Project no. CIT3-CT-2005-006193
WORKS
Work organisation and restructuring in the Knowledge Society

Integrated project
Priority 7: 'Citizens and governance in a knowledge-based society'

Deliverable 15.2.2
The transformation of work?
A quantitative evaluation of change in work in France

Due date of deliverable: May 2008
Actual submission date: May 2008

Start date of project: 01/06/2005 Duration: 48 months

Lead contractor:
HIVA-K.U.Leuven

Final report

Project co-funded by the European Commission within the Sixth Framework Programme (2002-		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission	
CO	Confidential, only for members of the consortium (including the Commission Services)	

The transformation of work?

WP15 - A quantitative evaluation of changes in work in France

Ekaterina Kalugina
CEE, France

CIT3-CT-2005-006193

Copyright (2008) © Work organisation and restructuring in the knowledge society - WORKS project
Project number: CIT3-CT-2005-006193

All rights reserved. No part of the report may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording; and may not be quoted or cited, without prior permission in writing from the Project Co-ordinator.

The authors are solely responsible for the content of this report. It does not represent the opinion of the Community. The Community is not responsible for any use that might be made of data/information appearing therein.

Contents

1 Introduction

The core focus of WORKS project is on changes in work caused by global restructuring. These changes concern first of all shifts in employment, job growth and job decline related to the global restructuring of value chains. The French country's report aims to bring together the main WORKS quantitative results in order to enrich them with more detailed and deep comments. It will provide a more comprehensive and complete overview of the WORKS findings concerning France. It will also help to understand if the observed changes in work are robust across different datasets and methods.

To have an idea about economic performance of France, in Table 1.1 we report some indicators reflecting the economic growth, knowledge economy and situation on its labour market. According to OECD data (OECD, 2006), the French economic growth is lower then EU-15 average (1.2 in France *versus* 2.38 in EU-15 in 2005) and it has been slowing down in 2005 compared to 1995, which is in accordance with the EU-15 average trend.

We can observe decreases in French unemployment, self-employment and part-time rates. However, the French unemployment rate is the highest in EU-15 in 2005, close to what is observed in Greece and Germany.

The performance in terms of knowledge investment is disappointing in France. Gross domestic expenditures on R&D (as a *per cent* of GDP) slightly diminished between 1995 and 2003 but stayed higher than EU-15 average. Compared with leading countries, France has some scope for progress in terms of R&D investment. In Sweden, for example, these expenditures increased from 3.35 *per cent* in 1995 to 3.98 *per cent* in 2003 while in France they decreased from 2.29 to 2.18.

As WORKS project is concentrated on work, it is worth saying a few words about the specificities of the French labour market. The high unemployment rate has been a central problem in France over the last 30 years. While France has an image of a country where the workers' protection legislation is highly developed, France is also the country where the feeling of job insecurity is the highest among industrialised countries. For example, Postel-Vinay and Saint-Martin (2004) constructed three indicators of 'feeling of job insecurity' using subjective data about job satisfaction. France has the worst performance for the first indicator coming from the following question: '*How much do you agree or disagree that this statement applies to your job? My job is secure: Strongly agree-Agree-Neither agree nor disagree-Disagree-Strongly disagree*'.

Two other indicators come from the following questions: 'Do you worry about the possibilities *of losing your job? I worry a great deal-I worry to some extent – I worry a little – I don't worry at all*' and '*How satisfied are you with your job or business in terms of job security? Using the scale 1 to 6, please indicate your degree of satisfaction in each case. Position 1 means that you are not satisfied at all and 6 that you are fully satisfied*'. For these two indicators France comes forth in terms of intensity of job insecurity, after Portugal, Germany and Czech Republic for the first indicator and after Portugal, Greece and Italy for the last one.

This feeling of job insecurity persists in spite of the fact that job destructions in France are not more important then in other industrialised countries. Abowd, Corbel and Kramarz (1999) showed that French labour market is characterised by high degree of simultaneous job creations and job destructions.

Why is there such a paradox in France? Cahuc and Kramarz (2004) point out that the unemployment rate is particularly high for young and seniors in France. At the beginning the active life, the unemployment rate is very high and 73 *per cent* of recruitment is made on various fixed term contracts. During the 'best years' of active life (25-54) the unemployment duration is higher compared to other countries and is increasing with age: it is difficult to find a new job if you lose yours. This problem is more acute for seniors who prefer to leave the activity earlier then the legal retirement age.

WORKS project is not focused on unemployment explanations but on transformation of work. Our country report is based on different contributions from the quantitative pillar of WORKS project. We analyse the main results concerning France and provide some interpretations. The analysed findings come from of WP8 and WP9 reports.

The WP8 report presents the literature review of the results of the major organisation surveys in Europe according to the five key issues for the WORKS project:

- the restructuring of the global value chain;
- changes in work organisation;
- flexibility;
- skills and internal labour markets;
- career trajectories and the quality of working life.

The results for France come from two types of sources:

- two national organisation surveys: COI (Changements Organisationnels et l'Informatisation, *Organisational Change and Computerisation*) and REPONSE (Relations Professionnelles et Négociations en Entreprises, *Profesionnal Relations and Negociations in Entreprises*);
- European-wide surveys: CIS (Community Innovation Survey), CVTS (Continuing Vocational Training Survey) and ESWT (European Survey on Working time and Work-Life balance).

The research produced in the frame of the quantitative work of WP9 focus on evolutions in the nature of the work, working conditions and employment patterns. To address these issues each WP9 report is based on the European micro-level dataset. The EU Labour Force Survey is used to provide basic facts on sectoral and geographical shifts in employment throughout Europe and to investigate various aspects of work flexibility. The European Working Conditions Survey is used to analyse the national variation in work complexity, independence in time allocation, work intensity and quality of working conditions. Finally, the European Household community Panel is used to look at aspects in individual-level changes in job skills and occupational switching over the career.

The country report is important as from a quantitative pillar, especially from WP9 reports, it appears that there is no clear-cut national convergence in respect of change on a number of dimensions, nor a consistent means of grouping types of countries over time and across different dimensions. Rather, a high level of national specificity is observed.

Table 1.1 Some macroeconomic indicators for the EU-15

	ALL		AT		BE		DK		FI		FR		DE		GR	
	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05
Real GDP growth: annual growth in *per cent*	3.2	2.38	1.9	2.0	2.4	1.2	3.1	3.0	3.4	2.9	2.4	1.2	1.9	0.9	2.1	3.7
Standardised unemployment rates: total; as a percentage of civilian labour force	9.5	7.0	3.9	5.2	9.7	8.4	6.8	4.8	15.4	8.4	11.1	9.9	8.0	9.4	9.1	9.8
Self-employment rates: total; as a percentage of total civilian employment	18.2	15.7	14.4	13.3	18.8	..	9.6	8.7	15.6	12.7	10.8	9.0	10.7	12.4	46.1	36.4
Part-time employment rates as a percentage of total employment	13.9	16.4	11.1	16.2	14.6	18.1	16.9	18.0	8.7	11.2	14.2	13.6	14.2	21.8	7.8	6.1
Gross domestic expenditure on R&D (as a *per cent* of GDP)	1.78	1.91*	1.54	2.19*	1.72	1.89*	1.82	2.62*	2.26	3.48*	2.29	2.18*	2.19	2.52*	0.49	0.62*
Researchers (per thousand employed, full-time equivalent)	5.2	6.1*	..	..	6.1	..	6.1	9.3*	8.2	17.7*	6.70	7.8*	6.2	7.0*	2.5	..

	IE		IT		LU		NL		PT		ES		SE		UK	
	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05	‘95	‘05
Real GDP growth: annual growth in *per cent*	9.6	5.5	2.9	1.1	1.4	4.0	3.0	1.5	4.3	0.4	2.8	3.5	3.9	2.9	2.9	1.9
Standardised unemployment rates: total; as a percentage of civilian labour force	12.3	4.4	11.2	7.7	2.9	4.5	6.6	4.7	7.3	7.6	18.8	9.2	8.8	6.4	8.5	4.8
Self-employment rates: total; as a percentage of total civilian employment	22.2	17.4	29.3	27.0	7.6	..	12.4	..	27.9	25.2	25.2	18.3	11.2	9.8	14.6	13.5
Part-time employment rates as a percentage of total employment	14.3	18.7	10.5	14.7	11.3	14.0	29.4	35.7	8.6	9.8	7.0	11.4	15.1	13.5	22.3	23.6
Gross domestic expenditure on R&D (as a *per cent* of GDP)	1.28	1.19*	1.00	..	..	1.78*	1.99	1.84*	0.57	0.78*	0.79	1.05*	3.35	3.98*	1.95	1.88*
Researchers (per thousand employed, full-time equivalent)	4.5	5.5*	3.4	..	..	6.6*	4.9	..	2.6	4.0*	3.4	5.2*	8.2	11.0*	5.3	..

Source: OECD (2006)

The report is organised as follows. In the first section we analyse the findings concerning one of the key issues of WORKS project – work flexibility. Then, based on HIVA WP9 report we deal with the issue of the effects of global value chain restructuring on employment. Section 3 traces the results referring to occupational change and skills. Finally, changes in work organisation are studied in last section.

2 Work flexibility

The first important issue analysed within the WORKS project concerns work flexibility. As work flexibility is at the heart of public and academic debates on changes in work and labour market reforms, this topic is studied in detail both in WP8 and WP9 reports. A sectoral and occupational description of trends in work hours, part-time work, temporary work and self-employment is provided by L. Brindelli and E. Rustichelli on the basis of the EU Labour Force Survey within the WP9 report. However, the sectoral and occupational perspective is only available on the European level.

WP8 report sheds light on flexible working time arrangements, overtime work, unusual hours, part-time and temporary work as well as provides the picture of determinants and effects of overall flexibility.

2.1 Time use

Overall Brindelli and Rustichelli report shows that average working time in Europe is slowly declining since the early 90s and this trend persists. According to the authors a major role has been played by the growth of part-time contracts on average in EU-15.

In France the average usual weekly working hours are increasing: from 36.8 in 2001 to 38 in 2005 (Table 2.1), contrary to the EU-15 average trend. France is not a country where the average usual weekly working hours are the weakest. On the contrary, in most countries this indicator is lower. In 2005 this is true for Belgium, Germany, Denmark, Finland, Ireland, Luxembourg, Sweden and UK. Eurostat results could be compared with French national Employment Survey. The employment survey was created in France in 1950 to regularly measure employment – which could not be done using the population census – and to count the number of job seekers. Over the decades, the survey adopted numerous technical innovations in terms of sampling methods, information collection methods and computerised data processing. On 1 January 2003, the Employment Survey was made quarterly. Its data are now collected continuously every week of each quarter. It had been annual since 1950, with data generally being collected in the month of March. This important change complies with a European move to harmonise unemployment statistics (Goux, 2003).[1] According to Employment Survey (Bruyère *et al.*, 2006) average

1 Since 2002 survey questionnaire has also been amended to bring it into line with European harmonisation and to allow for a more accurate description of employment (Givord, 2003). For example, the concept of weekly working hours is now used instead of *usual* working hours. Average *usual* weekly working hours generally refer to a 'normal' week without any particular events. While '*usual* working hours' and 'average working hours' are almost identical for individuals having regular working schedule, this is not the case for individuals having irregular working arrangements. These individuals indicate the average weekly working hours during the last month when responding to the question about the average working hours. As these respondents are generally characterised by a lot of overtime

weekly working hours for full-time employees in France seem to be stable rather than increasing between 2002 and 2004 (38.8 in 2002, 38.8 in 2003 and 38.9 in 2004).[2]

Table 2.1 Average usual weekly working hours,[3] EU-15, 2001-2005

	2001	2002	2003	2004	2005
Austria	38.3	37.9	37.9	39.9	39.3
Belgium	37.5	37.5	37.4	36.9	37.0
Germany	36.7	36.5	35.9	36.0	35.7
Denmark	36.2	35.8	35.9	35.6	35.6
Spain	40.1	39.9	39.7	39.6	39.4
Finland	38.4	38.2	38.0	37.9	37.7
France	36.8	36.3	37.9	37.9	38.0
Greece	43.3	43.2	43.4	43.0	43.1
Ireland	37.7	37.5	37.0	36.9	36.8
Italy	39.1	39.1	39.0	38.8	38.6
Luxembourg	38.2	38.0	38.1	37.7	37.5
Netherlands	31.6	31.1	30.9	30.8	30.7
Portugal	39.5	39.5	39.1	39.3	39.2
Sweden	36.7	36.7	36.5	36.4	36.5
UK	37.7	37.4	37.2	37.0	37.0
EU-15	37.6	37.4	37.4	37.4	37.3

Source: Birindelli and Rustichelli (2007), Eurostat data

The figures from Table 1.1 should be completed by the dynamics in part-time jobs. According to Brindelli and Rustichelli this type of jobs have been growing in France and in Europe on average between 1995 and 2005 (in EU-15 from 16.0 to 20.4, cf. Table 2.2). In France the part-time work dynamics is also positive (from 15.6 in 1995 to 17.4 in 2005, cf. Table 2.2). However, the rates are slightly lower than the EU-15 average especially from year 2000. The results from Employment Survey for the last years of analysed period are

the average weekly working hours are often greater then usual weekly hours. This indicator seems to be the same as the Eurostat concept used in Table 2.1.

2 We do not dispose the direct estimation of the working hours of full sample of employees (full-time and part-time) from Employment Survey. However, according to the Employment Survey results the number of hours worked by part-timers, full-timers as well as the proportion of part-time contracts did not changed between 2002 and 2004. So, the stabilisation of average weekly working hours is a reality for this period in France. The Eurostat data reports greater weekly working hours compared with French Employment Survey due probably to the overestimation of working hours of full-time employees.

