paid for the work they do.

To summarise, greater job and employment insecurity as well as negative work organisation features were more likely to be found in restructured workplaces – notably, increased work intensity and atypical work schedules. These appear to outweigh positive features such as increased autonomy, influence over work and training possibilities in terms of their impact on employee well-being. Restructured workplaces may exhibit work organisation features associated with learning organisations and high-performance work systems, but these do not generate the advantages in employee well-being that proponents of high-performance work systems (HPWS) would predict. In fact, our findings are more consistent with the 'labour process' (LP) critique of HPWS, where enhancements in organisational performance are predicted, but at the individual employee level 'minor gains in discretion, granted as a means to gain compliance with managerial aims … are far outweighed by work intensification, insecurity and stress' (Ramsey et al, 2000). In other words, efficiency benefits at the workplace or organisation level, even those that rely on increased employee autonomy, may come at the expense of employee welfare.

Physical and psychosocial risks related to work

Higher work intensity is one potential stressor that may contribute to negative health outcomes. The 5EWCS also captures information on specific risk factors such as exposure to noise and vibrations at work (i.e. physical risks) or bullying and threatening behaviour (i.e. psychosocial risks).

Working in restructured workplaces was associated with somewhat higher exposure to physical risks and notably higher exposure to psychosocial risks, especially bullying and threats or humiliating behaviour (see Table 19). There was also a significantly higher exposure to verbal abuse, the most commonly reported manifestation of workplace psychosocial risk. This suggests a greater probability of problematic social relations in restructured workplaces, both between colleagues (bullying) and also between employees and non-colleagues (e.g. patients and clients).

Table 19: Workplace health risks and reported restructuring

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
Work-related health risks	Health at risk because of work	28.8	23.0	1.513	***	19,647
	Physical risk exposure	33.5	31.6	1.297	***	20,000
	Psychosocial risk exposure	18.9	11.9	1.583	***	20,000
	Verbal abuse	14.4	9.4	1.498	***	19,940
	Unwanted sexual attention	2.0	1.2	1.607	*	19,972
	Threats and humiliating behaviour	7.7	3.7	1.857	***	19,951
	Bullying/harassment	6.8	3.1	1.997	***	19,953

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting. DVs in bold are composite indicators.

Co-variates: Sex, age, education level, firm size, supervisory status, sector, occupation and country.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

Some possible indirect transmission mechanisms explaining why psychosocial risks might increase in restructured workplaces have already been suggested. For example, decisions about who is retained and who leaves in restructurings involving layoffs may be divisive in character and associated with negative psychosocial work environment outcomes. To the extent that restructuring undermines job

security in the long run, even for survivors, this may also impact on interpersonal relationships, with colleagues positioning themselves competitively to preserve their posts. Finally, the post-restructuring increases in work intensification already noted may lead to a fraying of social relationships at work and create the conditions for negative or pathological behaviours between colleagues.

There is also a smaller – but still significant – increase in odds ratio for physical risks for restructured workers. We have already observed that public sector employees are more likely to have experienced restructuring than those in the private sector. It is noteworthy that three of the sectors with the highest levels of psychosocial exposure are all predominantly state funded. Moreover, those in restructured workplaces within public administration, health care and education report significantly higher psychosocial risk exposures, and in the latter two this is accompanied by significantly higher physical risks.

Table 20: Differences in psychosocial and physical risk exposure by sector comparing employees working in restructured workplaces and non-restructured workplaces, EU27

Sector	Psychosocial risk exposure				Physical risk exposure				N
	Restructuring		OR	Sig.	Restructuring		OR	Sig.	
	Yes (%)	No (%)			Yes (%)	No (%)			
Manufacturing	10.6	8.1		NS	45.3	46.2		NS	3,716
Construction	15.7	6.5	3.077	**	48.2	43.9	1.919	**	1,243
Retail, food, accom.	17.8	13.7		NS	28.4	26.8	1.336	*	3,605
Transport	23.5	18.7		NS	38.1	39.2		NS	1,140
Public administration	26.0	16.1	1.715	*	19.2	21.6		NS	1,654
Education	22.8	13.8	1.767	*	23.3	18.3	1.548	*	2,243
Health	33.1	17.3	1.870	***	44.5	33.5	1.618	**	2,371
Other services	14.3	9.8		NS	23.6	27.3		NS	2,727
All	18.9	11.9	1.583	***	33.5	31.6	1.297	***	20,000

Note: Odds ratios based on separate logits for each sector with following co-variates: sex, age, education level, firm size, supervisory status, occupation and country. Two sectors omitted due to small subsamples, n < 1000 – agriculture and financial services

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

Of particular concern are employees working in the health care sector, where workers report the highest level of exposure to psychosocial risk: 24% report exposure to at least one risk and this rises to 33% where restructuring has been reported. The health sector, as has already pointed out, has been a focus of research on links between restructuring and health and the 5EWCS data bear out some of the earlier findings cited.

Restructuring and physical and psychosocial health

Is the higher incidence of self-reported exposure to health risks amongst restructuring survivors, in particular to psychosocial type risks, accompanied with higher incidence of related negative health outcomes such as stress or fatigue?

The 5EWCS includes a large battery of questions on health outcomes, some framed generally without specific reference to work ('Over the last 12 months, did you suffer from any of the following health problems?' – depression or anxiety, hearing problems, etc.), while others are work specific ('Does your work affect your health, or not?'). Across nearly all self-reported health outcomes, whether work

related or more general, those in restructured workplaces were more likely to report higher levels of negative health outcomes (see Table 21).[18]

Table 21: Self-reported work- and non-work-related health outcomes and restructuring, EU27

Theme	Dependent variable	Restructuring		Odds ratio*	Sig.	N
		Yes (%)	No (%)			
General health	Good health in general	75.9	78.9	0.729	***	19,967
Perceptions of work–health interaction	Work affects health negatively	28.6	24.8	1.254	***	19,288
	Work affects health positively	7.8	5.5	1.346	**	19,228
Self-reported health problems	**Any physical health problems**	64.0	60.9	1.262	***	20,000
	Any psychological health problems	61.6	53.8	1.451	***	20,000
	Multiple physical health problems	43.0	40.9	1.249	***	20,000
	Multiple psychological health problems	35.5	27.1	1.495	***	20,000
Absenteeism/ presenteeism	Worked when sick in last 12 months	44.5	31.2	1.526	***	19,702
	Absent due to health problems in last 12 months	53.8	47.1	1.290	***	19,418
Specific health symptoms	Stress	34.0	24.2	1.565	***	19,933
	Fatigue	39.6	33.0	1.466	***	19,937
	Sleeping problems	24.2	16.2	1.581	***	19,942
	Depression	11.8	6.9	1.804	***	19,938
	Headache	43.4	38.0	1.256	***	19,961
	Stomach ache	15.4	12.6	1.314	***	19,964
	Back ache	47.8	46.9	1.157	***	19,961
	Muscular pains in shoulder, upper limbs	46.1	42.5	1.264	***	19,966
	Muscular pains in lower limbs	29.7	29.3	1.259	***	19,959
	Injury(ies)	8.8	8.5		NS	19,961
	Cardiovascular disease	5.0	4.0	1.364	**	19,916
	Respiratory difficulties	6.5	5.3	1.265	*	19,963
	Hearing problems	7.4	5.7		NS	19,966

Note: Odds ratios: Comparing respondents reporting restructuring in previous three years with those not reporting. DVs in bold are composite indicators (see Annex 4a for composition).

