Impact of restructuring on health and safety and quality of work life
Psychosocial risks

Daniele Di Nunzio, Pernille Hohnen,
Peter Hasle, Hans Torvatn & Lisbeth Øyum

IMPACT OF RESTRUCTURING

Impact of restructuring on health and safety and quality of work life
Psychosocial risks

Daniele Di Nunzio (IRES);
Pernille Hohnen & Peter Hasle (NRCW);
Hans Torvatn & Lisbeth Øyum (SINTEF)

European Commission

CITIZENS AND GOVERNANCE IN A
KNOWLEDGE-BASED SOCIETY

KATHOLIEKE UNIVERSITEIT
LEUVEN

HIVA

www.hiva.be

Cover design by Koloriet.

Contents

1   Introduction

It is generally agreed that major upheavals are taking place in the organisation of work as corporate structures are transformed in the context of economic globalisation and rapid technological change. But how can these changes be understood? And what are the impacts on social institutions and on workers? The Work Organisation Restructuring in the Knowledge Society (WORKS) project was funded by the European Commission in 2005 under its 6th Framework Programme to investigate these questions. With partners in seventeen different institutions in fourteen EU Member States, this ambitious research project has combined theoretical work and a detailed analysis of a wide range of statistics with in-depth case studies to analyse the forces that bring about these changes, including global value chain restructuring and the policy environment.

One of the underlying assumptions of the WORKS project is that the reorganisation of work can only be understood fully in the context of a global restructuring of value chains, entailing a simultaneous decomposition and recomposition of sectors, organisations, labour processes and skills. However, the considerable heterogeneity within Europe of skill supply, levels of employment, welfare systems, and economic sectors makes it especially difficult to disentangle the causes and effects of such processes and to isolate the primary drivers of change. Yet it is particularly important for Europe both to understand the factors that will enable firms to sustain their competitive edge, to ensure a future supply of jobs that is satisfactory both quantitatively and quality and to examine the impact of these changes on the quality of life. At the heart of this is a single issue: how are employment practices adapting to change and with what effect? If we can answer this more effectively on a Europe-wide basis we will be able to propose practical solutions to real problems.

Starting in June 2005, the WORKS consortium, involving partners from seventeen different institutes across fourteen EU Member States, carried out an ambitious programme of theoretical and empirical work. These were carried out under five main pillars: 'theories and concepts', 'quantitative research', 'policy', 'qualitative research on organisations' and 'qualitative research on individuals'. The work of these pillars is summarised more fully below.

This is one of eleven thematic reports that brings together the results of all five pillars to deepen our insights into the topic of Impact of restructuring on health and safety and quality of work life.

The other reports will focus on the topics of: value chain restructuring in Europe in a global economy; changes in work organisation and representation at the workplace; strategies to reach flexibility in the organisation; skills and qualification policies and HRM; new career trajectories and biographies; changing gender and ethnic relations in the workplace; working time, gender and work-life balance; change processes and future per-

5

spectives; changes in work in transitional economies; and employers' use of technology and the impact on organisational structure.

The material on which this report draws is summarised below.

1.1   Theories and concepts

In the first stage of its work the WORKS partners collectively carried out a review of the very large body of literature with relevance to the project's research questions, in order to map the field, formulate hypotheses to be tested in the empirical work and develop a clear conceptual framework for the research. This was no easy task. There are many lenses through which one can view the restructuring of work in a global knowledge economy. There are the lenses of different academic disciplines, for instance the sociology of work, economic geography, organisational theory, social psychology, ethnography, gender studies, industrial relations or political science. Then there are the lenses of different social perspectives, for instance those of international development agencies, of national governments in developed and developing countries, of technology providers, of statisticians, of employers, of trade unions, of educators, of civil society, of skilled professional workers who are may be beneficiaries of change, and of those groups that are potential losers. There are also differences deriving from different national research traditions, different ideological approaches and many other variables. In each of these many fields, a body of literature has grown up, trying to make sense of the changes taking place and supplying fragments of evidence. Piecing all this evidence together was a major challenge. The very disparity of the origins of this literature means that it is difficult to find a common frame of reference. Even when the same terms are used, they may be used with different meanings and the lack of commonly-agreed definitions can make the refracted pieces of evidence difficult to compare, often giving them a contradictory and anecdotal character.