3 According to the Eurostat documentation, the number of hours usually worked per week covers all hours including extra hours, either paid or unpaid, which the person normally works, but excludes the travelling time between home and workplace and the time taken for the main meal break (usually at lunchtime) are excluded. Persons who usually also do homework are asked to include the number of hours they usually work at home. Apprentices, trainees and other persons learning a job are asked to exclude any time spent at college or in other special training centres. Some persons, particularly self-employed persons and family workers, may not have usual hours, in the sense that their hours vary considerably from week to week or month to month. If a respondent is unable to provide a figure for usual working hours for this reason, the average of hours actually worked per week over the past four weeks should is used as a measure of usual hours.

very close to those from Eurostat. According to Bruyère *et al.* (2006) there were 17.4 *per cent* of part-timers in France in 2002 and 17.3 *per cent* in 2003 and 2004.

Table 2.2 Part-time workers as percentage of total employment, EU-15 countries 1995-2005

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
AT	13.9	14.9	14.9	15.8	16.8	17.0	17.2	19.0	18.6	20.2	21.0
BE	13.6	14.0	14.7	15.7	19.8	20.7	18.5	19.4	20.6	21.6	21.9
DE	16.3	16.5	17.5	18.3	19.0	19.4	20.3	20.8	21.7	22.3	24.1
DK	21.6	21.5	22.3	22.3	20.8	21.7	20.1	20.6	20.9	22.5	22.0
ES	7.4	7.9	8.2	7.9	8.2	8.1	8.1	8.1	8.3	8.9	12.8
FI	11.8	11.6	11.4	11.7	12.2	12.2	12.0	12.4	12.9	13.1	13.6
FR	15.6	16.0	16.8	17.2	17.3	16.9	16.4	16.2	16.7	16.6	17.4
GR	4.8	5.3	4.6	6.0	6.1	4.6	4.1	4.4	4.1	4.6	4.8
IE	12.1	11.6	12.3	16.7	16.8	16.8	16.6	16.6	17.0	16.9	-
IT	6.6	6.6	7.0	7.4	7.9	8.8	9.1	8.6	8.6	12.7	12.8
LU	7.9	7.7	8.2	9.5	10.7	11.3	11.3	11.7	13.4	16.4	17.4
NL	37.3	38.1	38.0	38.8	39.4	41.2	42.2	43.8	45.0	45.6	46.2
PT	7.5	8.7	9.9	11.2	11.1	10.8	11.3	11.4	11.8	11.2	11.5
SE	26.2	24.5	24.5	23.9	23.8	22.8	21.0	21.4	22.9	23.9	25.0
UK	24.1	24.6	24.9	24.9	25.2	25.3	25.2	25.5	26.0	26.2	25.7
EU-15	16.0	16.3	16.9	17.3	17.7	17.9	18.0	18.2	18.6	19.5	20.4

Source: Birindelli and Rustichelli (2007), Eurostat data

The authors consider that women activity rate is one of the main determinants of part-time diffusion: countries characterised by lower female activity rates show the lower part-time incidence in the labour market. They note that causal effect between female participation and part-time diffusion may be twofold: on one hand, as part-time is more spread among female workers, the more women participate in the labour market the higher the percentage of total part-time contracts; on the other hand, the more employers demand part-time job the higher the participation rate of women willing to work part-time.

Female part-time workers as percentage of total female employment are also slightly increasing in France (from 28.9 in 1995 to 30.9 in 2005, cf. Table 2.3) but the rate of female part-time workers is considerably lower in France than in EU-15 on average (in 2004, for example, 30 *per cent versus* 35.2 *per cent*, cf. Table 2.3). According to OECD data (OCDE, 2006) the women participation in the French labour market is at the EU-15 average level. In 2004 for example, women employment rate was 56.7 *per cent* of the active female population between 15 and 64 years old which is exactly the European average for this year. This rate is lower in Belgium, Spain, Greece, Ireland, Italy and Luxembourg.

Table 2.3 Female part-time workers as percentage of total female employment, in EU-15, 1995- 2005

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
AT	26.9	28.8	29.0	30.3	32.5	33.0	33.6	35.9	35.4	38.6	38.9
BE	29.8	30.5	31.4	33.3	39.9	39.9	36.8	37.7	39.7	41.0	40.7
DE	33.8	33.6	35.1	36.4	37.2	37.9	39.3	39.5	40.8	41.6	44.3
DK	35.5	34.5	34.5	35.8	33.9	35.2	31.6	31.4	32.0	33.9	32.7
ES	16.5	17.0	17.4	17.1	17.6	17.1	17.3	17.1	17.4	18.3	24.9
FI	15.8	15.6	15.6	17.0	17.0	16.9	16.7	17.1	17.8	17.8	18.5
FR	**28.9**	**29.4**	**30.9**	**31.5**	**31.6**	**31.0**	**30.4**	**29.7**	**29.9**	**30.0**	**30.9**
GR	8.4	9.0	8.1	10.5	10.2	8.0	7.2	8.0	7.4	8.6	9.1
IE	23.1	22.1	23.2	30.3	30.7	30.9	31.3	30.7	31.3	31.9	-
IT	13.1	13.0	13.9	14.4	15.7	17.4	17.8	16.7	17.2	24.8	25.7
LU	20.3	18.4	20.2	22.5	24.6	26.0	25.6	26.4	30.7	36.3	38.2
NL	67.3	68.5	67.9	67.9	68.6	70.6	71.3	72.8	74.2	74.8	75.3
PT	11.6	13.0	15.0	17.3	16.8	16.5	16.7	16.5	17.3	16.1	16.6
SE	43.4	41.8	41.4	40.7	40.0	36.3	32.7	32.9	35.4	36.4	39.9
UK	44.3	44.8	44.9	44.8	44.3	44.4	44.3	43.9	44.2	44.2	43.1
EU-15	31.3	31.6	32.4	33.0	33.4	33.6	33.6	33.4	34.0	35.2	36.6

While average weekly working hours of full-time workers is almost identical all over EU-15, a more volatile indicator is part-time workers' working time. According to the Table 2.4, in Germany, for example, the average weekly working hours of part-time workers are 17.4, in Sweden they are 24.8. French full-timers work slightly less then the average of EU-15 (41 *versus* 41.8) while part-timers work three hours more per week then the EU-15 average indicator (23.2 *versus* 19.6). We can note that France is characterised by long working hours of its part-timers: only in Sweden this indicator is higher.

Table 2.4 Average weekly working hours, EU-15, 2005

	Full-time	Part-time
AT	44.3	20.5
BE	41.1	23.1
DE	41.5	17.4
DK	40.3	18.6
ES	42.3	19.2
FI	40.5	20.0
FR	**41.0**	**23.2**
GR	44.2	21.2
IE	40.6	18.6
IT	41.2	21.1
LU	40.9	21.2
NL	40.7	19.0
PT	41.6	19.4
SE	41.1	24.8
UK	43.2	18.8
EU-15	41.8	19.6

Source: Eurostat

Part-time work is also analysed with the aid of ESWT (European Survey on Working time and Work-life balance) data by European Foundation (2006).[4] This data was launched in 2004 by the European Foundation for the Improvement of Living and Working Conditions. This is a large-scale representative sample survey at establishment level in 21 European countries, *i.e.* in the former 15 member states of the European Union and in six of the new member states (the Czech Republic, Cyprus, Latvia, Hungary, Poland and Slovenia). Fieldwork was carried out in autumn 2004 and in spring 2005. In over 21 000 establishments covering both private and public sectors, personnel managers and employee representatives – where available – were interviewed about working time arrangements and work–life balance at the workplace.

The authors determine country clusters where France is included in Continental cluster:
- Continental: Austria, Belgium , France, Germany, Luxembourg and Netherlands;
- Eastern: Hungary, Latvia Czech Republic and Poland;
- Nordic: Denmark, Finland and Sweden;
- Northern: United Kingdom and Ireland;
- Southern: Cyprus, Greece, Italy, Portugal, Slovenia and Spain.

The probability that a company employs a large share of part-timers increases by around 10 *per cent* points in Continental and Northern establishments, compared to Nordic companies. However, the authors note, that as for within country cluster results, French com-

4 The authors are Dominique Anxo, Colette Fagan, Marie-Thérèse Letablier, Corinne Perraudin and Mark Smith.

panies have a higher propensity of employing only full time workers while in the other continental countries the reverse effect is found. The analysis of patterns of part-time work shows that men part-time rate rates are lower in France, Italy, Germany and Austria than in other countries. Compared to Nordic establishments the probability that companies provide full reversibility options between full time and part time is, other thing being equal, slightly higher in Northern firms, of the same order of magnitude in continental firms, and lower in the remaining country clusters.

In WP8 it is also pointed out that part-time work is one of the most widely known 'atypical' working time arrangements in Europe with an increasing share of part-time workers over the past decade. The country typology by incidence of part-time work at organisation level and the share of part-timers par organisation is constructed. This typology places France rather at the end of the distribution for the percentage of establishments with any part-timers and at the middle of the distribution in terms of share of part-timers per establishment.

Overall, the topic of working hours is worthy of special attention notably in French labor market context. Table 2.1 based on Eurostat data suggests that average usual weekly working hours was slightly increasing in France. However, a relatively short time period (2001-2005) is analysed and Employment Survey results report rather a stabilisation of average weekly working hours during three years of analysed period. The concept which is more commonly used for such analysis is the annual working time duration.[5]

It is well known that the reduction of working time has a long tendency in France. According to Artus, Cahuc and Zylberberg (2007), the annual working time duration was 2,024 hours in France in 1960 while is it only 1,434 in 2005. According to INSEE (INSEE 2006) in 2003 and 2004 the annual working time duration was 1,650 hours for full-time employees except teachers. It corresponds to 35 hours and 52 minutes of average weekly working hours if we take a full-time employee who takes 5 weeks of leave and doesn't work during the 5 days of national holidays.

The special issue is that in France this working time reduction is mostly explained by the reduction of working hours of full time employees and not by the development of part-time work like in many other countries. France is a country where the weekly work duration has been fixed by law. This is not the case of all countries. For example, in Germany, United Kingdom and Denmark all questions relative to working hours refer to the sphere of the collective negotiations. The legislator imposes only the maximum duration of work.

5 It is worth noting the distinction between *collective* annual working time duration and *effective* working time duration. The collective annual working duration is a theoretical duration which corresponds to working hours of a full-time employee constrained to legal working duration accepted in his establishment. This type of data is obtained from establishment level data sources (Acemo in France). The effective working time duration corresponds to number of hours really worked by an employee during the reference period. It allows taking into account holidays, leaves and other source of working time variation. This type of information is obtained from individual level data sources (Employment Survey in France). France is especially characterised by the weak collective annual working time duration. However, the effective annual working time duration is also among one of the weakest in France compared with other industrialised countries.

Since 1996, French governments have adopted various incentive measures to stimulate the reduction of working time (Bunel, 2002). Social contributions' reduction has been proposed to firms that reduced the working time of their employees. The law of January 2000, called in France 'Aubry's law' generalised the working time reduction by fixing the legal weekly working time at 35 hours.[6] This threshold determines employee's overtime.

In France, this adoption of 35 hours' legal working week (between 1998 and 2002) accelerated the rhythm of working hours' reduction compared with other countries: between 1998 and 2004 the average annual duration of work diminished with an annual rhythm of 1 *per cent* in France, 0.1 *per cent* in the USA, 0.2 *per cent* in Spain, 0.4 *per cent* in United Kingdom and 0.9 *per cent* in Germany (Artus *et al.*, 2007).

The increase of the number of vacation days is also one of the reasons of decrease of average working time in France. These political measures aimed at fighting the high unemployment rates through a mechanism of 'work sharing'. Nowadays this debate about 'work sharing' is present more than ever in the French literature but its effects on the rising of employment or economic performances are mixed (Calavrezo *et al.*, 2007).

Another explanation of the average working time decrease in France is proposed by Olivier Blanchard (2004). It could be possible that in France, like in some other European countries, the fact of working less and of having more leisure is in fact a 'choice of society'. Some European nations have more accentuated preference for leisure compare with United States, for example. However, this thesis does not explain why structural unemployment in France is so high but could help to understand the process of working hours' reduction.

Non-standard working schedules are analysed both within WP8 and WP9. In the analysis of the ESWT conducted within the WP8, night work from 10 p.m. to 6 a.m., work on Saturdays and work on Sundays are taken into account. The analysis is done by means of an index based on the accumulated rankings of each country for each of the three forms of unusual work hours. France is situated within a group of countries (Sweden, Finland and Germany) with above-average shares of organisations indicating working time arrangements in each of the three forms of unusual working hours. The authors note that the unusual working hours are determined by sectors' rather than by countries' characteristics. However, if interactions between country and sector are taken into account, it becomes evident that country-specific characteristics such as work regulations and work culture can affect working time organisation in individual sectors.

Birindelli and Rustichelli report the statistics from Eurostat concerning shift work, as well as incidence of night, Saturday and Sunday work. Shift work in Europe is quite developed, especially in some Scandinavian countries (Table 2.5). This is not the case of France. In France employees working on shift work as a percentage of the total of employees is

6 The working-time reduction (WTR) was implemented by three laws : 'Robien's law' (June 1996), 'Aubry 1's law' (June 1998) and 'Aubry 2 law' (January 2000). The 'Robien's law' introduces a system of social contributions' reductions for enterprises that adopted WTR. The law is abolished by the 'Aubry 1 law' that fixes the legal weekly working time at 35 hours starting January 2000 for enterprises of more than 20 employees and starting January 2002 for all others. This calendar was confirmed by 'Aubry 2 law' that determines the method of calculation of effective work duration, new overtime schemes etc (Beffy & Fourcade, 2004).

quite low. In 2005 European average is 15 *per cent* while in France this indicator is 8.5 *per cent*. In 2005 Denmark is the only country where this percentage is lower than in France (4.9 *per cent versus* 8.5 *per cent*). In all other countries shift work is more developed then in France. This is especially the case of Sweden and Finland.