Co-variates: Aex, age, education level, firm size, supervisory status, sector, occupation and country.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: 5EWCS

[18] The one exception in Table 21 is that those in restructured workplaces are more likely to indicate that their work affects their health positively *and* negatively compared to employees of non-restructured workplaces. This suggests an interesting possibility for future research: that our core group of restructured employees may split into sub-groups enjoying either predominantly positive or predominantly negative work environment outcomes based perhaps on occupational status, form of restructuring (downsizing, upsizing, reorganisation) or some other background variable. While the 'yes, mainly positively' answer category is something of a residual category (6% answer 'yes, mainly positively', 33% answer 'yes, mainly negatively' and the remainder answer 'no', i.e. work does not affect health), this is consistent with restructuring contributing to a changed assessment of the impact of work on health. Employees in restructured organisations are less likely to answer neutrally to the work health impact question; interestingly, this also happens to be the case for questions relating to the salary and working time impacts of the crisis. A higher share of those in restructured workplaces report that their salary and working time increased *and* decreased in the period since January 2009 (fieldwork for 5EWCS was in 2010 Q1) compared to the control group of those not reporting restructuring. Employees in restructured workplaces are more likely to report change or discontinuity across a range of working conditions outcomes.

The strongest associations are with psychosomatic disorders such as depression, stress and sleeping problems.[19] Weaker but still statistically significant associations are with more ergonomically related or physical ailments linked to manual or industrial work (muscular pains and injuries, hearing problems). Employees in restructured workplaces are also significantly less likely to report that their general health is 'good' or 'very good'.

A predictable consequence is that there is a greater likelihood of both absenteeism and presenteeism (working when ill) in restructured workplaces. The effect for presenteeism is stronger, with 'stayers' estimated as reporting 39% more days per annum. One possible consequence of restructuring is the internalisation of the productivity-enhancing mindset in 'survivors' or 'stayers'. This may discourage taking sick leave for all but the most serious illnesses. Presenteeism has also been linked to job insecurity in general (Virtanen et al, 2003) and earlier research already noted the link between restructuring and heightened job insecurity for 'stayers'. Restructured employees also report 20% more days of work absence per year compared to those in non-restructured workplaces.

Table 22: Differences in psychosocial and physical health outcomes by sector comparing employees working in restructured workplaces and non-restructured workplaces, EU27

SECTOR	Psychosomatic disorders				Physical disorders				N
	Restructuring		OR	Sig.	Restructuring		OR	Sig.	
	Yes (%)	No (%)			Yes (%)	No (%)			
Manufacturing	59.9	49.9	1.538	***	65.4	63.4		NS	3,716
Construction	57.3	48.9		NS	62.2	68.7		NS	1,243
Retail, food, accom.	62.4	49.1	1.906	***	68.2	60.8	1.488	**	3,605
Transport	64.0	58.0		NS	64.4	72.3		NS	1,140
Public administration	63.1	54.4	1.508	*	57.8	58.8		NS	1,654
Education	67.5	60.1	1.493	*	63.4	51.5	1.847	***	2,243
Health	67.8	60.2	1.492	*	69.3	60.1	1.489	*	2,371
Other services	54.1	56.4		NS	62.2	60.5		NS	2,727
All	61.9	53.8	**1.451**	***	64.0	61.1	**1.262**	***	20,000

Note: Odds ratios based on separate logits for each sector with following co-variates: sex, age, education level, firm size, supervisory status, occupation and country. Percentages are EU27 weighted. Two sectors are omitted due to small subsamples, n < 1000 – agriculture and financial services.

*Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001.*

Source: 5EWCS

Table 22 reports both the incidence of self-reported psychosomatic disorders and physical disorders by sector depending on whether or not restructuring has been reported. It conveys a similar picture to that of Table 21 on reported health risks. Those in restructured workplaces were more likely to report physical and – especially – psychosomatic disorders. Stronger associations between restructuring and negative health outcomes were again found in the predominantly state-funded sectors of public administration (except for physical disorders), health care and education, though the associations are stronger for physical

[19] The relatively high coefficient for cardiovascular diseases may be surprising at first sight. In a factor analysis, this specific outcome has low loading on any of the two main groupings of health outcomes (psychosomatic or ergonomic/physical) and appears largely uncorrelated with other health problems. It is possibly related to intensification. There is also some evidence linking heart disease with job loss via downsizing (Vahtera et al, 2004).

rather than psychosomatic disorders. Restructured workplaces in basic services (retail, restaurants and hotels) also show significantly higher negative physical and psychosomatic health outcomes.

Conclusions

In this exploratory analysis of the 5EWCS data, we have looked at a subsample of just over 21,000 EU27 employees comparing self-reported work intensity, health risks and health outcomes between the 37% of EU27 employees reporting substantial workplace restructuring in the previous three years with the 63% who do not.

Reported levels of restructuring by country were seen to relate to known labour market developments such as unemployment or job mobility at national level only partially. This should serve as one reservation about what exactly the new restructuring question introduced for the first time in the 5EWCS actually captures. With additional caveats based on the complex formulation of the question, its three-year timeframe and the fact that it is not specific about the form of restructuring that occurred and whether job loss was involved, the 5EWCS data provides support to existing theories and empirical research on how restructuring impacts on work organisation and employee well-being. The traditional warning that such analysis provides evidence of correlation but not of causality is, however, also in order.

On the one hand, the analysis concurs with much of the existing research in linking restructuring with higher work intensity – and this effect is among the stronger effects, as judged by the size of the odds ratios. However, employee autonomy also tends to be higher in restructured workplaces and this effect holds across different occupational groups. This contradicts some of the more pessimistic findings cited from individual case studies and smaller-scale surveys where restructuring was associated with both increasing work intensity and decreasing autonomy – the lose-lose, 'high strain' quadrant of Karasek's command control matrix. Nonetheless, the advantages in worker autonomy were relatively minor compared to the increases in work intensity, and employees, especially those in blue collar occupations, were more, not less, likely to find themselves in 'high strain' work, suggesting a greater likelihood of negative health outcomes.

Other positive work organisation features associated with high-performance work systems were found to be more prevalent in restructured workplaces. Greater access to training, especially on-the-job training, greater influence and involvement in how work is organised, a higher incidence of teamwork and of formal assessment of work were observed. These suggest a commitment to human capital development, but employees in restructured workplaces were still more likely to report needing 'further training to cope well with their duties'.

They also fare worse according to 'soft' indicators of employee well-being such as self-reported satisfaction with working conditions and work–life balance. These associations were also strongly corroborated from analysis of our alternative data source (5ESS; see Annex 3), where the more precisely worded survey question allowed us to see that the negative impacts of restructuring were mainly confined to those working in downsized organisations.

We infer from the analysis that negative consequences of restructuring in terms of job and employment insecurity, higher work intensity and more employer-led scheduling flexibility tend to outweigh more positive 'learning organisation' or 'high-performance work system' features in employees' subjective assessments of work-related well-being.

Much of the research on the individual consequences of restructuring for 'stayers' or 'survivors' focuses on health outcomes, another important component of employee well-being. We find a higher prevalence of stress, health risks and negative health outcomes, especially of a psychosomatic nature (sleeping problems, depression, fatigue), in restructured workplaces. Our initial findings from this representative European data source are therefore broadly consistent with much recent research that draws attention to the (predominantly negative) health impacts of restructuring and downsizing on 'survivors' or 'stayers'.

The following summarise the main findings in relation to restructuring and health. Controlling for background variables, employees in restructured workplaces were significantly more likely to report:

- higher exposure to psychosocial workplace risks (notably bullying/harassment);
- higher reported levels of psychosomatic disorders (especially depression, stress and sleeping problems) though levels of ergonomic or physical health problems were also somewhat greater;
- higher levels of work absenteeism and in particular of presenteeism (working when sick);
- higher physical and psychosocial-type risks, especially among those employed in the health care sector.