Nevertheless, in its first six months, the project managed to bring together in a single report (Huws, 2006) a remarkably comprehensive overview of the available evidence, thanks to the large collective efforts of the interdisciplinary WORKS team. This evidence was carefully sifted with the aim of distilling insights that could help to produce a clear conceptual framework in order to develop hypotheses and research questions to guide the empirical research to be undertaken by the WORKS project. This programme of work was, however, highly ambitious, encompassing the aims of: improving our understanding of the major changes in work in the knowledge-based society, taking account both of global forces and of the regional diversity within Europe; investigating the evolving division of labour within and between companies and the related changes at the workplace; exploring the implications for the use of skills and knowledge, for flexibility and for the quality of working life; and examining the impact on occupational identities; time use and learning; as well as the impact on the social dialogue and the varieties of institutional shaping. Balancing the need to take account of these many dimensions whilst still retaining a focus on clear research questions that could be addressed feasibly within a coherent research design in a relatively short space of time was a major challenge, and we begin by presenting the methodology that was adopted to achieve this.

The first task was to achieve a division of labour that on the one hand took full advantage of the specialist subject expertise of partners whilst also recognising the diversity of national research traditions across Europe and the need to take account of the literature in

all major European languages. Once topics had been assigned to partners, in a second stage, these partners were asked to produce a list of 'key concepts' for inclusion in a glossary.[1] The purpose of the glossary was to ensure that all partners could share a common understanding and make visible any differences of interpretation or definition of key terms so that they could be discussed and agreed, in a process whereby, in its contribution to the cohesion of the whole group, the dialogue involved in producing the entries was as valuable as the end result. The next stage involved the production of draft reports covering the main concepts and the associated literature. Despite the authors' broad knowledge of their chosen topics, and the fact that each report included inputs from institutes in more than one country, it was felt that the only way to ensure that each report covered the full range of relevant European scholarship was to add a further, vital stage in the work. This involved circulating each draft report as it was completed to all the other WORKS partners, including those who had not been involved in the actual process of report-writing. In this stage, partners were asked to draw on their knowledge of the literature in their own language or national setting, as well as their specific subject knowledge, to comment on the reports, point to issues that might be regarded as contentious and add references to relevant sources. This process of peer review enriched and refined the report which was then used by all partners as an input to the development of research questions, methodologies and research instruments for the empirical research.

1.2   Quantitative research

The 'quantitative research' pillar of the WORKS project studied the changes in work in Europe on the basis of comparative analyses of data from existing organisation and individual surveys. In a first step, major European organisation surveys and individual and household surveys relevant for changes in work were mapped and benchmarked in order to assess their relevance and their strengths and weaknesses for comparative analyses on changes in work. Next, and more important for the thematic reports, the research focused on the secondary analysis of the results of the organisation and individual/household surveys. For the organisation surveys, a thematic analysis of thirteen major national and international organisation surveys, focusing on the major results with respect to the key issues of the WORKS project, resulted in an overview report 'Comparative analysis of organisation surveys in Europe' (Ramioul & Huys, 2007). The key issues addressed in this report are:
- new forms of work organisation, organisational and technological innovation, changes in work. Here in particular some findings with respect to skill-biased organisational change and the role of employee involvement and participation are relevant;
- changes in skills and qualification and vocational training policies at establishment level;
- work-life balance and working time arrangements. Here conclusions from EU wide research on working time arrangements and flexibility policies are of particular interest;
- quality of the working life as measured in organisation surveys.