Table 2.5 Employees working on shift work as a percentage of the total of employees, EU-15

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
AT	15.6	16.3	17.0	15.3	16.5	16.2	19.3	18.4	17.5	18.7	17.8
BE	15.7	15.9	16.2	16.5	8.8	9.0	10.3	9.6	9.6	10.0	8.8
DE	10.1	11.2	11.9	-	-	-	15.0	14.8	15.5	15.2	15.8
DK	7.3	8.0	7.8	7.9	7.2	6.0	6.1	5.0	3.8	5.7	4.9
ES	6.7	7.2	7.4	7.4	-	-	17.4	-	-	17.8	-
FI	23.7	22.5	22.9	24.5	23.1	23.9	23.9	24.4	24.1	23.5	24.4
FR	8.6	8.8	8.9	9.0	9.4	9.7	-	9.6	9.1	8.8	8.5
GR	12.6	13.8	12.5	13.5	13.5	13.5	19.2	19.0	19.6	18.7	18.9
IE	11.8	12.3	11.9	-	-	-	17.7	17.4	17.0	16.5	16.5
IT	17.9	18.0	18.3	18.6	18.9	18.3	21.0	21.8	21.6	18.6	18.3
LU	11.5	9.4	11.1	10.8	-	-	10.7	10.9	9.0	10.8	9.1
NL	8.0	8.3	8.7	9.0	8.5	-	-	-	-	-	-
PT	7.9	8.0	8.5	8.0	7.9	8.1	17.0	17.9	17.6	16.8	17.7
SE	25.0	26.5	24.8	25.2	25.0	24.4	21.8	24.4	22.3	20.6	24.4
UK	15.6	15.9	16.1	16.2	16.4	16.6	19.0	19.1	19.5	19.4	19.0
EU-15	12.2	12.7	13.0	13.4	14.1	14.5	17.4	16.1	16.1	15.8	15.0

Source: Eurostat

The most widespread form of unusual schedule is Saturday work in EU-15 (Table 2.6). This is also the case of France. Comparing 2000 and 2005 a considerable increase in Saturday and Sunday work is observed (from 25 *per cent* to 31 *per cent* and from 9 *per cent* to 14 *per cent* respectively). While in 2000 the incidence of Saturday work was lower in France then in EU-15 (24.8 *versus* 27.5), in 2005 the percentage of employment working on Saturday in France was considerably higher (31.3 *versus* 26.1). According to Eurostat in 2005 France became one of the countries where the Saturday work is the most widespread. Only Austria, Greece and Italy have the higher percentages of Saturday work. Night work and Sunday work were also increasing but less then Saturday work. Population working on Sundays and nights in France is comparable with the average EU-15 indicator.

Table 2.6 Population in employment working on night, Saturday and Sunday as a percentage of the total employment, EU-15 2000-2005

	2000			2005		
	Night	Saturday	Sunday	Night	Saturday	Sunday
AT	10.3	27.4	15.3	7.8	32.6	18.7
BE	5.0	17.6	9.3	4.6	20.1	10.8
DE	-	-	-	-	-	-
DK	7.1	25.4	19.5	7.4	22.5	18.0
ES	-	-	-	-	-	-
FI	8.4	25.2	17.6	9.1	23.3	16.1
FR	**4.6**	**24.8**	**9.2**	**7.1**	**31.3**	**14.0**
GR	4.2	42.4	14.7	4.4	39.6	13.0
IE	-	-	-	6.7	23.2	13.9
IT	5.3	36.2	8.0	8.4	39.7	13.2
LU	-	-	-	6.0	21.4	12.7
NL	-	-	-	-	-	-
PT	8.3	29.7	11.7	7.6	24.8	11.1
SE	7.6	19.9	18.0	5.6	12.7	10.8
UK	12.5	25.9	13.3	11.5	22.5	12.0
EU-15	7.3	27.5	13.6	7.2	26.1	13.7

However, the results from other sources give a different picture of unusual working hours in France. Our findings from three rounds of the European Working Conditions Survey (1995, 2000 & 2005) confirm the fact that the Saturday work stays the most widespread form of asocial working hours (cf. Table 2.7). Nevertheless, the dynamics of night, Saturday and Sunday work incidence is different compared with Eurostat data. The percentage of individuals responding that they work at least once a month at night, Sunday or Saturday is decreasing in France between 1995 and 2005. This decrease is considerable for Saturday work and slight for Sunday and night work. This divergence is certainly due to the different questions used as well as percentage calculation.[7] Saturday work, however, still concerns almost 48 *per cent* of individuals in 2005. The percentages from EWCS are also much higher compared to Eurostat data.
The results from French national survey on working conditions show that night and Sunday work continue to increase slightly while Saturday work has stayed stable between 1991 and 2005 (Bué *et al.*, 2007).

7 The questions in EWCS are the following: '*Normally, how many times a month do you work at night, say for* at *least 2 hours between 10.00 p.m. and 05.00 a.m.? And how many times a month do you work on Sundays? And how many times a month do you work on Saturdays?*' According to Eurostat documentation, night work, for example, is generally regarded as work done during usual sleeping hours and implies abnormal sleeping times. The possible answers are '*usuall*', '*sometimes*' and '*never*'. In this context, 'usually' in the corresponding question is interpreted as meaning at least half the number of days on which the person worked during a four-week reference period before the interview, 'sometimes' as less than half the number of days worked (but at least one occasion) and 'never' as no occasion during the four-week reference period preceding the interview.

Table 2.7 Population in employment working on night, Saturday and Sunday as a percentage of individuals responded on the corresponding questions (France)

	1995	2000	2005
Night work – at least 1 night per month	21.25	18.23	18.26
Saturday work – at least 1 Saturday per month	53.37	51.13	47.75
Sunday work – at least 1 Sunday per month	30.84	28.92	28.72

Source: European Working Conditions Survey (1995, 2000 & 2005), authors' calculations

The analysis of flexible working time arrangements with the aid of ESWT data (WP8) shows that there are significant differences in the incidence of flexible working time arrangements practiced in the 21 countries. The lowest degree of flexibility is reflected by the situations where only the time of the beginning or the end of the working is flexible, but not the number of hours worked per day. Other schemes allow the accumulation of credit or debit hours within certain limits over a longer period of time, but do not allow credit hours to be compensated by full days off. In more flexible schemes employees are permitted to take full days off as compensation for accumulated credit hours. Finally, there are the most flexible schemes which allow credit hours to be compensated by longer periods off. In most countries including France the share of organisations with any forms of flexible working hours is relatively identical, with a large set of countries in the range between 40 *per cent* and 55 *per cent*. The degree of flexibility offered by the working time systems also varies considerably from country to country. The authors observed that countries where the share of organisations with experience in flexible working times is low also tend to have comparatively smaller shares of employees entitled to make use of this flexibility within those firms which in principle practice that working time arrangement. France with other 'Continental' countries like Austria, Germany, and Netherlands is situated somewhat in the middle of the distribution: the share of establishments offering flexible working time is close to 50 *per cent* and the share of flexible work within establishment is between 60 and 70 *per cent*.

The analysis of European Foundation (2006) shows that the differences between countries are relatively independent from factors like size-class or economic activity. The authors draw the conclusion that the policy and practice of flexible working-time arrangement are largely influenced by the different national institutional frameworks and by specific cultural factors.

ESWT data also includes the questions about overtime work. The authors note that from surveys among individuals it is known that a majority of employees prefer to get their overtime hours compensated with time off rather than with money. However, this question of overtime compensation could be analysed within a more general problematic of work-leisure trade off. One may expect that in societies where people prefer working more in order to have more money, individuals would prefer to have money compensation for the overtime work. In France some surveys show that while there are still more individuals preferring to earn less money but to have more leisure, the percentage of such individuals is decreasing (Artus, Cahuc and Zylberberg, 2007).

According to ESWT establishment data, in France, in 37 *per cent* of organisations that report having overtime hours, money is the general form of compensation; 30 *per cent* report compensation by time off as a general rule; in another 33 *per cent* of organisation, the relative importance of both forms of compensation is approximately even.

Finally, combining the wide variety of flexibility indicators in the ESWT by means of latent class analysis, the European Foundation distinguishes between six types of flexibility responses among organisations in Europe. This typology refers to the amount of flexibility as well as the kind of practices that are supported. According to this typology France is placed with Germany, Austria, Ireland, Belgium, Luxembourg, and Slovenia in Central 2 group with low/intermediate firm oriented flexibility. This type is 'moderately flexible' that supports a package of arrangements that accommodates workers' need for flexibility over the course of their working life. Intermediate flexibility is rather related to sectors like education, hotels and restaurants, industry, transportation, with the size of firms mostly between 10 and 49 employees. Low flexibility is concentrated in small organisations in construction and industry.

The analysis also shows that the country in which a firm is located, reflecting differences in legal, cultural and institutional surroundings, is the most important determinant. The second most important determinant is the size of the organisation, measured by the number of employees. The sector ranks third as determinant of the flexibility profile of a company.

2.2 Evolution of temporary employment

The results for France concerning temporary work[8] are mostly concentrated in Birindelli and Rustichelli part of WP9 report. First of all, the authors note that international comparison on temporary work is rather difficult. As employment protection legislation is different, firing costs on permanent job are very variable and thus influencing firms' choices concerning hiring. In other words, where firing cost are low the distinction between temporary and permanent job is more difficult and there are few or non differences in the choice among the two kind of contracts. More generally, employment protection legislation is often pointed out as the most important source of rigidity on continental European labour markets (Kramarz & Michaud, 2004). However, Kramarz and Michaud also note that only few studies try to precisely relate firing costs and labor market flows.

According to Eurostat data (Table 2.8), in EU-15 a remarkable increase in temporary employment has been registered in the last decade (between 1997 & 2005). However, the authors do not give a precise definition of what temporary employment means. French labour laws allow firms to hire workers on two types of regular employment contracts:

8 According to Eurostat documentation, a job may be considered temporary if employer and employee agree that its end is determined by objective conditions such as a specific date, the completion of a task or the return of another employee who has been temporarily replaced. Where there is a work contract of limited duration, it usually states the terms of the end of the contract.
The following belong to these categories:
1. Persons with seasonal employment;
2. Persons engaged by an agency or employment exchange and hired to a third party to perform a specific task (unless there is a written work contract of unlimited duration with the agency or employment exchange);
3. *Persons* with specific training contracts. If there are no objective criteria for the end of a job or work contract, this *should* be considered permanent or of unlimited duration.

indefinite-term contracts (Contrats à Durée Indéterminée, CDI) and fixed-duration contracts (Contrats à Durée Déterminée, CDD) (Kramarz & Michaud, 2004). CDDs can be offered by firms for only very precise reasons: CDD cannot be used to fill a job that would exist under normal and permanent business conditions for a given firm. CDDs have a fixed duration, they can only be renewed once and their length, including renewal, cannot exceed 18 months (24 months for youth employment programs). Although their use is restricted, this type of contract is the most common method of hiring. Temporary contracts are considered to be the tool of flexibility for French employees.

In terms of temporary employment, France has followed the same trend that the EU-15 (Table 9). Moreover, in France the growth of temporary employment was higher then that of overall employment. The overall employment growth was 11.9 *per cent* between 1997 and 2005. For the same time period the growth in number of employees was 14.6 *per cent*, while temporary employment has increased by 17.6 *per cent*. However, the French performance is less impressive then that of many other European countries like Belgium, Spain, Italy, Netherlands, Portugal and Sweden (Table 2.8).

Table 2.8 Recent trends in employment, EU-15 1997-2005

	All in employment				Employees				Temporary			
	1997	2005	Diff.	% growth	1997	2005	Diff.	% growth	1997	2005	Diff.	% growth
AT	3609	3824	*216*	6.0	3109	3317	*208*	6.7	241	302	*60*	24.9
BE	3838	4235	*398*	10.4	3177	3590	*413*	13.0	199	318	*119*	59.6
DE	35299	36354	*1055*	3.0	31448	31859	*411*	1.3	3652	4527	*876*	24.0
DK	2675	2752	*77*	2.9	2423	2507	*85*	3.5	269	246	*-22*	-8.3
ES	13276	18973	*5698*	42.9	10114	15502	*5388*	53.3	3391	5169	*1778*	52.4
FI	2120	2401	*281*	13.2	1792	2097	*305*	17.0	306	345	*39*	12.7
FR	21958	24579	*2621*	11.9	19114	21906	*2792*	14.6	2473	2908	*435*	17.6
GR	3853	4369	*516*	13.4	2111	2779	*667*	31.6	230	329	*99*	43.1
IE	1373	1952	*579*	42.2	1088	1619	*532*	48.9	102	59	*-42*	-41.6
IT	20184	22563	*2379*	11.8	14365	16534	*2169*	15.1	1137	2026	*890*	78.3
LU	169	194	*25*	14.6	153	178	*25*	16.0	3	9	*6*	184.8
NL	7186	8111	*925*	12.9	6296	7105	*809*	12.8	717	1093	*376*	52.4
PT	4523	5123	*599*	13.2	3239	3814	*575*	17.7	388	743	*356*	91.7
SE	3917	4347	*430*	11.0	3457	3887	*430*	12.4	415	619	*205*	49.4
UK	26744	28187	*1443*	5.4	23216	24467	*1251*	5.4	1689	1396	*-292*	-17.3
EU-15	150724	167964	*17240*	11.4	125100	141160	*16060*	12.8	15211	20091	*4880*	32.1

Source: Eurostat

Another indicator of the incidence of temporary work on labour market is provided by the percentage of temporary employment with respect to overall employment. In France the last indicator didn't change much from 1997 to 2005 (12.9 *per cent* to 13.3 *per cent*, cf. Table 2.9), which is comparable with the Netherlands, for example (15.4 *per cent* in 2005). However it is much higher then Ireland (3.6 *per cent* in 2005), Luxembourg (5.1 *per cent* in 2005) or UK (5.7 *per cent* in 2005). If we calculate the percentage of temporary employment with respect to all in employment we find that the proportion of temporary workers didn't change between 1997 and 2005 (11.26 *per cent versus* 11.83 *per cent*, calculation from Table 2.9).