For most of the relationships that we have tested in this analysis, the associations are statistically significant, have the expected sign based on existing research, but are relatively modest. Odds ratios are generally in the range from 1.2 to 2.0. The consequences of restructuring clearly depend on a large set of other individual and contextual factors. Some of these factors – individual self-efficacy, worker representation, quality of management and employee/employer communication before and during the restructuring process, local community involvement, state-firm interactions, type of restructuring, commercial motives for restructuring, skill profile of workforce, etc. – may have an important role to play in moderating or mediating potentially negative impacts of restructuring. While these are beyond the scope of the present analysis, both the European Working Conditions Surveys and the European Social Survey, as well as national work environment surveys – some with a longitudinal dimension – offer rich possibilities for more focused research in this area.

The issue of restructuring and its employment consequences will continue to have a strong policy and research interest given the accelerating processes of technological and work organisational change in a globalising, multipolar world, high levels of recent restructuring activity in the wake of the 2008–09 recession, public sector retrenchment consequent on fiscal consolidation and austerity measures, and increased public and media attention on the consequences of inadequately managed restructuring for employees (e.g. France Telecom).

Evidence from the 5EWCS data, largely reflected in a preliminary analysis of the 5ESS data, supports existing research findings about mixed adverse and positive impacts on work organisation associated with restructuring. It also signals potential negative associations between restructuring and employees' self-reported health. The fact that it does so consistently across a broad range of indicators suggests that these associations are not spurious even if specific causal relations are necessarily complex and not so easy to establish. Higher levels of work intensity, job insecurity and greater exposure to physical and psychosocial health risks appear to have a mediating role, but it is perhaps prudent to echo Kivimaki et al (2001) and conclude that 'different changes in work have an additive effect on self-rated health and … no single change in work is able to explain the adverse development of self-rated health of employees after major downsizing'.

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ANNEXES

Annex 1: The European Restructuring Monitor (ERM)

The ERM defines job loss at restructuring in a similar fashion to the European Directive on Collective Redundancies (98/59/EC) in that it refers to intended redundancies.[20] However, the intended redundancies do not have to be notified to any public authority but rather 'announced', either in the media or some other public domain. The thresholds for redundancies are at least 100 jobs or involving sites employing more than 250 people and affecting at least 10% of the workforce. Unlike the Directive, however, there is no stipulation regarding the time in which the intended job loss is to occur.

The major advantage of the ERM is that as it captures data early on in the dismissal process and therefore includes those who may leave near the beginning of the process. It will, however, almost certainly overestimate the actual number affected by the restructuring, and while the ERM does require the correspondents to update any subsequent revisions of announcements, it is likely that these revisions will be less well covered in the media. The early warning feature of the ERM is therefore one of its major strengths, as information is usually available long before the reduction of the workforce is enacted. Another major strength of the ERM is that it is based on information in the public domain. Thus, no issues of privacy arise and the identification of specific cases allows the process of structural change to be observed at company level.

Nevertheless, the major problem with the ERM is whether the macro picture that it portrays is representative of job loss in general. There are a number of ways in which the ERM may be biased with respect to job loss in general.

Firstly, a company size bias occurs by definition due to the ERM thresholds stipulated. Moreover, even within the company size definitions, an overrepresentation of big companies and large workforce reductions will almost certainly occur, as these are more likely to be reported in the media. As company size is correlated with a number of important factors, such as economic sector, the size bias will lead to many other types of bias. For example, the large company bias is likely to lead to a higher reporting rate in the ERM for manufacturing relative to services. The manufacturing bias may, in turn, lead to a bias as regards region and gender. The fact that the sampling error will be greater when companies are small may lead to inconsistencies over time – if company size varies over time – and between countries with differing company size distributions. The most obvious impact of the large company bias can be seen in relation to the small Member States, such as Cyprus and Malta, as they have very few companies of the size that fall under the ERM thresholds. Indeed, the ERM database provides very limited information on restructuring in these countries.

A second bias which is also likely to occur is a regional bias – apart from that which follows from the large company bias just outlined. Such a bias may arise when media coverage is not evenly spread throughout the country. While most of the designated newspapers are formally national, some national or regional capital city bias may also be possible.

A country-size bias is also likely to occur in the ERM. In absolute numbers, there is obviously much more job loss in big countries. In terms of national impact, restructuring involving, for example, 100 employees will be a less frequently occurring and more media-prominent event in countries such as Greece or Portugal than in Germany or the UK. This suggests that the reporting frequency will be higher in small countries than in large ones. Such a bias could introduce serious flaws in comparisons

[20] Council Directive 98/59/EC of 20 July 1998 on the approximation of the laws of the Member States relating to collective redundancies. This directive consolidates Directives 75/129/EEC and 92/56/EEC.

between countries, albeit not over time. Moreover, because there are more large companies in big countries, this leads to better coverage in the ERM. Thus, there are likely to be conflicting tendencies to bias as regards country size, leaving little indication as to the size and direction of the bias.

A bias in terms of type of restructuring – such as internal restructuring, relocation or closures – may also occur if the public and media focus is more concentrated on certain types of restructuring. Otherwise, there is little to suggest that a bias occurs in this aspect of the ERM.

Finally, it should be noted that the ERM also reports cases of job creation. However, as the majority of ERM cases are identified in newspapers, one could presume, in accordance with the journalistic adage that 'the best news is bad news', that a higher rate of reporting of job loss relative to job creation will occur. This is counterbalanced to an extent, nonetheless, by the enthusiasm of the press departments of investment promotion agencies in placing and highlighting media stories about new factories or offices and, in turn, new jobs.

Annex 2: Employment gains by sector and country

Table 23: Net employment gains/losses by sector and country showing top five sectors for gains/losses, 2008 Q1 to 2012 Q1, figures in ,000s

	UK	SK	SI	SE	RO	PT	PL
A – Agriculture, forestry and fishing	23.4	–20.4	–8.4	–3.2	–9.0	–45.5	–153.6
B – Min ing and quarrying	–13.1	–3.5	0.0	0.0	–25.8	–1.9	57.5
CA – Manufacturing: Food, bev. and tobacco	–23.3	–11.3	–7.1	–2.6	6.4	–11.6	–58.6
CB – Manufacturing: Textiles, clothing, leather	–40.7	–23.4	–12.5	–1.5	–92.6	–43.5	–115.5
CC – Manufacturing: Wood, paper and printing	–58.9	–4.1	–3.4	–11.5	–43.3	–26.9	–8.2
CD – Manufacturing: Coke, petroleum products	–10.3	0.0	–0.2	–0.8	–4.9	–2.0	4.8
CE – Manufacturing: Chemicals	–19.6	–1.7	–7.7	–3.5	2.1	1.5	8.4
CF – Manufacturing: Pharma	–17.0	–0.5	3.0	–3.0	–1.9	–9.6	23.8
CG – Manufacturing: Rubber, plastics, etc.	–41.0	–3.1	–7.1	–4.0	–17.1	–5.1	4.9
CH – Manufacturing: Basic metals	–178.1	–4.5	–1.5	–14.3	–23.0	–31.8	–26.1
CI – Manufacturing: Computers, etc.	–60.2	–9.7	–1.8	–2.3	32.5	–0.2	19.6
CJ – Manufacturing: Electrical equipment	3.2	–16.4	–6.1	–5.5	–37.6	10.1	–9.7
CK – Manufacturing: Machinery, etc.	–114.0	–8.3	–5.3	–13.4	–28.7	–14.4	–24.5
CL – Manufacturing: Transport	–124.8	22.1	–0.2	–15.3	7.9	0.7	–33.4
CM – Manufacturing: Other and repair	90.3	3.8	0.4	0.4	–10.7	14.9	–15.4
D – Electricity, gas, steam and air conditioning supply	43.1	–3.9	–1.8	2.7	–10.7	–1.6	12.8
E – Water supply; sewerage, waste management and remediation activities	22.9	–6.2	2.3	6.4	–6.9	–2.7	–0.5
F – Construction	–469.7	–15.2	–6.1	11.8	–51.2	–173.6	65.9
G – Wholesale and retail trade; repair of motor vehicles and motorcycles	–286.5	2.5	–8.3	–5.2	87.9	–81.9	58.5
H – Transportation and storage	–203.8	1.9	–6.6	–9.3	–20.8	–22.6	–1.0
I – Accommodation and food service activities	122.1	–14.1	7.1	–4.2	21.3	–43.8	60.5
JA – Publishing, broadcasting	75.1	2.5	–2.0	–3.4	–1.8	–6.6	–5.0
JB – Telecomms	–96.5	1.7	1.8	–0.6	9.6	–3.9	–6.9
JC – IT and info services	–2.2	10.2	3.7	22.2	13.9	10.9	55.3
K – Financial and insurance activities	–80.6	3.6	8.0	4.9	37.6	2.3	77.3
L – Real estate activities	66.1	0.8	2.2	3.1	3.6	–6.3	4.8
MA – Legal, accounting, architecture, engineering, etc.	8.9	–3.5	2.3	40.8	37.7	–5.6	117.8
MB – Scientific research/development	–7.2	1.0	–0.1	–10.2	–0.6	2.4	7.6
MC – Other professional scientific, technical	245.5	2.5	1.9	9.2	1.2	3.3	41.9
N – Administrative and support service activities	153.7	7.4	0.1	8.2	32.4	5.1	63.7
O – Public administration and defence; compulsory social security	–234.4	22.3	2.1	22.5	24.8	–29.6	100.8
P – Education	330.1	–15.8	8.3	15.8	–14.2	27.1	15.2
QA – Human health services	6.2	11.1	0.0	–1.4	–0.4	31.0	59.9
QB – Residential care and social work activities	272.1	5.3	–0.5	–9.0	–2.2	37.5	25.0
R – Arts, entertainment and recreation	8.7	1.1	2.8	3.6	4.0	0.7	–9.0
STU – Other services activities, etc.	–6.8	–4.1	–5.6	5.1	61.4	–51.7	33.1