---

1   Available online on http://www.worksproject.be/Glos_and_defint.htm.

For each of these issues, the most relevant conclusions from the organisation surveys were summarised, thus leading to a comprehensive overview of organisational changes in Europe based on this particular data source.

For individual surveys, three major sources of individual and household data made it possible to carry out longitudinal and EU comparative analysis on the issues relevant for the WORKS project: the Community Labour Force Survey (CLFS); the European Working Conditions Survey (EWCS) and the European Community Household Panel (ECHP). Based on these three key data sources, four different reports were published, each focusing on the EU comparative analysis and on the identification of trends with respect to key WORKS issues. The reports focused on the following issues:

- tracing employment in business functions: a sectoral and occupational approach: in this report an innovative method was used to measure changes in employment related to value chain restructuring (Geurts, Coppin & Ramioul, 2007);
- trends in work organisation and working conditions. For this report, three waves of the European Working Conditions Survey were analysed in a longitudinal and EU comparative perspective, shedding light on changes in task complexity, autonomy, working time independency, health and safety issues and working conditions (Greenan, Kalugina & Walkowiak, 2007);
- work flexibility in Europe: a sectoral and occupational description of trends in work hours, part-time work, temporary work, and self-employment was carried out based on this important European data source (Birindelli & Rusticelli, 2007);
- occupational change in Europe: based on longitudinal data, aspects of work satisfaction, occupational mobility and over qualification were investigated (Brynin & Longhi, 2007).

1.3   Qualitative research on organisations

The organisational case studies within the WORKS project covered a number of generic business functions that represent a wide variety of activities and labour processes in the 'knowledge society' ranging from highly-skilled 'knowledge work' to semi-skilled manual tasks. The research also aimed to focus on those business functions that feature prominently in the external restructuring of companies and thus in the restructuring of global value chains. The selected business functions were: research and development; production; logistics; customer service; and information technology.

To study the restructuring of value chains these business functions need to be located in specific sectors. The selection of sectors reflected the emergence of global value chains in different historical stages: sectors where vertical disintegration and internationalisation is already a rather old fact, and sectors where these have developed only very recently. The sectors under study were:

The *clothing industry* is an example of an 'old' industry where restructuring of global commodity chains was already an issue in the 1970s. Recently, the integration of Central and Eastern Europe in pan-European production networks and the phasing out of the Multi-Fibre Arrangement and the WTO agreement on textiles and clothing considerably changed the trade regimes and resulted in a new wave of restructuring mainly affecting production in Southern Europe and the CEE countries. This sector also provides interesting examples of 'head and tail' companies which concentrate high-skilled work within Europe but carry out the rest elsewhere.

The *food industry* is the largest manufacturing sector in terms of employment in the EU. It was subject to major restructuring after the completion of the single market in the European Union in the early 1990s which allowed companies to replace their country-by-country organisation with a pan-European structure. In contrast with parts of the clothing industry, food production is by and large highly-automated. Both industries are interesting as examples of buyer-centred value chains in which the demands of the retail trade play a pivotal role.

The *IT industry* is a growing industry that saw a major wave of restructuring during and after the boom years in the late 1990s and around 2000, partly associated with off shoring. Internationally, this has contributed to the emergence of a 'new breed of TNCs', global companies that supply services to other companies. To a large extent the IT service provider companies have grown through large outsourcing contracts that include the transfer of personnel from their public or private sector client organisations, a tendency highly relevant for the research questions of WORKS.

Public sector organisations and *services of general interest* are currently subject to far-reaching restructuring because of liberalisation and privatisation policies and budgetary constraints. In these sectors the lengthening of value chains through large scale outsourcing is a very recent phenomenon. The consequences for the quality of work are highly influenced by traditional differences in the regulation of work between the public and private sectors.