Table 2.9 Temporary employment as percentage of total employees, EU-15 1997-2005

	1997	2005
AT	7.8	9.1
BE	6.3	8.9
DE	11.6	14.2
DK	11.1	9.8
ES	33.5	33.3
FI	17.1	16.5
FR	**12.9**	**13.3**
GR	10.9	11.8
IE	9.4	3.6
IT	7.9	12.3
LU	2.0	5.1
NL	11.4	15.4
PT	12.0	19.5
SE	12.0	15.9
UK	7.3	5.7
EU-15	12.2	14.2

These findings are not completely confirmed by the figures coming from our calculations from EWCS. In 2000, 13.3 *per cent* of respondents (excluding the self-employed) indicated that they work on fixed term contract, temporary employment agency contract or apprenticeship or other training schemes. In 2005 this percentage is 13.7 *per cent*. On the contrary, in 1995, 16.4 *per cent* of respondents answered being employed on such contracts. Figures from EWCS are calculated as percentage of employed people excluding the self-employed. The main conclusion of WP9 report based on Eurostat data in terms of temporary employment for France is a greater growth of temporary employment compared with growth of employees and overall employment. However, temporary employment as percentage of total employees stayed quite stable between 1997 and 2005 which is partly confirmed by our calculations: the proportion of respondents on temporary contracts was 13.3 *per cent* in 2000 and 13.7 *per cent* in 2005.

Employment stability and labour flows are also analysed using French REPONSE survey. Coutrot (2004) investigates the relationship between employment stability and innovation taking into account the fact that French firms have increased precarious forms of employment while reforming their work organisation and implementing new technologies. The results do not allow making a definitive judgement. The author interprets it like existence of a dual management of personnel, where a significantly large reserve of temporary employees coexists with a rather stable permanent workforce.

Askenazy *et al.* (2004) explore the effects of new technologies and new organisational practices on labour flows of different professional categories in France. The authors conclude that the labour flows of all workers categories must have been stimulated over the last years, either through the implementation of ICT for blue-collar workers, either by new organisational practices for white-collar workers.

2.3 The evolution of self-employment

The question of self-employment is only explored in the Italian part of WP9 report.

Overall in EU-15, a slight decrease of self-employment incidence on total employment can be observed (from 15 *per cent* in 1995 to 14.7 *per cent* in 2005, cf. Table 2.10). France is situated considerably below the average and there was a decrease in self-employment as percentage of total employment between 1995 and 2005 (from 11.6 *per cent* to 9.9 *per cent*). We can compare these figures with our calculations from EWCS data. According to this, the percentage of individuals answering that they are self-employed is slightly higher: in 1995 -12.7 (*versus* 11.6 in Eurostat), in 2000 -13.6 (*versus* 10.1) and in 2005 11.2 (*versus* 9.9). However the slight decrease in percentage of self-employed in France is also confirmed by EWCS data (12.7 in 1995 *versus* 11.2 in 2005).

Table 2.10 Self-employed as percentage of total employment, EU-15 1995-2005

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Austria	10.8	10.8	10.8	11.0	10.9	10.8	10.8	10.9	10.9	12.0	11.8
Belgium	15.4	15.4	14.9	15.4	14.8	14.0	13.2	13.6	13.5	13.0	13.5
Germany	9.4	9.6	9.9	10.0	10.0	10.1	9.9	10.0	10.4	10.9	11.2
Denmark	8.4	8.3	8.3	8.4	8.3	8.2	8.0	8.0	8.4	7.9	8.1
Spain	21.4	21.3	20.6	19.9	19.0	18.0	18.0	17.3	16.6	16.7	16.5
Finland	14.3	15.1	14.5	14.0	13.0	12.9	12.3	12.3	12.3	12.0	12.1
France	11.6	11.3	11.2	10.9	10.7	10.1	9.8	9.7	10.2	9.9	9.9
Greece	33.8	33.7	33.3	32.3	32.1	32.3	31.5	31.3	31.0	30.2	30.0
Ireland	20.7	19.8	19.5	19.0	18.0	17.8	17.3	17.1	16.7	17.2	16.3
Italy	24.6	24.7	24.6	24.4	24.4	24.2	23.7	23.4	23.2	25.5	24.9
Luxembourg	10.0	9.0	8.5	8.8	8.4	8.9	6.7	7.3	7.7	7.9	7.7
Netherlands	11.5	11.2	11.3	10.8	10.7	10.3	10.8	11.1	10.9	11.6	11.8
Portugal	25.8	26.8	26.9	25.9	24.8	23.6	25.5	25.6	25.6	24.4	24.1
Sweden	11.7	11.7	11.2	10.9	10.9	10.6	10.2	10.2	10.0	10.1	10.3
United Kingdom	12.9	12.6	12.5	12.1	12.2	11.9	11.8	12.0	12.5	12.8	12.7
EU-15	15.0	15.0	15.0	14.7	14.6	14.3	14.1	14.1	14.3	14.7	14.7

Source: Eurostat

3 Tracing employment in business functions - A sectoral and occupational approach

This part of our country study is based on HIVA report (Karen Geurts, Laura Coppin & Monique Ramioul) which is quite different from other three quantitative reports of WP9. The HIVA report is closely linked with the global value chain and the notion of a business function is used as the main unit of analysis. The business function is defined as a unit of activity that can be categorised within a value chain *i.e.* a cluster of technologically and economically distinct activities which are usually performed together. Business functions refer to both core and support activities in value chains. The aim of HIVA is to measure the effects of global value chain restructuring on employment in the European Union. As business functions are not defined in existing data sets, proxies are used to identify them. A specific method is developed to identify business functions by cross tabulating sectors and occupations, for a selection of sectors and occupations that have been investigated through case studies. On the one hand, relevant occupational groups within specific sectors are defined. On the other hand, the distribution across sectors and occupations are used as proxies for business functions. The data used is the Labour Force Survey (LFS).

The main research questions of this report are numerous: What is the sectoral distribution of the working population in the EU countries, and how has this changed since the mid-nineties? How have sectors involving the supply of business services grown over the past decade and what has been the relationship of this growth to trends in other sectors which are their clients? What is the occupational structure of distinct sectors? How does this structure differ by country, and how has it changed in the past decade? What is the scale of different business functions, in which sectors do they occur, and likewise what are the trends and evolutions in the EU countries?

The authors point out that 'the answers to these questions will provide insight in how business functions have shifted between sectors and countries in the last decade – thus giving an indication of the restructuring of value chains – and in the relationship between job growth and job decline in different sectors and countries'.

The report is structured along six business functions: Core production activities ('Operations'), Logistics, Marketing and Sales, Customer services, Legal and financial services, and IT services.

Like in Chapter 2, we will find, analyse and enrich with possible interpretations of the results concerning France.

'Operations', as a main area of activities within a value chain, include all activities that transform inputs into outputs. As an example of this category of activities, the authors look at the core production activities *in clothing and textile industry*. In all old European member states there was a negative evolution in the textile and clothing sector between

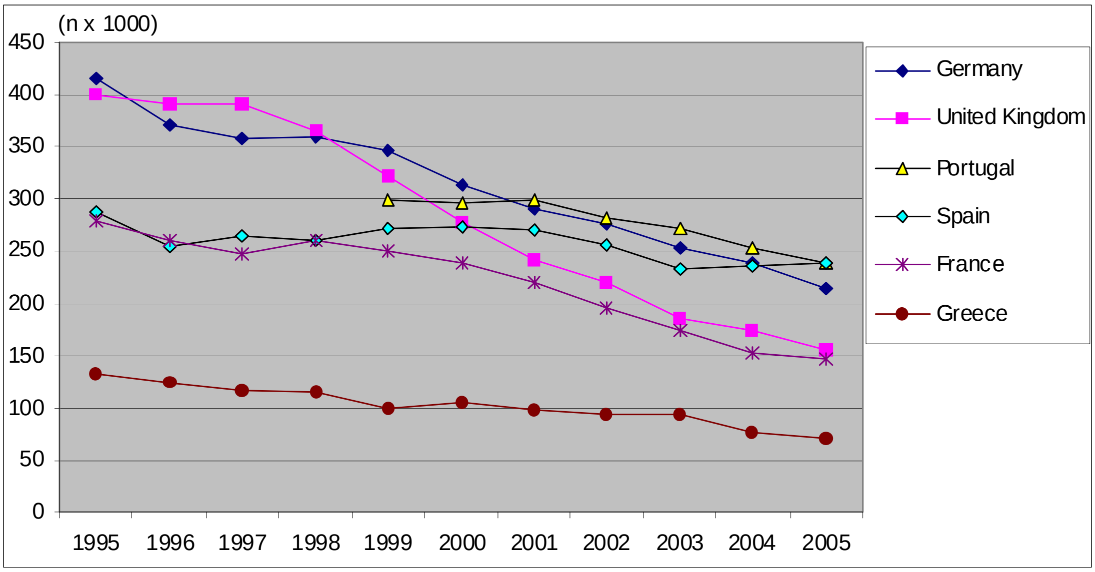
1996 and 2004 (Table 3.1 and Figure 3.1). In France, while the evolution of total employment was positive for this period (11 *per cent*), the decline of employment in the textile and closing sector was one of the highest in EU-15 (-39 *per cent*, the highest was in Luxembourg - 57 *per cent* and in UK – 56 *per cent*). So the textile and clothing sector suffered significant job losses in France. In absolute numbers, the largest job losses occurred in the UK, but also in Italy, Germany. Like in EU-15, the share of employment in this sector in total employment has also decreased in France (from 1.2 *per cent* in 1996 to 0.7 *per cent* in 2005). Now, like in most EU-15 countries, textile and clothing account for less than 1 *per cent* of total employment (Table 3.1).

Table 3.1 Employment evolution in the textile and clothing sector (NACE 17+18); EU-15 member states, 1996-2004

	Employment in NACE 17+18				Evolution of total employment	Share of NACE 17+18 in total employment		
	1996	2004	Evolution 1996-2004		1996-2004	1996	2004	Evolution 1996-2004
	N*1,000	N*1,000	N*1,000	*per cent*	*per cent*	*per cent*	*per cent*	ppt
Italy	726	552	-174	-24	+11.0	3.6	2.5	-1.1
Portugal	298	254	-44	-15	+2.1	5.9	5.0	-1.0
Spain	268	237	-32	-12	+40.1	2.1	1.3	-0.8
Germany	381	236	-146	-38	+1.0	1.1	0.7	-0.4
UK	393	172	-222	-56	+6.3	1.5	0.6	-0.9
France	**262**	**159**	**-104**	**-39**	**+11.1**	**1.2**	**0.7**	**-0.5**
Greece	125	80	-45	-36	+12.3	3.2	1.9	-1.4
Belgium	69	48	-21	-31	+9.0	1.8	1.1	-0.7
Austria	56	28	-28	-50	+3.7	1.5	0.7	-0.8
Netherlands	35	20	-14	-42	+16.5	0.5	0.2	-0.2
Finland	19	14	-6	-29	+15.0	0.9	0.6	-0.4
Sweden	23	13	-10	-44	+8.2	0.6	0.3	-0.3
Denmark	18	11	-7	-37	+3.8	0.7	0.4	-0.3
Ireland	21	9	-12	-57	+42.7	1.6	0.5	-1.1
Luxembourg					+15.1			
EU-15	2,695	1,832	-863	-32	+10.2	1.8	1.1	-0.7

Countries sorted by number of employed in 2004.
1996: three-year averages of 1995/1996/1997; for Portugal three-year average of 1999/2000/2001-2004: three-year averages of 2003/2004/2005

Figure 3.1 Employment evolution in the textile and clothing sector (NACE 17+18); EU-15 member states, 1995-2005 (one-year averages)



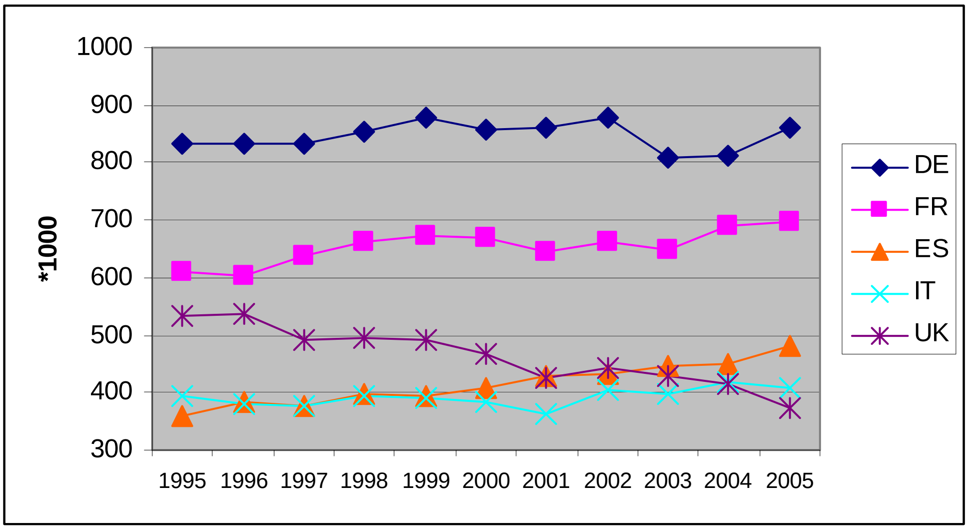
The second example of 'Operations' – the cluster of activities within a value chain involving the transformation of inputs into outputs – is the core production activities in *food industry*. Compared to 1996, there was an increase of 2 *per cent* of employment in this sector. In France the evolution in this sector was positive and comparable with that of total employment (10 *per cent* in food industry *versus* 11 *per cent* of total employment cf. Table 3.2 and Figure 3.2). France, together with Denmark and Ireland, are countries with high shares of food industry workers in total employment (2.8 *per cent* for both years in France). In this respect France is different from other countries (except Germany) where share of food industry workers decreased during the period while in France it remained stable.