	NL	MT	LV	LU	LT	IT	IE
A – Agriculture, forestry and fishing	–25.2	–0.9	–3.3	–0.4	–8.8	–23.1	–29.4
B – Mining and quarrying	–2.9	0.3	–0.3	–0.8	–2.4	–9.0	–4.4
CA – Manufacturing: Food, bev and tobacco	–7.7	0.1	–10.8	–1.1	–8.3	17.4	–1.4
CB – Manufacturing: Textiles, clothing, leather	–3.5	–0.3	–4.4	–0.2	–11.7	–130.8	–4.5
CC – Manufacturing: Wood, paper and printing	–27.2	–1.0	–15.1	–0.1	–1.7	–50.5	–9.0
CD – Manufacturing: Coke, petroleum products	–1.2		0.0		–2.1	–5.3	0.1
CE – Manufacturing: Chemicals	–8.1	0.0	–0.5	0.2	–2.5	–9.9	0.4
CF – Manufacturing: Pharma	–5.3	0.2	–1.2		0.4	–5.6	–2.4
CG – Manufacturing: Rubber, plastics, etc.	–13.2	0.0	–1.7	–2.1	–7.5	–44.3	–6.6
CH – Manufacturing: Basic metals	–44.1	0.5	–6.7	1.8	–0.2	27.9	–10.8
CI – Manufacturing: Computers, etc.	–14.1	–1.2	–1.9	0.1	1.5	–12.4	–7.3
CJ – Manufacturing: Electrical equipment	–5.0	–0.2	–3.6	–0.1	–6.5	6.2	0.1
CK – Manufacturing: Machinery, etc.	–17.1	0.4	–2.9	0.3	1.5	–10.1	0.4
CL – Manufacturing: Transport	–10.5	–2.3	–0.7	0.2	1.0	–39.2	–1.4
CM – Manufacturing: Other and repair	–14.7	1.3	–7.3	0.9	–8.2	–64.1	–5.5
D – Electricity, gas, steam and air conditioning supply	3.9	–0.3	–5.8	0.7	–6.3	48.6	0.2
E – Water supply; sewerage, waste management and remediation activities	–1.9	0.0	–5.2	0.2	0.6	32.4	–2.7
F – Construction	–69.9	–0.6	–72.8	1.2	–81.6	–172.1	–155.6
G – Wholesale and retail trade; repair of motor vehicles and motorcycles	–62.6	0.7	–48.2	–0.8	–20.6	–165.6	–48.4
H – Transportation and storage	–51.6	2.4	–12.6	–4.1	11.2	1.3	–8.7
I – Accommodation and food service activities	–1.7	1.4	–3.6	1.2	–3.5	28.2	–18.4
JA – Publishing, broadcasting	–18.3	–0.1	–4.1	0.6	–2.4	0.5	–0.3
JB – Telecomms	–6.4	–1.1	–4.3	1.2	3.5	–45.3	–1.4
JC – IT and info services	–20.2	1.5	–5.7	2.8	8.2	13.3	6.9
K – Financial and insurance activities	–37.7	1.7	1.1	8.8	–0.5	4.4	–5.0
L – Real estate activities	–8.6	0.0	14.8	0.2	6.1	22.8	–0.4
MA – Legal, accounting, architecture, engineering, etc.	–110.2	0.7	3.6	1.6	17.5	–126.4	–8.3
MB – Scientific research/development	–4.8	0.1	–1.0	0.7	–0.9	–12.0	0.7
MC – Other professional scientific, technical	14.6	0.9	–12.8	–1.0	–3.5	–24.1	–9.8
N – Administrative and support service activities	–1.7	–0.6	–1.8	0.6	3.1	–27.6	–23.4
O – Public administration and defence; compulsory social security	–29.6	1.9	–28.4	0.9	2.2	–0.3	–3.0
P – Education	–15.7	3.4	4.6	–0.4	–17.3	–114.5	4.3
QA – Human health services	50.7	0.6	1.9	3.1	–0.8	135.5	10.5
QB – Residential care and social work activities	–40.7	2.2	2.2	5.0	0.2	33.3	2.1
R – Arts, entertainment and recreation	–14.5	0.6	–13.9	0.9	–2.4	24.0	–0.4
STU – Other services activities, etc.	0.0	0.6	–4.1	3.7	–2.0	311.2	0.5