Each business function located in a particular sector was studied in a range of countries with diverse employment and welfare regimes (liberal, conservative, socio-democratic, *etc.*). This made it possible to analyse the influence of institutional frameworks on the consequences of restructuring. Overall, 58 case studies were conducted in fourteen countries. The following overview shows the distribution of case studies.

Table 1.1   Sample of case studies

	R&D design	Production	Logistics	Customer service	IT
Textiles/clothing	BE; FR; DE; PT; IT	BE; IT; PT; HU; GR	FR; DE; NL; PT; HU		
Food		GR; BG; IT; NO; DK; UK	BE; NO; BG; GR; UK		
IT	DE; AT; UK; BE; FR; NO	DE; AT; HU; BG; SW			
Public sector administration				AT; BE; BG; HU; IT; UK; SW	BE; NL; UK; FR; DE; NO; SW; PT
Services of general interest: post and rail				DE; AT; SW; NL; GR	

For each case study, eight to ten interviews with management, key employees, and shop stewards (in the selected business functions) were conducted. The interviews were complemented by company documents and other material that made it possible to produce a comprehensive picture. Researchers in the respective countries synthesised the individual case studies from the interview data. On the basis of the individual case study reports,

comprehensive comparative analyses were carried out to compose this report. The authors of the report are deeply indebted to the researchers who carried out the case studies in the various countries and to the respondents who devoted their time to our research and helped us to understand the developments in their companies and sectors. For the presentation in this report, all company names have been changed to assure anonymity.

1.4   Qualitative research on individuals

The organisational case studies were complemented by case studies designed to investigate the impacts of changes at work on individuals and their households. Thirty of these occupational case studies were achieved in fourteen countries, between June 2006 and May 2007; in total 246 in-depth individual interviews were carried out, according to common interview guidelines elaborated in May 2006.

These occupational case studies are closely related to the organisational case studies that were carried out in a selected number of business functions, during the same time span. In the WORKS project, the concept of the 'business function' lies at the core of the qualitative empirical research, since these business functions provide the most useful unit of analysis for studying value chain restructuring and changes in work. In order to study changes in work at the individual level, individual workers were selected within specific occupational groups linked to key business functions.

Six occupational groups were selected: designers in the clothing industry; researchers in information and communication technology; IT professionals in software services; production workers in food or clothing; logistics workers in food or clothing; front-office employees in customer relationships in public services. In each occupational group, three to seven case studies were conducted in different countries, covering a variety of socio-economic and institutional contexts. Each case study relied on seven to nine in-depth individual interviews, including a biographical dimension.

The analysis of the interviews was structured around five themes that grouped together the WORKS research questions. These were: career trajectory, occupational identity, quality of work, knowledge and learning, and work-life balance.

Particular attention was paid to gender issues. Gender was treated as a transversal theme in the analysis of changes in work at the individual level. The principle of gender mainstreaming (*i.e.* taking systematically into account the differentiated experiences of men and women in all items of data collection and analysis), formed one of the basic guidelines for the individual interviews.

1.5   The policy pillar

A central task in WORKS is to examine what effect policy initiatives and regulation at various levels - international, European, national, regional, sectoral and company - actually have on work life and work experience. Especially relevant in this regard is the role of institutions in the determination, implementation and enforcement of policy. We began with the question: Can we expect divergences in the ability to regulate changes in work due to restructuring according to different types of production or employment regimes,

different types of industrial relations models, diverse institutional frameworks? Toward this end, all of the organisational case studies included a section on industrial relations and regulation of work. Within each company that was investigated, data was collected on the forms that worker representation took, which issues were negotiated, the role of workplace representation in restructuring (information, consultation, active intervention), the impact of European or national regulations, and the pressures on regulations and institutions due to restructuring. Additional interviews with trade union representatives and works councilors were carried out where possible.