Table 3.2 Employment evolution in the food industry (NACE 15); EU-15 member states, 1996-2004

	Employment in NACE 15				Evolution of total employment	Share of NACE 15 in total employment		
	1996	2004	Evolution 1996/2004		2004-1996	1996	2004	Evolution 1996/2004
	N*1,000	N*1,000	N*1,000	*per cent*	*per cent*	*per cent*	*per cent*	ppt
Germany	833	827	-6	-1	+1.0	2.3	2.3	0.0
France	**616**	**679**	**+63**	**+10**	**+11.1**	**2.8**	**2.8**	**0.0**
Spain	374	458	+85	+23	+40.1	2.9	2.5	-0.4
Italy	385	408	+23	+6	+11.0	1.9	1.8	-0.1
UK	520	405	-115	-22	+6.3	2.0	1.4	-0.5
Netherlands	166	152	-14	-8	+16.5	2.4	1.9	-0.5
Greece	101	118	+17	+17	+12.3	2.6	2.7	+0.1
Portugal	108	110	+2	+2	+14.8	2.4	2.2	-0.3
Belgium	93	104	+11	+12	+9.0	2.4	2.5	+0.1
Denmark	86	81	-6	-6	+3.8	3.3	2.9	-0.3
Austria	81	74	-7	-9	+3.7	2.2	2.0	-0.3
Sweden	61	62	+1	+1	+8.2	1.5	1.4	-0.1
Ireland	42	54	+12	+29	+42.7	3.2	2.9	-0.3
Finland	44	43	0	-1	+15.0	2.1	1.8	-0.3
Luxembourg	2	2	0	-16	+15.1	1.3	0.9	-0.3
EU-15	3,510	3,578	+67	+2	+10.6	2.3	2.2	-0.2

Countries sorted by number of employed in 2004.
1996: three-year averages of 1995/1996/1997.
2004: three-year averages of 2003/2004/2005.

Figure 3.2 Employment evolution in the food industry (NACE 15), EU-15, 1995 – 2005 (one-year averages)



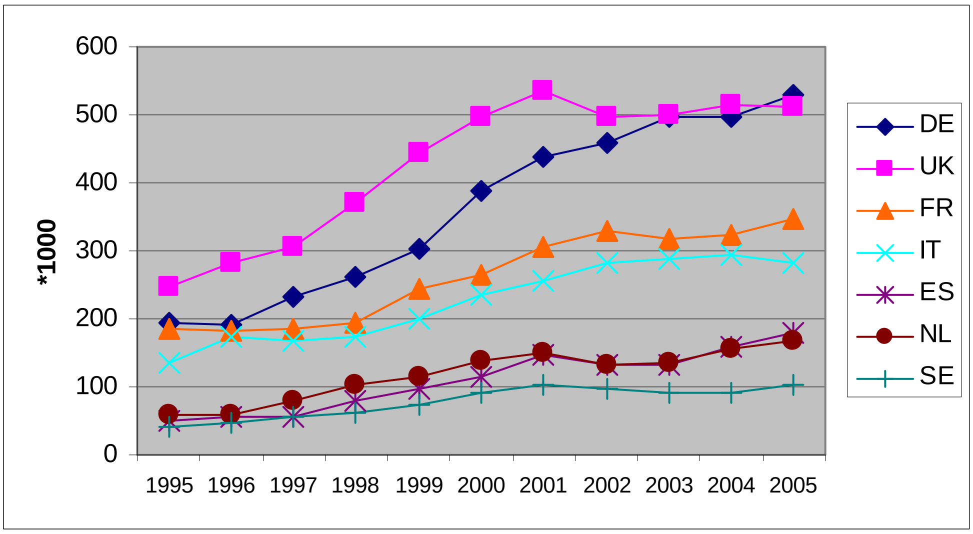
A third and last sector analysed by authors in terms of ‘operations’ is *the IT sector* (Table 3.3 and Figure 3.3). Overall, employment in the IT sector has soared between 1996 and 2004 in Europe. The number of jobs in the sector increased by 106 *per cent*; the corresponding number of jobs created is 1.19 million. While France has contributed in this pan-European growth with an increase of 79 *per cent* of jobs in this sector, French performance is far from the most impressive. During the same period the IT ‘jobs’ growth was 272 *per cent* in Greece, 189 *per cent* in Luxembourg, 148 *per cent* in Germany, for example. Finally, France is the country where the positive evolution was the smallest. Smaller increases were only observed in Portugal and Denmark. However, in Denmark like in other Scandinavian countries the shares in total employment for the IT sector is one of the highest.

Table 3.3 Employment evolution in the IT sector (NACE 72); EU-15 member states, 1996-2004

	Employment in NACE 72				Evolution of total employ-ment	Share of NACE 72 in total employment		
	1996	2004	Evolution 1996/2004		2004-1996	1996	2004	Evolution 1996/2004
	N*1,000	N*1,000	N*1,000	*per cent*	*per cent*	*per cent*	*per cent*	ppt
UK	278	508	+230	+83	+6.3	1.1	1.8	+0.8
Germany	205	508	+303	+148	+1.0	0.6	1.4	+0.8
France	**184**	**329**	**+145**	**+79**	**+11.1**	**0.8**	**1.3**	**+0.5**
Italy	159	288	+130	+82	+11.0	0.8	1.3	+0.5
Spain	54	157	+103	+190	+40.1	0.4	0.9	+0.4
Netherlands	66	153	+87	+133	+16.5	0.9	1.9	+0.9
Sweden	48	96	+47	+98	+8.2	1.2	2.2	+1.0
Belgium	26	60	+34	+132	+9.0	0.7	1.4	+0.8
Denmark	32	48	+16	+50	+3.8	1.2	1.8	+0.5
Finland	21	43	+22	+107	+15.0	1.0	1.8	+0.8
Austria	17	42	+25	+146	+3.7	0.5	1.1	+0.6
Ireland	12	32	+21	+178	+42.7	0.9	1.7	+0.8
Portugal	15	22	+8	+51	+14.8	0.3	0.4	+0.1
Greece	5	19	+14	+272	+12.3	0.1	0.4	+0.3
Luxembourg	1	2	+1	+189	+15.1	0.4	0.9	+0.5
EU-15	1,122	2,307	+1,186	+106	+10.6	0.7	1.4	+0.6

Countries sorted by number of employed in 2004.
1996: three-year averages of 1995/1996/1997.
2004: three-year averages of 2003/2004/2005.

Figure 3.3 Employment evolution in the IT sector (NACE 72), EU-15, 1995-2005 (one-year averages)



A second area of activities which can be distinguished in a value chain, is '**Material and Product Logistics and Distribution**', a cluster of activities which includes activities such as warehousing of incoming material and outgoing products, distribution, order processing, *etc.* The authors start with the analysis of employment in logistics (Clerks and labourers) in the EU member states in 2004. Overall, people employed as a clerk or labourer in logistics account for 2.5 *per cent* of the total labour force. This share varies by country but in France it is exactly on EU-15 average level.

Activities aimed at maintaining and enhancing the product's value after it is sold are commonly referred to as **customer services**, and occupy a distinct position within a value chain. In EU-15 in 2004, 2.1 *per cent* of all employed worked as customer service clerks. In the old member states, this percentage was 2.2 *per cent*. Like for logistic employment France is situated in the EU-15 average with 2.1 *per cent* of total employment.

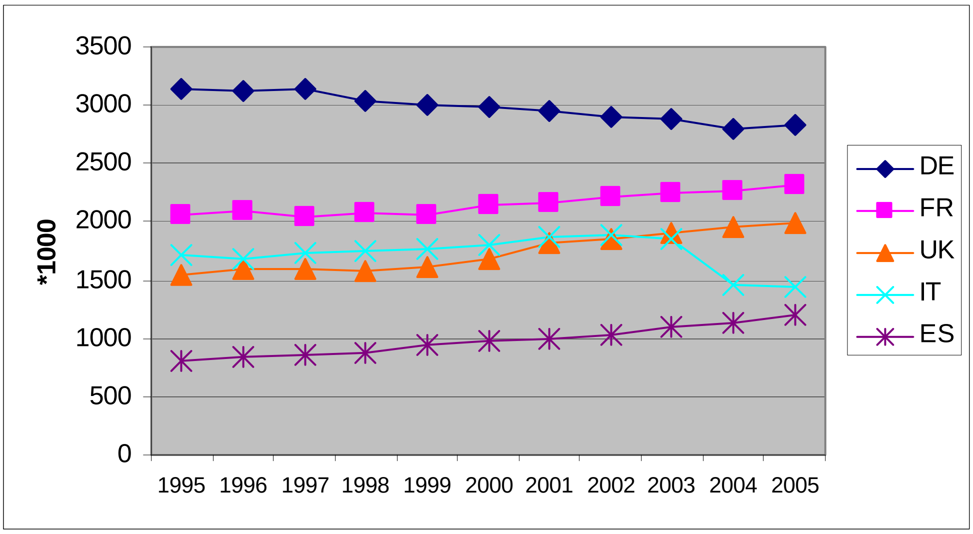
More data is available on *customer services in public administration*. In 2004, 7.4 *per cent* of the EU-15 employed work in the public administration. The number of employed in the public administration increased by 5.8 *per cent* between 1996 and 2004 (Table 3.4 and Figure 3.4). The EU-15 countries with the highest shares of employed in the public administration are Belgium and France, where respectively 9.9 *per cent* and 9.3 *per cent* of all employed hold a job in the public administration. Moreover, in these two countries there was an identical positive evolution in number workers employed in this sector: +10 *per cent*. This corresponds to a small decrease of -0.1 percentage points in terms of share in total employment.

Table 3.4 Employment evolution in Public administration (NACE 75); EU-15 member states, 1996-2004

	Employment in NACE 75				Evolution of total employment	Share of NACE 75 in total employment		
	1996	2004	Evolution 1996/2004		2004-1996	1996	2004	Evolution 1996/2004
	N*1,000	N*1,000	N*1,000	*per cent*	*per cent*	*per cent*	*per cent*	ppt
Germany	3,136	2,833	-303	-10	+1.0	8.8	7.9	-0.9
France	2,064	2,273	+210	+10	+11.1	9.4	9.3	-0.1
UK	1,579	1,946	+367	+23	+6.3	6.0	7.0	+1.0
Italy	1,709	1,582	-127	-7	+11.0	8.5	7.1	-1.4
Spain	837	1,137	+300	+36	+40.1	6.5	6.3	-0.2
Netherlands	531	563	+32	+6	+16.5	7.6	6.9	-0.7
Belgium	373	412	+39	+10	+9.0	9.8	9.9	+0.1
Greece	275	341	+66	+24	+12.3	7.2	7.9	+0.7
Portugal	310	336	+26	+8	+14.8	7.0	6.6	-0.4
Sweden	208	246	+39	+19	+8.2	5.2	5.7	+0.5
Austria	238	235	-3	-1	+3.7	6.6	6.2	-0.3
Denmark	162	159	-3	-2	+3.8	6.1	5.8	-0.3
Finland	110	115	+4	+4	+15.0	5.3	4.8	-0.5
Ireland	72	94	+22	+30	+42.7	5.5	5.0	-0.5
Luxembourg	17	23	+6	+36	+15.1	10.0	11.9	+1.8
Total	11,621	12,297	+675	+5.8	+10.6	7.8	7.4	-0.3

Countries sorted by number of employed in 2004.
1996: three-year averages of 1995/1996/1997.
2004: three-year averages of 2003/2004/2005.

Figure 3.4 Employment evolution in public administration (NACE 75), EU-15, 1995-2005 (one-year averages)



One of the sectors that is being analysed in the WORKS case studies, is that of '**General interest services**'. More precisely *transport via railways and Post and courier activities* are analysed (Table 3.5). The data is available only for 2001-2004 and only for Germany, France, Spain, Austria, Portugal, Finland and Luxembourg. Over these 7 countries the Railway and Postal services suffered quite substantial losses in this short period of time (-5 *per cent* in EU-7). In France the decline of this sector is slight: only 1 *per cent* between 2001 and 2004. In 2004, along with Luxembourg, in France, the share of Railway and Postal services is the highest in total national employment compared with other countries available (3.4 *per cent* in Luxembourg, 2 *per cent* in France).

Table 3.5 Employment evolution in the Railway and Postal services (NACE 60.1 & 64.2); EU-15 member states: Germany, France, Spain, Austria, Portugal, Finland and Luxembourg (EU-15*), 2001-2004

	Employment in NACE 60.1 & 64.2				Evol. of total employment	Share of NACE 60.1 & 64.2 in total employment		
	2001	2004	Evolution 2001/2004		2004-2001	2001	2004	Evolution 2001/2004
	N*1,000	N*1,000	N*1,000	*per cent*	*per cent*	*per cent*	*per cent*	ppt
Germany	566	509	-57	-10	-1.4	1.6	1.4	-0.1
France	487	481	-6	-1	+2.8	2.0	2.0	-0.1
Spain	129	143	+14	+11	+12.7	0.8	0.8	0.0
Austria	78	62	-16	-20	+1.6	2.1	1.6	-0.4
Portugal	36	32	-4	-10	0.0	0.7	0.6	-0.1
Finland	35	32	-3	-8	+0.6	1.5	1.3	-0.1
Luxembourg	7	7	0	0	+3.1	3.5	3.4	-0.1
Total	1,337	1,266	-71	-5	+2.7	1.5	1.4	-0.1

Countries sorted by number of employed in 2004.
2001: two-year averages of 2001/2002.
2004: two-year averages of 2004/2005.

'**Technology Development**' is another distinct cluster of activities that can be categorised within the value chain of products and services. It includes all forms of technology development that support the value chain activities. The most typical example is research and development, but also activities related to process design and automation are categorised as technology development. Two large occupational groups in this sector, *computing professionals and computer associate professionals*, are analysed. In France, in 2004 there were 70 *per cent* of computing professionals while the rest 30 *per cent* are classified as computer associate professionals. The situation is opposite in Italy for example, where the computer associate professionals represent the majority in this sector. Another extreme is the Ireland where 100 *per cent* of IT-employed are computing professionals. The share of IT workers in total employment in the old member states (EU-15) in 2004 is of 1.8 *per cent* which is exactly the same share as in France. This share is the highest in the Netherlands (3.2 *per cent*) and the lowest in Greece (0.5 *per cent*).