	HU	GR	FR	FI	ES	EE	DK
A – Agriculture, forestry and fishing	21.8	–13.6	33.2	–8.5	–81.1	3.2	4.1
B – Mining and quarrying	–1.8	–6.4	1.4	2.0	–14.9	–0.9	0.7
CA – Manufacturing: Food, bev and tobacco	0.5	–12.4	2.5	1.1	–69.8	–1.3	–6.7
CB – Manufacturing: Textiles, clothing, leather	–8.9	–35.4	–33.5	–3.1	–71.8	–7.2	–8.4
CC – Manufacturing: Wood, paper and printing	–18.6	–35.3	–63.7	–19.6	–83.7	–0.6	–9.1
CD – Manufacturing: Coke, petroleum products	–3.6	0.3	–7.4	0.1	1.1	0.3	0.2
CE – Manufacturing: Chemicals	–7.2	–4.8	–9.6	–3.0	–47.3	–0.2	0.0
CF – Manufacturing: Pharma	–3.5	–1.5	–8.7	0.0	–7.1	0.3	8.5
CG – Manufacturing: Rubber, plastics, etc.	–8.4	–17.1	4.7	–6.7	–131.3	–2.4	–10.7
CH – Manufacturing: Basic metals	–7.0	–14.2	–39.1	–8.3	–187.3	–2.7	–19.0
CI – Manufacturing: Computers, etc.	–2.5	–3.7	–39.0	–8.4	–20.9	–0.5	0.8
CJ – Manufacturing: Electrical equipment	–15.1	–4.8	–36.4	–1.6	–34.0	–3.1	–6.8
CK – Manufacturing: Machinery, etc.	–6.9	–5.9	–26.7	–1.6	–32.6	1.3	–15.7
CL – Manufacturing: Transport	22.1	–6.4	–52.0	–5.5	–51.6	2.2	–4.6
CM – Manufacturing: Other and repair	6.2	–21.9	–63.4	–5.0	–129.7	–3.7	1.1
D – Electricity, gas, steam and air conditioning supply	5.4	–11.8	39.4	1.3	10.4	2.4	3.4
E – Water supply; sewerage, waste management and remediation activities	8.7	–5.4	9.8	0.1	19.0	1.8	–4.5
F – Construction	–72.9	–176.2	–45.4	–6.5	–1482.4	–27.8	–55.3
G – Wholesale and retail trade; repair of motor vehicles and motorcycles	–40.5	–120.3	–57.9	–20.3	–355.2	–12.3	–59.0
H – Transportation and storage	4.4	–20.5	–121.3	–6.8	–114.3	6.1	–12.6
I – Accommodation and food service activities	6.1	–28.3	82.8	–7.7	–138.1	–1.4	8.6
JA – Publishing, broadcasting	–3.7	1.4	8.1	5.5	–22.7	1.6	–11.3
JB – Telecomms	4.0	–0.6	–29.1	–3.5	–19.4	–0.4	–3.4
JC – IT and info services	2.9	1.6	114.3	1.0	27.8	2.7	3.9
K – Financial and insurance activities	1.7	–3.1	7.2	3.3	–78.4	2.5	–7.2
L – Real estate activities	4.2	–2.9	–59.1	3.4	–23.9	–2.4	–5.7
MA – Legal, accounting, architecture, engineering, etc.	–3.6	–11.9	70.6	2.6	–43.7	2.5	–5.7
MB – Scientific research/development	–3.6	–1.3	16.4	2.3	8.7	–1.6	–3.1
MC – Other professional scientific, technical	–10.0	8.2	27.3	1.3	–14.6	1.2	–2.0
N – Administrative and support service activities	29.2	–4.7	–17.9	1.2	–62.9	8.1	14.8
O – Public administration and defence; compulsory social security	33.3	–36.7	–202.0	–4.1	138.0	1.0	–26.0
P – Education	1.9	–13.1	–6.3	4.5	46.9	–3.4	39.4
QA – Human health services	9.1	–7.8	54.7	19.0	82.4	3.5	7.5
QB – Residential care and social work activities	3.9	3.1	179.7	12.5	124.5	1.9	24.7
R – Arts, entertainment and recreation	–4.0	–12.5	–2.7	7.5	6.3	–4.8	8.6
STU – Other services activities, etc.	–5.0	–22.2	–2.9	–4.1	–117.8	–3.8	–1.0

	DE	CZ	CY	BG	BE	AT	EU
A – Agriculture, forestry and fishing	–116.2	–23.5	–3.3	–55.9	–31.9	–5.8	–585.4
B – Mining and quarrying	–0.4	–8.3	0.5	–9.0	3.8	0.6	–38.7
CA – Manufacturing: Food, bev and tobacco	13.2	–11.4	–1.5	–25.6	–17.0	7.5	–240.6
CB – Manufacturing: Textiles, clothing, leather	–30.3	–23.8	–0.7	–65.5	–19.5	–10.2	–803.2
CC – Manufacturing: Wood, paper and printing	–47.8	–1.1	–1.8	–7.7	–22.1	–6.2	–578.3
CD – Manufacturing: Coke, petroleum products	–8.2	2.0		–4.2	0.0	0.2	–41.1
CE – Manufacturing: Chemicals	19.2	–0.4	–0.2	–4.0	–20.9	2.6	–116.7
CF – Manufacturing: Pharma	34.2	3.4	–0.4	–2.8	–4.6	6.7	5.2
CG – Manufacturing: Rubber, plastics, etc.	–52.3	–14.7	–0.8	–2.5	–10.7	2.9	–397.7
CH – Manufacturing: Basic metals	25.6	–24.2	–0.8	–5.1	–11.0	–10.0	–613.9
CI – Manufacturing: Computers, etc.	3.6	9.8	0.2	–4.7	–8.1	–7.6	–138.2
CJ – Manufacturing: Electrical equipment	–3.6	–16.5	0.1	–7.8	5.3	17.9	–177.6
CK – Manufacturing: Machinery, etc.	–23.6	–19.6	0.2	–24.4	–0.8	8.3	–384.2
CL – Manufacturing: Transport	76.1	21.5	0.1	1.6	–15.6	3.7	–204.5
CM – Manufacturing: Other and repair	–39.8	–15.0	–1.3	–7.5	–11.5	10.6	–294.5
D – Electricity, gas, steam and air conditioning supply	90.0	–7.8	–0.1	–2.2	–3.0	7.8	216.7
E – Water supply; sewerage, waste management and remediation activities	–19.2	–2.3	2.9	0.9	0.7	–3.4	47.9
F – Construction	86.7	–57.0	–2.5	–115.0	27.6	–26.9	–3143.4
G – Wholesale and retail trade; repair of motor vehicles and motorcycles	94.2	–11.0	4.4	–4.1	24.1	–26.4	–1163.0
H – Transportation and storage	42.2	–12.6	–2.0	–4.6	–31.2	0.6	–596.9
I – Accommodation and food service activities	50.2	–4.4	3.7	–1.3	5.7	11.5	139.8
JA – Publishing, broadcasting	–3.4	–2.7	–0.3	–2.9	10.2	–4.1	10.5
JB – Telecomms	–19.1	3.7	0.0	–1.5	–9.1	–2.1	–229.4
JC – IT and info services	80.0	15.8	1.1	4.6	17.7	11.1	405.2
K – Financial and insurance activities	13.8	16.6	1.7	–7.2	–16.9	3.5	–36.6
L – Real estate activities	11.5	5.9	–0.6	–7.0	5.8	4.5	42.7
MA – Legal, accounting, architecture, engineering, etc.	95.4	26.8	3.2	–1.4	–10.0	20.3	122.2
MB – Scientific research/development	42.1	–4.5	–0.4	–5.4	1.8	1.1	28.1
MC – Other professional scientific, technical	5.6	–3.6	0.4	–3.3	6.3	–3.8	282.6
N – Administrative and support service activities	309.3	–17.6	–1.7	21.2	55.8	11.2	565.0
O – Public administration and defence; compulsory social security	83.2	–8.9	–5.7	–26.6	–13.0	–4.8	–220.0
P – Education	200.1	25.7	3.6	–27.5	27.7	26.9	557.2
QA – Human health services	192.2	13.8	–0.5	–7.4	2.9	3.5	680.7
QB – Residential care and social work activities	321.2	–10.8	0.0	1.7	82.0	33.7	1110.4
R – Arts, entertainment and recreation	31.9	4.6	2.8	–4.2	11.0	6.0	56.7
STU – Other services activities, etc.	–203.2	21.4	6.5	–4.3	6.9	–1.3	10.4

Source: European Labour Force Survey

Annex 3: 5ESS

The work environment and employment downsizing/upsizing: Some preliminary analysis of the European Social Survey 2010, wave 5

The **European Social Survey** (the ESS) is 'an academically-driven social survey designed to chart and explain the interaction between Europe's changing institutions and the attitudes, beliefs and behaviour patterns of its diverse populations'. The project is funded jointly by the European Commission, the European Science Foundation and academic funding bodies in each of the 30 participation countries (2012). To date, there have been five waves of the ESS taking place every two years since 2002. The sixth wave of fieldwork/data collection is under preparation and should take place in 2012 Q4. Participating countries include EU and non-EU Member States. Twenty Member States were covered in the fifth wave of the ESS carried out in 2010, which we use for the analysis that follows.