The research agenda motivating this line of inquiry was to examine what role the institutions and actors of industrial relations play in restructuring across value chain in diverse settings and across diverse institutional contexts. A further issue is what role workers´ representatives have in tempering the effects at the workplace that result from this restructuring, including the terms and conditions of employment, fragmentation and segmentation, gender equality, training and skilling, and quality of work life. Existing studies have shown that there are major challenges for existing institutions and forms of social dialogue to deal with current trends in restructuring and changes at work. Therefore, the case studies also investigated the impact of restructuring on the strategies or effectiveness of workers' representation and workers' voice.

1.6   The content of this report

The goal of this thematic report is to identify the consequences of restructuring on health and safety and quality of work life with a specific focus on psychosocial risks. In order to identify new problems and new protection opportunities after restructuring, 58 organisational case studies and 33 occupational case studies carried out by WORKS have been analysed with the analytic support of data, literature and previous reports drafted for the WORKS project. Theories, methods and specific goals of the analysis are explained and justified in Chapter 2. Chapter 3, through an analysis of Eurostat statistics and the European Working Conditions Survey, outlines some cross national trends concerning health and safety issues, to present the structural developments that seem to prevail in contemporary European labour market. Chapters 4, 5, 6 are the result of a detailed analysis of case studies, with a close examination of the six dimensions identified by Kristensen (1999) as indicator of work-related stress. Chapter 4 consists of an analysis of the five selected sectors and focuses on what has been found to be the most important emerging psychosocial working environment issues in the cases. In Chapter 5, we present a summary emphasising empirical findings across sectors, focusing on each of the six dimensions of Kristensen model, with a brief description of cross sectoral variations and differences related to business function and education. Finally, Chapter 6 provides an analysis of the main changes during restructuring considering their consequences for the six dimensions model, with the aim to present the new challenges leaded by restructuring. Report closes by offering a series of recommendations aimed at protecting the quality of work life and health and safety for European employees.

There are two important methodological considerations to take into account to better understand this thematic report. *First*, it is difficult to isolate a single 'case of restructuring' both spatially and periodically, in particular it is hard to identify its consequences on health. The employee's description of health problems depends on his/her perception of

risks, hence a qualitative analysis can reveal or not specific problems of a group of work-ers. The culture of individual work, that affects the perception of one's health, is influ-enced by multiple factors and is different depending on region, company's culture and individual subjectivity. Moreover, some psychosocial problems depend on the time passed after restructuring: some diseases are immediately perceived, others need more time to show up. *Second*, it is noteworthy that in many of these cases there is a lack of more specific information about the employees' experiences of health and safety, espe-cially as for psychosocial working conditions. This required a close attention in comparing cases and finding general explanations for restructuring processes on the one hand and specific factors determining the quality of work life and psychosocial working environ-ment dimensions on the other.

2   Theories of impact of restructuring on health, safety and the quality of working life

2.1   Present theories

Work life researchers have been interested in the impacts of all kinds of restructuring on health and safety[2] for decades. Early examples of such studies includes for example the studies of the introduction of the Longwall method for coal-getting (Trist & Bamforth, 1951), introduction of work place democracy in Norway in the sixties and seventies (Emery & Thorsrud, 1976), and the Michigan quality of work project (Seashore, 1982). As globalisation became the new big trend in the nineties several studies analysed its impact on society as a whole, including work life (Martin & Schuman, 1996) and in the last decades several studies have analysed the impact of change in general, including restructuring.

The general picture is that *worker's perceptions* of their health and safety and risk perception, has shown an *improvement* over the last fifteen years, according to a survey on working conditions undertaken in 2000 (Paoli & Merlie, 2000). However the *worsening of important factors of working condition* such as: intensification of work, prevalence of repetitive movements, high-speed work, workpace determined by others, and flexible employment practises as well as continued exposure to physical hazards at the workplace, *causes continued health problems for workers.*

The general picture of development of health and safety issues is therefore mixed. Health and safety has improved in some areas (safety, physical working environment), but has deteriorated in others (like intensification of work, repetitive movements), while other changes (increased interaction with costumers/clients) have both positive (like increased meaning) and negative (like more stress, increase in demands) consequences for the workers.