The analysis carried out in HIVA report has allowed gaining insight in the changes in employment in particular sectors and business functions. For France, the evolutions in available sectors are in the same direction that EU-15 average. For sectors considered, it shows that France is changing with Europe and the EU-15. Like Europe, France has suffered from the important job losses in textile and closing sector, while the number of workers in IT sector is increasing.

4 Occupational change, skills, career trajectories and work-life balance

In this Chapter we will concentrate on the issue of skills, occupational changes and career trajectories. The results come from both WP8 and WP9 reports.

The measure of change in people's working circumstances over their career is the aim of the ISER study (Malcolm Brynin & Simonetta Longhi). This is the only study within WP9 quantitative pillar which uses panel data of the European Household Community Panel, the British Household Panel Study, and the German Socio-Economic Panel. The research analyses trends in relative skills (overqualification) and career flexibility but also includes measures of job satisfaction. So the report analyses three factors which concern both the use of labour and its welfare effects. One is skill utilisation. The second area is satisfaction with work and different aspects of work. Finally, a third indicator is occupational mobility *i.e.* the extent people move across occupations or industries.

WP8 report analyses the main results from organisation surveys in Europe about skills and internal labour markets, career trajectories and the quality of working life.

Our method will be the same as for other quantitative reports. We will analyse in a detailed manner the results concerning France.

4.1 Skill utilisation and job satisfaction

The WP9 report starts with the analysis of distribution and value of skills and the analysis of factors that are associated with variations in job satisfaction. The authors link these with a study of overqualification – whether people feel that their own skills are valued.

First they look at returns to education using a random effect panel estimator by country with the log of wages as dependent variable. The analysed question is: *Does a degree generate the same proportional return in all countries?* The results show that for all countries including France having some or high education has a positive effect on wages: the coefficients are statistically significant at one *per cent* level. A medium level of education seems to pay the least in France but also in the Netherlands. In France we also observe the highest differences between the coefficients of 'some' and 'high' education suggesting that reaching a high level of education in this country entails a relatively high benefit compared with obtaining only 'some' education (the same holds for Finland and Portugal). The return to higher education, the variable which most clearly denotes the value of knowledge, varies considerably across countries.

Another question is the extent to which people are educationally matched to the job they do. To study this, the authors consider some subjective indicators: do people feel their skills are matched to the job, and are they satisfied with their jobs?
The ECHP asks workers whether they are satisfied with different aspects of their job. The answer is given on a six-point scale ranging from 'not at all satisfied' to 'fully satisfied'. The authors analyse the proportion of workers that are dissatisfied with their jobs in terms of earnings, job security, type of work, number of hours worked, working times (*e.g.* night shifts) and work environment, as well as overall (Table 4.1). They note that because of different social norms across countries, a cross-country comparison of satisfaction itself is not appropriate, but it is possible to compare national differences within the time period. An increase in the proportion of dissatisfied workers might point to worsening working conditions, while a decrease in that proportion might point to improving working conditions or to workers' adaptation to a new environment.

The proportion of workers dissatisfied with their earnings has considerably decreased in France (from 47 *per cent* in 1996 to 39 *per cent* in 2001, cf. Table 4.1), that of workers dissatisfied with the level of job security also tends to decrease (from 29 to 21 *per cent*) and that of workers dissatisfied with their type of work as well as working times and work environment remained globally stable. Finally, overall work dissatisfaction is less important in 2001 then in 1996 in France (14 *versus* 17 *per cent*). So, in terms of subjective indicators the changes are rather positive in France. European averages changed in the same way showing that the degree of satisfaction with different aspects of job is increasing in Europe. While the use of subjective data could be criticised, such an analysis is very useful especially when comparing with other more objective labour market indicators.

Table 4.1 Percentage of workers dissatisfied with different aspects of their job

Country	Earnings		Job security		Type of work		Hours worked		Working times		Work environment		Overall	
	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001
Denmark	23	23	19	14	10	9	13	12	13	11	14	11	8	7
The Netherlands	19	14	21	11	9	10	14	14	11	10	20	20	7	8
Belgium	30	28	23	18	15	14	17	18	16	16	21	20	17	16
France	**47**	**39**	**29**	**21**	**12**	**11**	**25***	**22**	**20**	**20**	**22**	**22**	**17**	**14**
UK	28	26*	27	20	18	18	27	25					20	18
Ireland	35	23	22	15	12	11	17	11	13	9	13	11	16	13
Italy	53	54	30	33	27	31	31	35	29	33	31	34	33	33
Greece	61	52	40	35	37	32	37	33	35	34	40	33	45	36
Spain	59	51	34	29	26	22	35	35	28	27	27	29	28	25
Portugal	65	54	30	21	20	17	27	21	22	16	18	14	29	21
Austria	23	19	14	10	6	4	12	10	10	7	9	6	7	6
Finland	31	26	26	20	17	14	19	17	16	16	20	17	13	12
Mean	40	34	26	21	17	16	23	21	18	17	20	18	20	17

* 1997.

After establishing the absence of decline in satisfaction in Europe the authors continue with more detailed analysis: at individual level one can observe a relationship between the work people do, including its degree of security, and their satisfaction with work. The question is then the following: '*Who is more likely to be dissatisfied with their job*?' The authors compute a probit model in which the dependent variable is a dummy that has value one for workers who declare that they are dissatisfied with their job in general, and zero otherwise. Among explanatory variables they include age, gender, education, whether the job is in the public sector, occupation groups, industries, whether the worker has supervisory tasks, the type of contract, and the year of the interview. The main interest is in the effect of being in some sort of insecure contract.

In France workers employed in the public sector are less dissatisfied (more satisfied) with their job than others workers. It could be linked with the high degree of security of jobs in public sector. Being a civil servant in France means very often the small probability of falling into unemployment. In the introduction we have mentioned that several authors showed the considerable fear of unemployment in the French society. Compared with the private sector, French public sector is more protective in terms of dismissals.

Workers employed in intermediate and non-supervisory jobs have higher probability of being dissatisfied than workers with supervisory tasks. There are no differences in degree of dissatisfaction amongst economic sectors in France: no economic sector is significant. As for occupations, the probability of being dissatisfied is higher for clerks, service and shop workers, craft and related and elementary occupations.

As far as education is concerned France is the country where the higher degree of education is associated with the higher probability of being dissatisfied: the coefficients of having high education or some education are positive and significant. It is not the case in all countries: it is the opposite in Italy, Greece and Portugal, for example.

Finally, workers in fixed-term, casual, and other atypical jobs are more likely to be dissatisfied than workers in permanent jobs. This strongly suggests that these conditions are the result of constraints, not of choice. Most of these people presumably find it difficult to obtain better, more secure work.

The authors make the hypothesis that it is possible that where people can change their contract type, their work situation improves. So they compute a probit model to analyse the impact of changes in the characteristics of the job on the probability of an increase in job satisfaction.

In France both a change of occupation and a change of economic sector seem to increase the probability of an improvement in satisfaction, though change in sector seems to have a bigger impact than a change of occupation. However, moving to a permanent position doesn't have any impact on the probability of becoming more satisfied with the job in France: the corresponding coefficient is not significant. However, in most European countries moving to a permanent position has a positive impact.

Another measure of effectiveness in employment that the authors used is whether people do work for which their education is suited. When individuals have more education than is necessary for a job, this is often called 'overqualification'. In the ECHP overqualified workers can be identified as those who answer 'yes' to the question '*Do you feel that you have skills or qualifications to do a more demanding job than the one you now have?*' A disadvantage of this way of measuring overqualification is that of its subjectivity: workers are classified as overqualified as long as they feel that they are. But this remark is true for any subjective variable. Ideally, it is better to have both objective and subjective indicators about the analysed phenomenon.

The proportion of workers who feel overqualified is rather high in all countries (Table 4.2). In France, there were 54 *per cent* of individuals feeling overqualified in 1996 and 50 *per cent* in 2001. In 2001, this share is smaller in The Netherlands, Ireland, Italy Greece and Portugal and greater in Denmark, Belgium, Spain, Austria and Finland. So France is in an intermediaite position among analysed countries. The proportion of workers who feel overqualified decreases in France as well as in Ireland, Italy, Greece, Portugal, Austria and Finland, and seems to increase considerably only in Spain. This is perhaps contrary to what one would expect if the re-organisation of work makes workers worse off.

Table 4.2 Percentage of workers who feel overqualified, by country and wave

	1996	2001
Denmark	62	60
Netherlands	41	40
Belgium	65	66
France	**54**	**50**
Ireland	57	49
Italy	53	46
Greece	62	51
Spain	57	63
Portugal	55	37
Austria	63	54
Finland	66	63

For more detailed analysis the authors compute a probit model in which the dependent variable is the overqualification dummy, which has value one if the worker feels overqualified, and zero otherwise. Among the explanatory variables they include age, gender, education, whether the job is in the public sector, occupation groups, industries, whether the worker has supervisory tasks, the type of contract, and year of the interview.

The results for France suggest that young workers feel overqualified more often than older ones. Workers with high and some education are more likely to feel overqualified than workers with lower levels of education. Men are more likely than women to feel they are overqualified. There are some differences across occupations: professionals and clerks seem to feel overqualified more often than assemblers. Individuals working as skilled agricultural and fish workers feel overqualified less often than the reference occupation *i.e.* the assemblers. There are no differences across economic sectors in terms of overqualification in France. The main interest is in the association between overqualification and job security. In France, having a fixed-term contract, casual work and other no-permanent job agreement generally has a big positive impact on the probability of feeling overqualified.

For the next step, the authors analyse the possibility that people switch the industry in which they work in order to find a better job match. For this purpose they use a probit model to analyse which changes in job characteristics are more likely to end the feeling of being overqualified. Surprisingly, changes in wages seem to have a negative and statistically significant impact in France. Both a change of occupation and a change of economic sector can end the feeling of being overqualified. The interaction term is negative and significant for France, suggesting that there is no cumulative effect of changing both occupation and sector.

4.2 Occupational and industrial mobility

Occupational and industrial mobility could be an important measure of the degree of 'flexibility' of labour market. The authors assume that this occupational and industrial fluidity has a mostly negative meaning: movement across occupations is inefficient, whether from a personal or a productivity point of view.

The authors begin with the analysis of the degree of stability in a number of occupations over two years' period (Tables 4.3 and 4.4). France shows very little occupational change over this period which could be explained by its high level of job protection. France has the highest percentages of workers remaining in same occupations compared with other ten analysed European countries. This is true almost for all occupations. If we consider the period over seven years, France still retains its high level of stability.

Table 4.3 Percentages of workers remaining in same occupations wave 1-wave 3

	Germany	Denmark	Netherlands	Belgium	France	UK	Ireland	Italy	Greece	Spain	Portugal
Senior manager	89.3	90.0	92.6	93.2	**95.2**	84.2	92.8	96.2	91.2	93.6	99.2
Professional	93.8	95.5	94.5	95.5	**96.3**	86.6	97.6	96.2	98.3	97.8	96.3
Technical	92.4	91.8	92.5	94.7	**96.6**	77.1	91.6	97.2	94.4	92.3	97.7
Clerical	93.2	92.8	94.1	96.7	**96.6**	82.2	88.8	96.8	97.3	93.9	93.7
Service	93.2	86.6	91.8	94.0	**97.1**	85.1	84.3	94.4	92.2	89.3	92.1
Skilled	95.5	88.8	93.7	89.6	**96.0**	82.8	90.1	94.2	93.9	93.3	93.0
Less skilled	95.3	83.1	92.0	89.1	**94.6**	84.0	90.7	94.7	90.9	92.5	94.7
Elementary	89.2	76.5	88.8	92.0	**94.9**	76.3	84.8	86.8	91.7	86.6	89.9

Table 4.4 Percentages of workers remaining in same occupations wave 1-wave 8

	Germany	Denmark	Netherlands	Belgium	France	UK	Ireland	Italy	Greece	Spain	Portugal
Senior manager	44.6	77.0	52.9	50.3	**82.1**	63.8	71.2	43.0	49.2	52.4	38.3
Professional	79.2	80.4	68.0	53.9	**80.7**	63.0	81.1	78.8	81.8	81.4	81.6
Technical	73.7	76.1	56.5	39.5	**78.4**	52.2	52.9	43.4	44.2	59.2	41.7
Clerical	67.5	77.6	54.8	62.9	**82.4**	61.9	64.1	75.4	69.6	43.9	66.3
Service	63.2	70.8	45.0	48.6	**78.7**	60.6	54.8	54.9	62.8	62.2	52.8
Skilled	74.8	74.8	67.1	37.5	**82.7**	63.8	59.7	61.7	74.8	65.5	74.2
Less skilled	67.3	70.2	67.5	40.3	**77.5**	57.4	60.7	47.1	68.3	58.8	57.2
Elementary	54.7	58.2	38.2	20.0	**73.6**	37.0	43.5	35.2	51.4	48.5	44.4

As for the degree of switching across industries, there is also a high level of stability in France over the short timescale (Table 4.5). However, the data shows that in Denmark and

Netherlands there was no movement in the textile industry during the two analysed years while in France almost 8 *per cent* of workers have left this industry. The results are not the same for 7 years period, the mobility in textile sector is quite high in France but also in Denmark and Netherlands (Table 4.6). The health industry is the most stable in France: the percentage of workers remaining in this industry over the period of 7 years is of 92.8 *per cent*.