In order to imitate as closely as possible the analysis carried out with the EWCS, we cover employees currently in work (ILO definition) in the 20 Member States covered (n = 16,139).[21] The specific question in the ESS we rely on deals with recent employment shifts in the respondent's organisation (i.e. downsizing/upsizing):

> *Q63: And during the last three years, would you say that the number of people employed at the organisation for which you work has:*
>
> *1/ decreased a lot, 2/ decreased a little, 3/ not changed, 4/ increased a little, 5/ increased a lot, 8/ don't know*

The question is in the rotating module on Work, Family and Wellbeing, which was first carried out in 2004 and repeated in 2010 with a number of additional questions, like this one, addressing the impacts of the crisis/recession.

Important differences between the ESS and the EWCS questions are noted. The 5EWCS question relates to the workplace or establishment, while the ESS question relates to the 'organisation'. The 5EWCS question does not explicitly address employment losses (or gains), but we assume that in many cases the restructuring is likely to have involved job losses (or gains) at the workplace level. Some of the working hypotheses are at least indirectly based on this assumption (i.e. smaller staff, greater workload per staff member, possibly with new responsibilities leading to high work intensity). The ESS question, on the other hand, is explicitly about employment shifts and can be used to more precisely represent associations between downsizing/upsizing and work environment outcomes.

It helps in any comparison that there are many work environment-related questions in the ESS that cover similar territory to those used in the 5EWCS analysis and that the timeframe and survey year are the same. It also helps that we can generate background variables (age, sex, occupation, sector, etc.) in the ESS with matching or near-matching categories to those used in the EWCS analysis. In this way, we can look at differences in work environment outcomes between employees in downsizing/upsizing organisations (against those in which no employment changes were reported) and see the extent to which these are consistent with the differences across employees depending on whether a broader measure of 'substantial restructuring or reorganisation' was reported. Given the richer set of answer categories in the ESS questions, it should help us to more specifically isolate negative associations of downsizing-type restructurings.

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[21] The following seven Member States did not participate in ESS wave 5, 2010: AT, IT, LT, LU, LV, MT, RO.

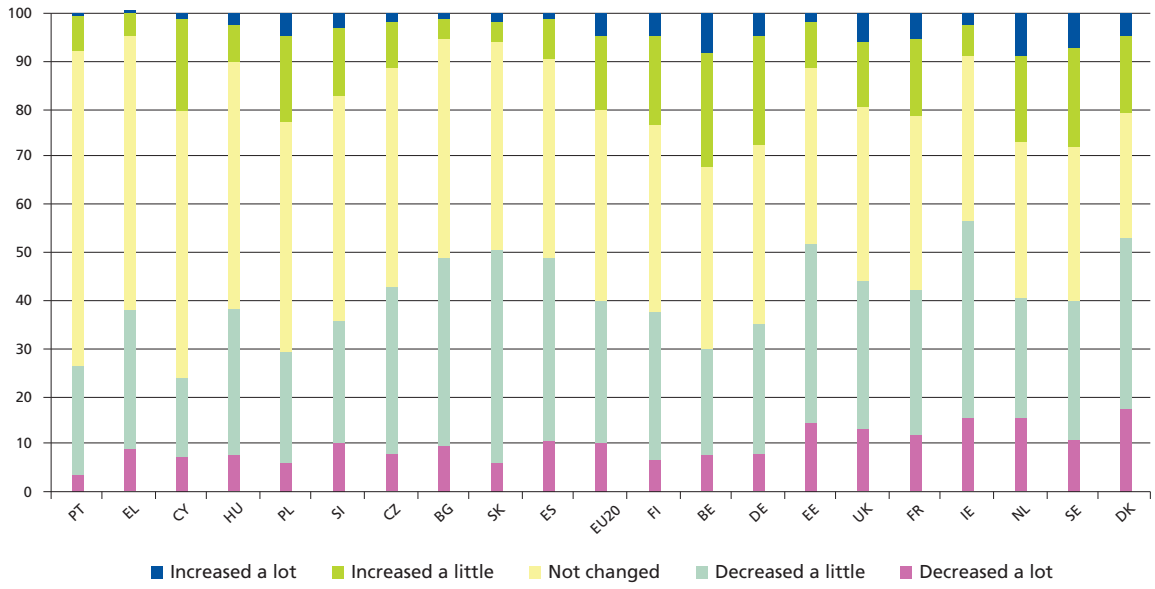
Even though the ESS question has the same timeframe as the EWCS question (three years), we do not exclude respondents with tenure of less than years in this case. A note to ESS interviewers indicates that if a respondent has not been in the current organisation for three years, the initial phrasing should be changed to 'Since you joined the organisation'. This ensures that the respondent has been at work in the organisation since any reported employment upsizing or downsizing, as is the case with our EWCS subpopulation.

Descriptive results

In the ESS, just over 60% of EU respondents indicate that there has been some change in organisation employment levels in the previous three years. This is larger than those reporting substantial restructuring in the EWCS (37%). The inclusion of the categories 'increased/decreased a little' in all likelihood boosts the share of positive answers to the ESS question.

The two main answer categories were 'not changed' (39% of respondents) and 'decreased a little' (30%), while the categories more unequivocally constituting 'substantial restructuring or reorganisation' – 'increased/decreased a lot' – together amounted to just 15% of respondents. The EWCS estimates of substantial restructuring lie approximately midway between the 'employment increased/decreased a lot' and the 'employment increased/decreased a little' estimates in the ESS.

Figure 21: Employment changes in respondent's organisation in previous three years, by country, EU20, 2010 (%)



Source: ESS wave 5 (weighted data, author's analysis)

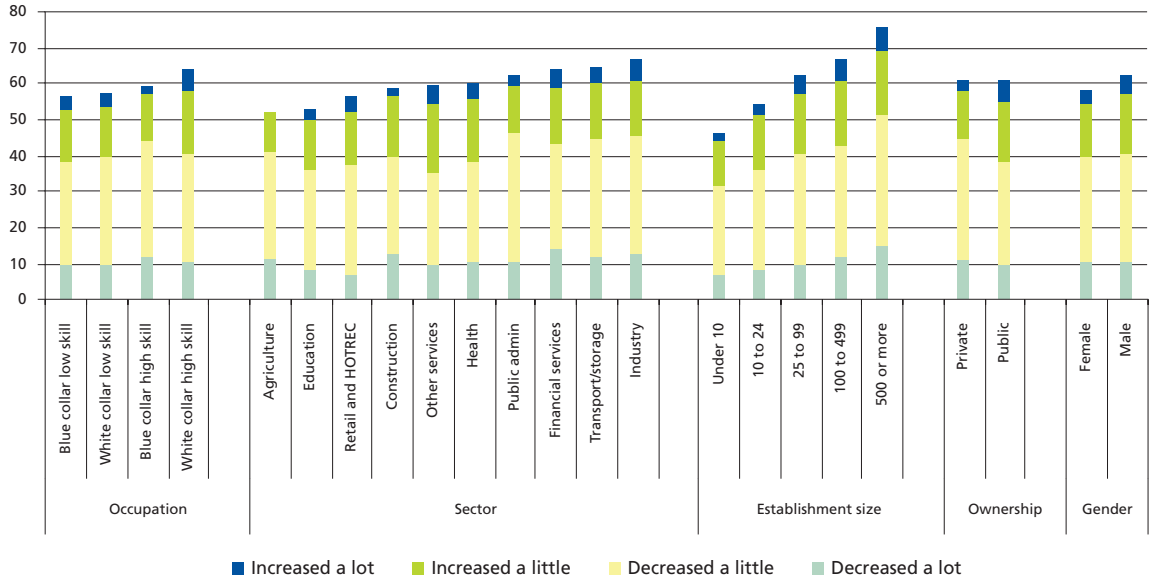
Figure 21 is sorted left to right by the category 'not changed', which we take as a comparator category to 'no restructuring' in the 5EWCS. For many countries, this ranking tells a very similar story to Figure 16 in the main analysis. Sweden and Denmark are the countries with the most volatile reported employment levels at organisation level and were also amongst the top three countries for reporting 'substantial restructuring or reorganisation' in the 5EWCS.[22] Ireland, the UK and Estonia – all countries

[22] Finland, however, is near the EU mean level for this indicator.

with variously hard landings during the recession – also appear near the top for both restructuring and employment downsizing/upsizing. On the other hand, southern and eastern Member States are more likely to report lower levels for both restructuring and of employment change at organisation level. Poland, Hungary, Slovenia and Greece[23] figure near the lower end for both charts.

If we generate a similar chart to Figure 7 in the main analysis, we also observe some familiar patterns for the main background variables. Male employees, high-skill white collar employees and those working in financial services, industry and transport are more likely to report downsizing/upsizing and the strongest determinant of reporting employment restructuring is, as before, establishment size. Those in the private sector report marginally more employment restructuring – contrary to the 5EWCS evidence – but the differences are minor and the construction of the public sector category is somewhat different in both cases[24] and this may in part be responsible.

Figure 22: Employment changes in respondent's organisation in previous three years, EU20, 2010 (%)



Note: Missing category 'no change' (in employment).

Source: ESS wave 5 (weighted data, author's analysis)

Multivariate analysis

Both the 5ESS Core Module F and the Rotating Module G (Work, Family and Wellbeing) include background variables and work environment variables. In some cases there are questions similar in formulation to those in the 5EWCS. For all of the background variables used as controls in the multivariate analysis of the 5EWCS data, it is also possible to replicate them (with some minor deviations) using the 5ESS. It is therefore possible to carry out comparable, if not identical,

[23] The big rise in Greek unemployment took place during/after 2010, not before it.

[24] From the ESS, we take public sector to comprise those employed in 'central/local government', 'other public sector (such as education and health)' and 'a state-owned enterprise', while in the EWCS analysis, public sector refers to those answering 'public sector' and ambiguous categories 'not for profit, NGO', 'joint private-public organisation or company' and 'other' are disregarded.

multivariate analyses with the ESS as already carried out with the 5EWCS, based on a similar logit model.[25] The outputs of this multivariate analysis are presented below.

Table 24: Upsizing/downsizing and work environment outcomes

		Organisation employment levels (ref: no change)			
Theme	**Dependent variable**	**Decreased a lot**	**Decreased a little**	**Increased a little**	**Increased a lot**
Work intensity/ working time	Never enough time to get everything done in job	1.508***	1.166*		
	Job requires me to work very hard				
	Have to work overtime at least once a month	1.600***		1.360***	
	Long weekly working hours (48+ hours)			1.269*	
Autonomy	Allowed to choose/change pace of work				
	Allowed to decide how work is organised			1.277**	
	Can decide starting/finishing time at work			1.318**	1.676***
Training/ job content	Training paid for all/mainly by employer	1.436***	1.265**	1.463***	1.944***
	Job requires learning new things				
	A lot of variety in work				
Employment security	Easy to find a similar job with another employer	0.749**	0.957	1.263**	
	Good opportunities for advancement	0.687***			
Pay	Paid appropriately for work	0.559***			
Employee well-being	WHO-3 (subset of WHO-5)	0.699***	0.782***	0.842*	
	Job security	0.550***	0.762***		
	Job satisfaction	0.524***	0.696***		
	Work-life balance satisfaction	0.540***	0.775***		
Recession impacts	Had to take pay reduction in last 3 years	2.168***	1.512***		1.792***
	Had to work shorter hours in last 3 years	1.964***	1.319**		
	Less job security in last 3 years	4.078***	2.000***		1.404*
	Had to rely on lower household income in last 3 years	1.442***			
Health risks	Health/safety at risk because of job	1.327*			

*Note: The coefficients are odds ratios from logit models where the main independent variable of interest is whether organisational upsizing or downsizing took place in the previous three years (reference category: no change in employment). Control variables: education, sex, occupation, sector, country, establishment size, age group and supervisory status. Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

Source: ESS wave 5 (weighted data, author's analysis)

[25] In other words, a model whose main parameters of interest derive from the following equation:

$$\exp(Bx) = P(Y = 1 \mid X = 1, Z_1 \ldots, Z_p) / P(Y = 0 \mid X = 1, Z_1 \ldots, Z_p) \;/\; P(Y = 1 \mid X = 0, Z_1 \ldots, Z_p) / P(Y = 0 \mid X = 0, Z_1 \ldots, Z_p)$$

where the dependent variable Y (e.g. high work intensity) has been dichotomised, the independent variable of main interest, X (e.g. restructuring reported in the case of the 5EWCS), has also been dichotomised, $Z_1 \ldots, Z_p$ are other predictor or control variables and the exp(Bx) is the estimated odds ratios reported. In the case of the 5 ESS analysis, the odds ratios of interest are those comparing the impact on outcome variables (e.g. work intensity) for employees reporting different categories of organisation employment shift ('increased a lot', etc.) compared to a reference 'no (employment) change' category.

As we can see from Table 24, the results of a preliminary analysis of the ESS data are largely supportive of the findings based on the EWCS analysis. What the ESS data make clearer – and what we were not in a position to infer from the EWCS data given the formulation of the core restructuring question – is that negative work environment effects are more likely in organisations where employment has decreased, especially those were employment has decreased a lot. The following summarises the main findings:

1. Restructuring in the form of downsizing is a strong predictor of lower general well-being and lower job satisfaction and reduced job security. The more employment declined, the stronger the impact.

2. Increased levels of reported work autonomy and control over working time was observed in upsizing firms but not in downsizing firms.

3. Employees in organisations where employment had declined a lot in the previous three years were more likely to report that their health/safety was at risk because of their job.

4. Employer-paid training is more prevalent in organisations where employment levels shifted, whether the shift was positive or negative.

5. Conversely, there was no significant difference in terms of stimulating work (learning new things or reporting a variety of work tasks) between downsizing/upsizing and employment-stable organisations. This is the one area in which the EWCS and ESS findings contradict each other.

6. There was only very limited evidence of greater weekly working hours in restructured organisations, as in the EWCS. Relatively greater work effort was more likely along the intensive as opposed to the extensive margin.

7. Of the work intensity proxies, two were significantly higher for those employed in employment-declining organisations – the requirement to work overtime at least once a month and difficulties in getting 'everything in the job done'. But one of the work intensity variables in the ESS – 'my job requires that I work very hard' – was not significant.

With some qualifications, noted above, we can conclude that the ESS data allow us to identify similar associations between restructuring and work environment outcomes, as already seen in the main EWCS analysis. It also confirms that most negative work environment outcomes are more specifically associated with organisational downsizing as opposed to upsizing.

Annex 4A: 5EWCS

Recoding of variables (where ordinal) and construction of composite variables

Work organisation

Work intensity

Working to tight deadlines: 1 = those answering around half of the time or more.

Working at high speed: 1 = those answering around half of the time or more.

Enough time to get job done: 1 = those answering sometimes/rarely/never.

Working in free time to meet work demands: 1 = those answering 'once or twice a month' or more frequently.

Can take a break when wishes: 1 = those answering most of the time or always.

High work intensity: Those answering around half of the time or more to both the tight deadlines and high-speed work questions. Cronbach's alpha: 0.77.

High work autonomy: Respondents who answered the following three questions positively – a/ able to choose pace, b/ method, c/ order of work. Cronbach's alpha: 0.77.

Influence/involvement

Has say in choice of work partners: 1 = those answering most of the time or always.

Involved in improvents in work organisation of dept or organisation: 1 = those answering most of the time or always.

Can influence decisions that are important for work: 1 = those answering most of the time or always.

Training/development

Underqualified: 1 = those answering 'I need further training to cope well with my duties'.

Overqualified: 1 = those answering 'I have the skills to cope with more demanding duties'.

Computer use: 1 = those answering 'half of the time' or greater.

Working time

Long weekly hours: 1 = those reporting working 48 hours or more per week.