Table 4.5 Percentages of workers remaining in same industries wave1-wave 3

	Germany	Denmark	Netherlands	Belgium	France	UK	Ireland	Italy	Greece	Spain	Portugal
Farming/ mines	84.6	82.2	94.4	85.6	**96.2**	87.4	87.1	96.9	97.3	85.9	88.2
Food industry	82.4	93.9	96.6	90.0	**92.4**	79.9	90.0	92.6	84.8	92.2	87.6
Textiles	80.8	100	100	92.2	**92.0**	82.4	91.8	96.3	94.6	93.8	90.0
Wood/paper	92.0	86.1	93.8	87.4	**96.9**	82.3	91.4	91.7	81.7	95.0	92.7
Chemicals	92.2	79.0	82.0	98.1	**96.5**	87.6	94.0	93.5	87.7	90.1	91.9
Machinery	94.9	89.9	92.1	92.6	**95.3**	79.1	75.7	90.6	93.5	90.2	92.4
Construction	91.8	91.8	94.7	83.8	**93.4**	73.0	88.1	94.1	94.2	87.7	93.4
Retail	89.3	83.4	92.8	87.0	**95.9**	82.8	82.4	92.3	89.4	83.2	92.4
Hotels	79.4	80.7	77.9	88.4	**95.4**	73.8	87.2	91.5	86.2	89.3	82.9
Transport	94.5	85.0	95.0	96.3	**97.6**	86.6	93.5	95.8	96.1	94.5	96.0
Finance	97.5	95.5	94.4	98.6	**99.0**	88.8	95.1	99.0	98.1	95.0	99.8
Property	84.9	83.1	88.3	85.6	**94.1**	73.5	77.6	86.0	84.7	85.8	79.4
Public admin	95.2	86.2	96.0	98.0	**98.1**	88.2	98.7	97.8	99.1	97.6	98.3
Education	94.2	93.2	96.5	96.6	**96.5**	94.4	96.2	99.4	97.9	97.7	98.3
Health	97.1	94.2	97.6	97.4	**98.9**	90.5	97.7	97.3	97.7	97.1	95.4

Table 4.6 Percentages of workers remaining in same industries wave1-wave 8

	Germany	Denmark	Netherlands	Belgium	France	UK	Ireland	Italy	Greece	Spain	Portugal
Farming/ mines	67.0	68.3	80.3	60.7	**88.8**	44.8	46.1	69.0	82.3	59.2	74.5
Food industry	60.7	66.0	78.7	38.7	**76.7**	52.9	57.7	54.2	64.2	71.4	77.0
Textiles	48.3	72.5	45.7	48.6	**79.4**	35.4	46.8	71.8	67.7	76.1	75.5
Wood/paper	71.5	62.9	87.0	41.4	**75.8**	50.7	63.9	40.6	67.4	62.9	64.8
Chemicals	62.6	63.4	69.0	59.7	**89.3**	55.3	51.8	53.9	64.5	54.6	61.6
Machinery	72.0	55.7	55.0	50.0	**85.3**	50.3	21.6	55.6	72.0	67.6	63.3
Construction	66.4	83.8	96.3	55.4	**84.0**	49.0	51.0	62.6	73.6	75.2	75.5
Retail	65.3	67.7	62.6	51.8	**84.2**	54.9	45.8	54.2	68.9	63.5	66.2
Hotels	34.2	45.6	52.0	56.0	**79.8**	39.8	48.7	74.7	74.6	69.4	64.3
Transport	68.0	70.9	74.2	73.5	**93.2**	73.6	77.4	73.6	80.1	73.6	67.5
Finance	86.1	77.0	81.8	92.8	**89.6**	70.3	95.1	82.9	90.7	96.6	78.3
Property	49.7	70.8	66.5	25.3	**79.2**	47.5	44.5	33.9	57.5	57.0	43.1
Public admin	81.6	73.9	77.3	65.4	**90.9**	71.7	85.1	75.6	84.3	71.6	85.6
Education	83.1	82.0	91.3	87.0	**86.9**	80.4	85.9	91.1	91.4	86.1	85.5
Health	92.9	74.8	88.7	82.4	**92.8**	78.2	89.5	71.4	91.5	84.7	81.2

However, the main interest is not only in measuring the extent of moves but in understanding if this mobility is positive as the result of normal career progression or something negative as a results of different constraints on the labour market. To test this, one can analyse the distribution of change for each country, using a simple measure of upward and downward mobility (*e.g.* clerical to associate professional, elementary to semi-skilled, both count as upward). For all countries, including France, upward mobility is always greater than downward mobility, and indeed the latter is rather small (only 0.6 *per cent* for France).

The next step is to analyse the factors associated with occupational flexibility. The authors compute a probit model of the probability of an occupational change in order to understand who is more likely to change occupation.

In terms of demographics, the results suggest that in France women and older people seem to be less likely to change occupation, as are people with no supervisory tasks. In France, the probability of changing the occupation is equally distributed among the sectors: no sector is significant. People working in elementary occupations have a higher probability of changing occupation. In terms of our main focus of interest, those who are relatively satisfied with their job seem to be less likely to change occupation (the coefficient is negative and significant), while those who feel overqualified and those with a fixed-term or other non-permanent contract are more likely to change. So, the core contributory factors would seem to be those which describe (from the respondents' point of view) unsatisfactory or uncertain work: being in a fixed-term contract, in casual work, or overqualified, or having relatively low job satisfaction. The French results are globally the same as for the other analysed European countries.

Finally, the authors focus on the direction of change (compared to all others who move either down, sideways, or who do not move at all) using a random effects probit model. They analyse three main variables of interest – job satisfaction, overqualification and fixed-term work. In France, the coefficient of job satisfaction is negative in respect of upward mobility and not significant in respect of downward mobility. So the more an individual is satisfied, the smaller is his probability of moving upward. Overqualification is strongly associated with upward mobility in most countries, including France, so that many people move into better, more demanding jobs where they are no longer overqualified. For downward mobility the coefficient of overqualification is no more significant. Finally, the coefficient of being on fixed term contract is positive and significant for both directions of change. Some people in such work move up, some down.

The report shows a high degree of occupational change in Europe in the aggregate and, on average, over people's careers. This varies enormously by country, being especially high in Belgium and especially low in France.

The results of this report for France points out the high level of job protection in public sector, the precarious role of fixed-term contracts and the importance of feeling of overqualification for upward mobility. The degree of satisfaction with different aspects of jobs is increasing in France. However, the low mobility of French workers across occupations and industries could reflect the specific configuration of the French labour market, with a strong public sector and high unemployment rates. People hesitate to change jobs because of high level of job insecurity feeling mentioned in introduction. When one finally finds a permanent job, he or she prefers to keep it as long as possible.

Skills are also the subject of the WP8 report which focuses rather on individuals participation in lifelong education and training. Comparable data on this issue for the European countries are available from the *Continuing Vocational Training Survey (CVTS).* This

European survey provides comparable data on the forms, contents and scope of the continuing vocational training, either within organisations or by means of external continuing training providers. In the WP8 report the following variables are analysed:

- the proportion of organisations offering continuing training out of all organisations (**training incidence**);
- participation rates by employees in organisations offering training courses (**training access**);
- the number of hours of continuing training per participant (**training intensity**).

The authors study the countries' ranks according to the proportion of organisations offering continuing training, participation rates and participation hours. Comparing the three indicators, the best French rank is for the participation rate with 51 *per cent* of employees in organisations offering training courses. The leading country for this indicator is Sweden with 63 *per cent* participation rate. In term of number of hours of continuing training per participant France is on 11th place with 36 hours. The best performance is for Spain with 42 hours. Finally, 76 *per cent* of organisations offer continuing training. In Denmark there are 96 *per cent* of such organisations. France in the 'middle' group of Central and Sourthern European countries. However, authors note that there is no direct connection between the proportion of training enterprises with training courses, the opportunity for employees to participate in the enterprises' training courses and the intensity of the continuing training.

Some papers based on REPONSE and COI surveys are also devoted to the topic of skills. More precisely, papers analyse the link between organisational change or innovation and skills. For example, Askenazy and Moreno-Galbis (2004) investigates the effect of organisational and technological changes on job stability of different occupations. They show that the adoption of information technologies increases flows of manual workers, employees and intermediary occupations. In addition, tayloristic organisation reduces flows of employees and manual workers, while most of the new work practices raise employment variation of managers. The paper of Caroli and Van Reenen (2001) investigates the determination and consequences of organisational changes (OC) in a panel of British and French establishments. Organisational changes include the decentralization of authority, delayering of managerial functions, and increased multitasking. The authors argue that OC and skills are complements and offer support for the hypothesis of 'skill-biased' organisational change with three empirical findings. First, organisational changes reduce the demand for unskilled workers in both countries. Second, OC is negatively associated with increases in regional skill price differentials (a measure of the relative supply of skill). Third, OC leads to greater productivity increases in establishments with larger initial skill endowments. Technical change is also complementary with human capital, but the effects of OC are not simply due to its correlation with technological change but have an independent role.

Based on the analysis of COI data, Walkowiak (2006) finds a technological and organisational bias favourable to skilled employees. Both technological and organisational changes are also associated to different renewal trajectories of employers showing a stabilising effect on employment flows and a renewal of employees. However, while modernisation has beneficial effects on employment, it is favourable rather to the employment of more skilled employees. Speaking about training, Zamora (2006) does not find a relationship between organisations adopting technological change and the amount of training they provide. By contrast the increase in training following an organisational innovation is persistent over long time and progressive.

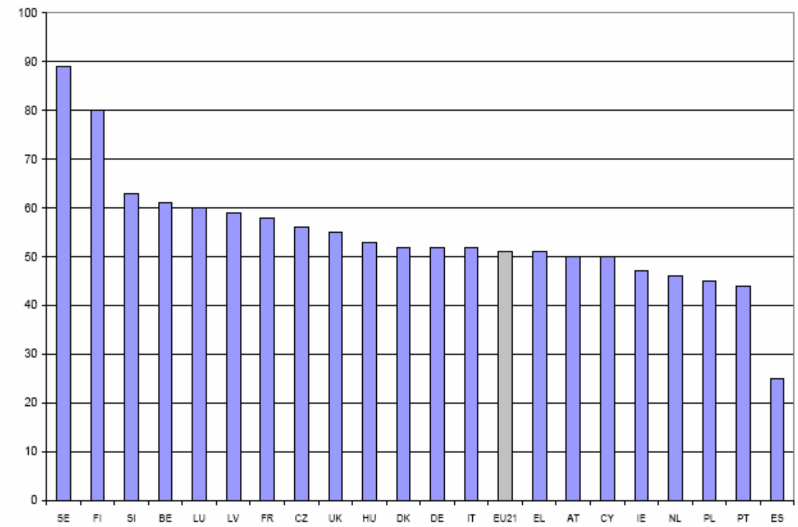
Finally, Behaghel and Greenan (2005) find technological change penalises specifically the less qualified older employees especially in terms of training in computer skills. The hypothesis of a comparative disadvantage of senior employees with regard to change therefore seems to be limited to technological rather than organisational change.

4.3 Career trajectories and work-life balance

The ESWT provides recent information on this issue for the European countries. The data especially pays attention to flexibility at the demand of employees, instead of at the demand of the organisation as is usually done. So the survey takes a work-life balance perspective. It focuses on parental leave that usually starts after maternity leave is finished. It is usually the longest and – from the perspective of an organisation – with regard to work organisation probably most difficult to handle kind of leave.

The proportion of organisations with employees on parental leave varies from 45 *per cent* to 60 *per cent* in most of the 21 countries surveyed. France with almost 60 *per cent* of organisations with employees on parental leave during the last three years takes 7th place among 21 countries (Figure 4.1). The differences between countries depend on the length and financial conditions of the national parental leave regulations. So the 'country effect' like for many other WORK's issues is the most important and relates to national variations in statutory provisions in addition to other societal differences such as public childcare provisions and labour market conditions. In France, like in many other countries, the idea of participation of men in childcare activities is largely admitted. Fathers in France can take 11 days of parental leave during the first four months after baby's birth.

Figure 4.1 Organisations with employees on parental leave during the last three years by country (*per cent*)



Source: European Foundation, 2007a: 15

Finally, within the framework of phased retirement schemes, employees beyond a certain age threshold have the possibility to gradually reduce the number of working hours when approaching the retirement age. Phased retirement enables elderly employees to stay integrated in the labour market but with a reduced work pressure. But the price is very often a reduced income. In France, the share of organisations offering phased retirement to their employees amounts to approximately 32 *per cent*. This is quite below the European average (of 21 countries). France is situated below Poland and Czech Republic, for example. In Netherlands this practice is used by more than 60 *per cent* of organisations.

5 A quantitative evaluation of the shape of employment and new forms of work organisation

Question of work organisation are addressed both in WP8 and WP9 reports.

CEE report uses the European Working Conditions Surveys to trace the changes in work organisation through five key synthetic indicators capturing some dimensions of work. The first indicator shows the opposition between routine jobs and complex jobs involving opportunities of learning. We call this indicator the degree of job complexity. The second indicator distinguishes workers who are independent in their time allocation from those who, because they belong to workgroups in their workplace, are not. This indicator is called the degree of independence in time allocation. Other two indicators characterise the intensity of work. From our point of view the work intensity has two main components: the intensity of technical constraints and the intensity of market constraints. The intensity of technical constraints is driven by the automatic speed of machines or movement of products *etc.* while the intensity of market constraints reflects the dependence on direct demands from people such as customers, passengers, pupils, patients, *etc.* Finally, the last indicator reflects the quality of working conditions especially physical nuisances.

Our main questions here are: are the changes in France the same as in the EU-15? What are the most important results that distinguish France?

The results show that France is the only country of EU-15 where we do not find any significant changes in our analysed indicators between 1995 and 2005. However, it does not mean that there were no changes at all. With European Working Conditions Survey we have observations only in three points of time: 1995, 2000 and 2005. If we consider the changes between 1995 and 2005, what we observe is that the value of indicators in 2005 is not statistically different from the value of these indicators in 1995 so that the level of job complexity, independence in time allocation, intensity of technical and market constraints as well as the quality of working conditions stayed virtually the same between 1995 and 2005. Unfortunately we can't follow the real dynamic with our data. The only work dimension which changed within the period between 1995 and 2005 is the intensity of market constraints. These constraints intensified between 1995 and 2000 but diminished between 2000 and 2005.

The same analysis could be applied to the ranking of France according to different indicators within the 15 European countries. Compared with other EU 15 countries, France has a high degree of independence in time allocation in 2005 (4th rank) and low intensities of technical and market constraints in 2005 (13th rank in both cases).

In conclusion, we can only say that according to our analysis there were no substantial changes in analysed work dimensions in France during the ten years period between 1995 and 2005. It is not the case of European Union on average and some other European countries taken separately. This result calls certainly for deeper analysis and comparison work with other data sources specific to France.