Long working days: 1 = those reporting working more than 10 hours a day at least once a month.

Health risks

Physical risk exposure: 1 = those answering 'all of the time' or 'nearly all of the time' to any one of 12 physical risk exposures (working in tiring or painful positions, carrying or moving heavy loads, etc.).

Psychosocial risk exposure: 1 = those answering yes to any one or more of five psychosocial risk questions (verbal abuse, bullying/harassment, etc.).

Health outcomes

Health in general: 1 = those answering 'good' or 'very good'.

Any physical health problems in past 12 months: 1 = those experiencing any of the following in previous 12 months – backache, muscular pains in lower limbs or upper limbs, injury(ies).

Any psychological health problems in past 12 months: 1 = those experiencing any of the following in previous 12 months – fatigue, depression, headaches, sleeping problems.

Multiple physical health problems: As above but at least two problems mentioned.

Multiple psychological health problems: As above but at least two problems mentioned.

Stress: 1 = those indicating they experience stress in their work 'always' or 'most of the time'.

General outcomes

Satisfied with working conditions: 1 = answering 'satisfied' or 'very satisfied'.

Work–life balance satisfaction: 1 = answering that 'working hours … fit family or social commitments outside work' 'well' or 'very well'.

Well-paid: 1 = in top three deciles of pay.

Consider self well-paid: 1 = those answering 'agree' or 'strongly agree' to statement 'I am well paid for the work I do'.

Job security: 1 = those answering 'disagree' or 'strongly disagree' to statement 'I might lose my job in the next six months'.

Employment security: 1 = those answering 'agree' or 'strongly agree' to statement 'If I were to lose or quit my current job, it would be easy for me to find a job of similar salary'.

Annex 4B: Multivariate analysis

Presentation of findings of multivariate analysis

Given the requirements of the logit model, we dichotomise each of the outcome variables where the source variable has more than two answer categories. Independent (control) variables include country (27 country dummies), age (3 categories: 15–29, 30–49, 50+), sex, establishment size (3 categories: < 10, 10–99 and ≥ 100), education level (3 categories), sector (10 categories, NACE 1-digit) and supervisory responsibilities (3 categories: no supervisory responsibilities, responsibility for less than 10 staff, responsibility for 10 or more staff).

An alternative strategy would be to run ordered or multinomial logit models with the same sets of variables. This would have the advantage of retaining the full detail of the original dependent variables but at the expense of greater complexity of the models and greater difficulty in interpretation of the coefficients.

Outcomes of the logits are in the form of odds ratios (OR) comparing the odds of those respondents who have reported restructuring with those respondents who have reported no restructuring. Odds ratios are provided for a wide range of work- and health-related outcomes. For example, the reported OR for high work intensity (1.447) indicates the change in odds of a respondent reporting high work intensity based on whether or not he/she has reported workplace restructuring, controlling for sex, age, country, establishment size and sector, supervisory status and educational attainment level. An OR > 1 indicates a greater likelihood of reporting high work intensity for those reporting restructuring, while an OR < 1 indicates a lower likelihood.

Odds are related to but not the same as probabilities and as a result their significance is not necessarily intuitively easy to grasp. The relationship is expressed as follows: Odds = p/(1 – p). In other words, the odds of something happening is the same as the probability of it happening divided by the probability of it not happening. Furthermore, odds ratios are not the same as odds; they involve an additional stage of calculation. As odds ratios are the basis of our presentation of most of the results in this Chapter 2, a practical example will hopefully help to clarify the relationship between ORs and changes in probabilities. Let's assume our models generate an odds ratio of 1.5 for restructuring in a logit where work intensity is the dependent variable and using the controls indicated above (the actual OR is not too dissimilar, 1.447, but we'll use OR of 1.5 for ease of presentation). This means that the odds of reporting high work intensity are 50% higher for those in restructured workplaces. In terms of probabilities, an OR of 1.5 is the outcome of the following calculation:

P(high work intensity | restructuring)/P(not high work intensity | restructuring)

/

P(high work intensity | no restructuring)/P(not high work intensity| no restructuring)

For a simple illustration, inputting the following values would generate an OR of 1.5:

0.6 / 0.4

/

0.5 / 0.5

In this case, an OR of 1.5 corresponds to an increase in probability of reporting high work intensity from 0.5 to 0.6, i.e. 20%, based on the comparison of restructured vs. non-restructured employees,

or 10 percentage points. ORs greater than 1 signify a higher likelihood of falling into the positive category of the dependent variable (high work intensity in this case), while ORs less than 1 signify a lower likelihood.

For simplicity of presentation, the tables in the text present odds ratios and significance levels only for independent variables of specific interest (whether or not restructuring was reported) and will omit the odds ratios for other co-variates. A sample full output with ORs and other model parameters is included below. The dependent variable is work intensity (1 = reporting working to tight deadlines and at high speed 'around half of the time' or more, otherwise = 0). The remaining outputs are available on request.

Table 25: Sample full logit output (dependent variable: work intensity (1 = yes, 0 = no)), coefficients expressed as odds ratios

DEPENDENT VARIABLE: high work intensity	Odds ratio/sig
INDEPENDENT VARIABLES	
RESTRUCTURING. Yes=1	1.447***
EDUCATION LEVEL: Primary. Ref: Second level completed	0.965
Third level	0.996
OCCUPATION, white collar low skill. Ref: white collar high skill	0.809**
Blue collar high skill	1.645***
Blue collar low skill	1.403***
AGE, 35-49 yrs. Ref: <35 yrs	0.855*
50+ yrs	0.705***
SEX. Male=1, Female=0	0.809***
SUPERVISORY STATUS, =<10 persons. Ref: not supervisor	1.367***
Supervisor, >10	1.252
FIRMSIZE, 10-99. Ref: <10	1.331***
Firmsize, 100+	1.296***
SECTOR, Agriculture. Ref: Industry	0.559**
Construction	1.518***
Retail etc	0.997
Transport	1.129
Financial services	1.174
Public admin	0.712**
Education	0.399***
Health	0.710**
Other services	0.988
COUNTRY, Bulgaria. Ref: Belgium	0.466***
Czech Republic	0.96
Denmark	0.967
Germany	2.220***
Estonia	0.983
Greece	2.129***
Spain	1.212
France	1.167
Ireland	1.400**

DEPENDENT VARIABLE: high work intensity	Odds ratio/sig
INDEPENDENT VARIABLES	
Italy	1.297*
Cyprus	3.339***
Latvia	0.471***
Lithuania	0.499***
Luxembourg	0.965
Hungary	1.758***
Malta	1.410**
Netherlands	0.923
Austria	1.631***
Poland	0.556***
Portugal	0.654**
Romania	1.333*
Slovenia	2.011***
Slovakia	0.845
Finland	1.272*
Sweden	1.662***
United Kingdom	1.067
N	19866
pseudo R-sq	0.064

Exponentiated coefficients

** p<0.05, ** p<0.01, *** p<0.001*

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The ERM Report 2012 focuses on the consequences of restructuring for employees. It examines which employees lost their job at the onset of the economic crisis, which of them found a new job and how both job loss and subsequent re-employment impacted on their overall life situation and satisfaction. It also looks at the impact on working conditions for employees who remain at the restructured firm. Both these studies, of those who lost their jobs and those who stayed at the restructured workplace, have never before been analysed by using common, EU-wide and representative, datasets. The report also provides an overview of recent restructuring using the ERM database. While restructuring cases reporting job loss have fallen since the peak of 2009, they still outnumber announcements of job gain. Several recent cases testify to serious problems in the once very promising alternative energy sector in Europe. The findings show that much of the recently announced job creation is in the hotels and retail sectors.

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is a tripartite EU body, whose role is to provide key actors in social policymaking with findings, knowledge and advice drawn from comparative research. The Foundation was established in 1975 by Council Regulation EEC No 1365/75 of 26 May 1975.

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