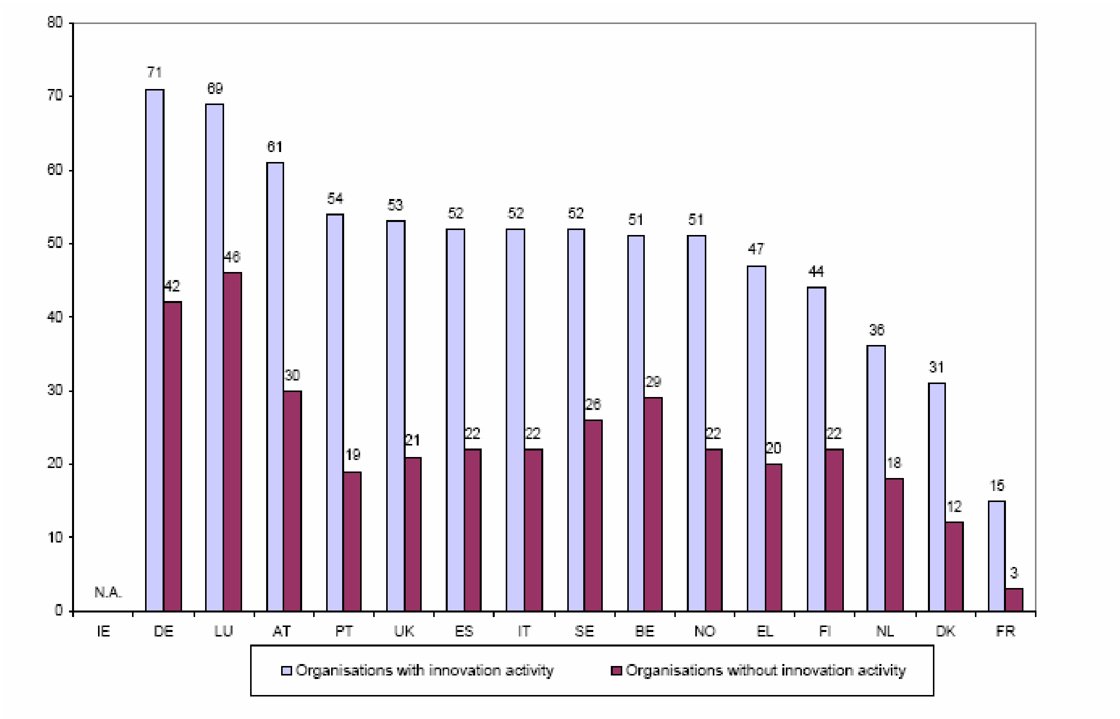
The series of French working conditions survey have registered a trend towards work intensification with a deterioration of working conditions over the 1984-1998 periods. The last survey, conducted in 2005 witnesses a stabilisation in this trend (Bué, Coutrot, Hamon-Cholet, Vinck, 2007). Market pressures have stopped increasing as well as bad physical working conditions (except for blue collar workers). On the other hand, employee discretion has decreased while formalisation of work and in particular working time has increased.

The COI survey, which is a French matched employer/employee survey on organisational change and computer use, also registers a pause in the reorganisation process of enterprises in manufacturing over the recent period (2003-2006). A first survey, conducted in 1997 and covering firms with more than 50 employees in manufacturing industries over the 1993-1997 period shows a rapid diffusion of new managerial and ICT tools (Greenan and Mairesse, 2006). Moreover, the intensity of use of new organisational practices is positively correlated at the employer's level with the intensity of communication of blue collar workers and of technicians and supervisors. It takes form of group work, information exchange, mutual co-operation and meetings. The survey results globally confirm the existence of a complementarity between the use of new organisational practices and ICT's. However the development of a more intensive communication seems not to be a permanent feature of new work organisations but rather a direct and necessary consequence of the adjustment of coordination costs linked to the implementation of the changes as such.

Conducted again, in 2006, the COI survey shows that a smaller fraction of manufacturing firms have implemented organisational changes over the 2003-2006 period compared with the 1994-1997 period (Greenan and Walkowiak, 2008). Compared with the manufacturing sector, private companies of the service sector that have been covered in the new wave of the survey implement organisational changes less frequently. However, since 1997, ICT diffusion has been rapid and massive: 42 *per cent* of manufacturing firms used Internet in 1997, 100 *per cent* of them do so in 2006. The use of a web site concerns 85 *per cent* of firms in 2005 whereas 18 *per cent* of firms were concerned in 1997. For the case of France, it is also important to keep in mind that the laws on working time reduction in France, implemented between 1998 and 2002 have spurred an active wave of internal reorganisations around working time arrangement.

The question of incidence of a new work organisation is analysed within the WP8 report. The authors note that there are currently no European-wide organisation surveys that can determine to what extent a change in work organisation is taking place in European countries. The *CIS (Community Innovation Survey)* survey is an exception, but it only brings limited information. Some questions within this survey deal with changes in strategy, management, organisation, marketing and finally in changes in designs. The Figure 5.1 presents the results on the issue of organisational changes, to be understood as the implementation of new or significant changes in organisational structures during the period 1998-2000.

Figure 5.1 Organisations that have implemented new or significantly changed organisational structures according to innovation activity between 1998 and 2000



The figure shows very high country differences in the level of organisational change.

The figure shows that organisations with innovation activity were more likely to engage in organisational change than organisations without innovation activity and this for each country. This is also true for France: French organisations with innovation activity are fifth times as likely as those without innovation activity to make organisational changes. However, figures for France are much smaller than for all other countries. In Germany, for example, 71 *per cent* of organisations with innovation activity have implemented new or significantly changed organisational structures while this figure is only 15 *per cent* for France. We observe the same result for the organisations without innovation activity: in Germany there are 42 *per cent* that implement new organisational structures compared with only 3 *per cent* in France. It could indicate that the diffusion of new organisational structures is less widespread in France than in other European countries. Nevertheless, as the authors' remark, the results should be taken with caution.

As for results from French organisation REPONSE survey Coutrot (2000) shows that most employees still fall into the 'traditional' organisations, characterized by a rigid work organisation with a low degree of autonomy and work force subjected to permanent control. However more globalised and competitive French organisations are more oriented towards the combination of innovative management and work organisation with systematic work prescription and controls. Lemière, Perraudin and Petit (2005) analyse the different employment and work policies of French establishments in the end of the 90s with the aim of highlighting the different employment relationship characteristics in connection with work organisation practices. Five classes of employment and work policies are defined on the basis of the REPONSE survey that was conducted in 1998. An important result is the topicality of a dual scheme linked to what is usually described as labour market segmentation. Rojot and Le Franchec (2004) investigate the relationship between firms strategies and HRM. The paper attempts to demonstrate, first, that there is a link between certain types of strategy adopted by firms and certain HRM practices implemented in those firms, and second that enterprises engaged in pursuing a given strategy centred on innovation use HRM practices generally linked with high involvement of employees.

One of the questions about new forms of work organisations is about the possible complementarities between new organisational practices. Using the data from French REPONSE and the British WERS, the study of Caroli *et al.* (2001) performs an analysis of complementarities between organisational practices. More precisely the objective of the study is to test the presence of performance enhancing complementarities between systems of employee representation and new organisational practices. The results for both the UK and France can be seen as providing support for the thesis that complementarities between new organisational practices count for innovative performance but unlike the UK case, there is no evidence to suggest that in France employee representation is a precondition for reaping the benefits associated with the use of new organisational practices.

6 Conclusion

So what can be leant about France from WORKS project?

First of all, from our own research based on the European Working Conditions Survey we find that France is the only country of EU-15 where the five analysed dimensions of work stayed stable between 1995 and 2005. More precisely, we do not find any significant changes in such work dimensions like work complexity, independence in time allocation, work intensity, intensity of market constraints and quality of working conditions during the ten years period. However, this result should be taken with caution as there were some changes if take into account the dynamics of our indicators between 1995 and 2000 and between 2000 and 2005. This concerns intensity of market constraints. In France, these constraints became more intensified between 1995 and 2000 but during the last analysed five years (2000-2005) the intensification of these constraints diminished significantly. The final result shows that the intensity of market constraints in 2005 is statistically identical to the level of 1995. But as far as all other work dimensions are concerned we do not find any clear changes.

While in Europe there is a very high degree of occupational change in the aggregate and, on average, over people's careers, this occupational change is especially low in France. There is no decrease in satisfaction with different aspects of job neither in Europe nor in France. Factors which explain dissatisfaction with work especially include the nature of employment contracts: people with fixed-term contracts are especially likely to be dissatisfied with their work. Finally, the feeling of overqualification is an important determinant of occupational mobility in France.

In terms of changes in work within the analysed business functions, France shows the same tendencies that the EU-15 on average. For example, French textile and clothing industry has suffered substantial job losses while the IT sector has created a good number of jobs during the analysed period.

According to Eurostat data, average usual weekly working hours slightly increased in France between 2001 and 2005. The share of part-time also increased while the percentage of self-employed decreased during the analysed period. One of the findings of the time-use data analysis is the considerable rise in the incidence of Saturday and Sunday work in France between 2000 and 2005. However, this result is not completely confirmed by French national sources.

Bibliography

Abowd J., Corbel P. & Kramarz F. (1999), 'The entry and exit of workers and the growth of employment', *Review of Economics and Statistics*, 81(2), p. 170-187.

Artus P., Cahuc P. & Zylberberg A. (2007), *Temps de travail, revenue et emploi*, Economic Analysis Council.

Askenazy P. & Moreno-Galbis E. (2005), 'The impact of technological and organisational changes on labor flows. Evidence on French establishments', *Revue Economique,* vol. 5, n° 3.

Beffy P-O & Fourcade N. (2004), 'Le ralentissement de la productivité du travail au cours des années 1990: l'impact des politiques d'emploi', *Economie et Statistique*, n° 376-377.

Behaghel L. & Greenan N. (2005), *Training and Age Biased Technical Change: Evidence from French Micro Data*, Document de travail du CREST, n° 6.

Blanchard O. (2004), 'The Economic Future of Europe', *Journal of Economic Perspectives*, vol. 18, n° 4, p. 3-26.

Bruyère M., Chagny O., Ulrich V. & Zilberman S. (2006), 'Comparaisons internationals de la durée du travail pour sept pays en 2004: la place de la France', *Données sociales – La société française,* Edition 2006.

Bué J., Coutrot T., Hamon-Cholet S. & Vinck L. (2007), 'Conditions de travail: une pause dans l'intensification du travail', *Premières Synthèses de la DARES*, n° 01.2.

Bunel M. (2002), *Added worker effect revisited through the French working time reduction experiment*, Gate W.P. 02-09.

Cahuc P. & F. Kramarz (2004), *De la Précarité à la Mobilité: vers une Securité Sociale Professionnelle*, report for Minister of Economy and Minister of Labour.

Calavrezo O., Duhautois R. & Walkowiak E. (2007), *The effect of working time reduction on short-term compensation: a French empirical analysis*, CEE Discussion paper n° 88.

Caroli E. & Van Reenen J. (2001), 'Skill-based organisational change? Evidence from a panel of british and french establishments', *Quarterly Journal of Economics*, vol. 116, n° 4, p. 1,449-92.

Coutrot T. (2000), 'Post-fordism and managerial strategies in France', in Clarke L., de Gijsel P. & Janssen J. (eds.), *The dynamics of wage relations in the new Europe*, Kluwer Academic Publishers, Dordrecht.

Coutrot T. (2004), 'Innovations et stabilité des emplois' (Organisational and Technical Innovations and Employment Stability), *Travail et Emploi*, n° 98, avril 2004, p. 37-49.

European Foundation for the Improvement of Living and Working Conditions (2006), *Working time and work-life balance in European companies*, Office for Official Publications of the European ommunities, Luxembourg.

European Labour Force Survey, http://circa.europa.eu/irc/dsis/employment/info/data/eu_lfs/-LFS_MAIN/LFS/LFS_CONCEPTS_and_DEFINITIONS.htm.

Givord P. (2003), 'A new Employment Survey', *Economie et Statistique,* n° 362, July, p. 59-66.

Goux D. (2003), 'A History of the Employment Survey', *Economie et Statistique,* n° 362, July, p. 41-57.

Greenan N. & Mairesse J. (2006), 'Les changements organisationnels, l'informatisation des enterprises et le travail des salariés'(Organisational changes, informatisation of organisations and the work of employees), *Revue économique*, vol. 57, n° 6, p. 1,137-1,176.

Greenan N. & Walkowiak E. (2008), *Changements organisationnels et informatisation: les tendances de long terme dans l'industrie*, mimeo CEE.

Kramarz F. & Michaud M-L. (2004), 'The Shape of Hiring and Separation Costs', *IZA DP,* n° 1,170.

Lemière S., Perraudin C. & Petit H. (2005), 'Les pratiques de gestion du travail et de l'emploi en France et leurs conséquences sur les salariés' (employement and work management practices and their consequences on workers), *Prepub SAMOS*, n° 263.

OCDE (2006), *Panorama des statistiques de l'OCDE 2006: Économie, environnement et société.*

Postel-Vinay F. & Saint-Martin A. (2004), 'Comment les salaries perçoivent-ils la protection de l'emploi?', *Economie et Statistique*, n° 372, p. 41-59.

Rojot J. & Le Flanchec A. (2004), 'Une étude de la relation entre stratégies d'entreprise et pratiques de gestion des ressources humaines' (The relationship between firm's strategy and HRM practices), *Revue de gestion des ressources humaines*, n° 51, p. 24-38.

Walkowiak E. (2006), 'Renouvellement de la main-d'oevre et modernization des enterprises' (Renewal of the work force and modernisation of organisations), *Revue économique*, vol. 57, n° 6, p. 1,205-1,234;

Zamora P. (2006), 'Changements organisationnels, technologiques et recours à la formation dans les enterprises industrielles' (Organisational and technological changes and the provision of training in industrial organisations), *Revue économique*, vol. 57, n° 6, p. 1,235-1,258.