A special problem when analysing effects of organisational restructuring is to isolate the effects of the restructuring from other developments, including of course other changes. Organisational change can be a difficult endeavour. The probability of any change project realising planned financial and strategic objectives has been found to be 25-50 *per cent* (Clegg & Walsh, 2004; Kramer, Dougherty & Pierce, 2004). Nguyen and Kleiner (2003) conclude that, in the world of increasing mergers and acquisitions, 75-80 *per cent* of organisations fail to reach targeted objectives. Negative occupational health effects are part of this equation (Torvatn & Molden, 2001). These effects include uncertainty for

---

[2]   In the present paper we use 'health and safety' in a broad sense of the word, covering physical health and safety as well as psychosocial working environment and quality of work life.

the future job situation that the change creates (Blau, 2003; Bordia, Hobman, Jones, Gallois & Callan, 2004; Furnham, 1997; Nguyen & Kleiner, 2003), a loss of control (Proctor & Doukakis, 2003; Worrall & Cooper, 1998), reduced role clarity (Korunka, Scharitzer, Caratons & Sainfort, 2003), or a change in the relations between employees when colleagues are discharged or when well-established organisational structures disappear (Kivimaki, Vathera, Elovainio, Pentti & Virtanen, 2003; Noel, 1998). All this, in turn, may contribute to different short- and long-term outcomes at the individual and organisational level, such as psychological morbidity (Virtanen *et al.*, 2005), early retirement (Saksvik & Gustafsson, 2004), increased job strain (Korunka *et al.*, 2003), sickness absenteeism (Nguyen & Kleiner, 2003), injuries (Quinlan, Mayhew & Bohle, 2001; Virtanen *et al.*, 2005).

In addition to these factors several researchers has identified the organisational change processes itself as possible health risks (Saksvik, 1996; Landsbergis, Cahill, & Schnall, 1999; Westerlund *et al.*, 2004; European Agency for Safety and Health at Work, 2007). It seems that the content of the change process, expansion, restructuring, lay-offs and downsizing or other are of less importance than how the process is carried out, in determining the health risks. A sub-strand of this research has identified management of change processes as important to the outcomes (Saksvik *et al.*, 2007; Øyum, Andersen, Buvik, Knutstad & Skarholt, 2006) and focus on how the managers organise, communicate and facilitate the change process.

Thus, both the organisational change process and the effects of the process may produce negative health effects. However, this effect does not have to occur in all organisational change processes, and positive effects may also occur at the same time. Examples of positive effects are learning, increased meaning, new careers, new jobs, increased customer interaction, increased flexibility, increased control over work.

To the extent that there is any agreement to be found it the existing literature it would be along the following lines:

- organisational change (including restructuring) has a large potential of influencing occupational health and quality of life of workers;
- the primary effect from the workers perspective is negative, and it should be noted that effects are not limited to psychosocial effects, physical effects (injuries) as well as sickness (measured both in absenteeism as well as hospital admission) is part of the picture. In addition to this organisational change may also affect employment and precariousness of work.

However, the above-mentioned effects are not given. Organisational change may be a positive experience, and may open up for new careers, learning and new job challenges as well as create new jobs. Further, the exact effects of organisational change depend to a large degree on the change process, more than the exact form of change.

2.2   The contribution of WORKS to existing research

This report builds on and follows up a well-established research tradition of analysing effects of restructuring/organisational change on workers health and safety. While this tradition is varied and exceptions can be found to all the criteria typically projects in this tradition are:

- quantitative oriented, mostly survey based, either national or within one organisation;

- usually conducted within one nation;
- qualitative studies are mostly single case studies;
- few, if any cross sectoral studies;
- unit of analysis is organisations or individuals;
- rarely crossing value chain borders.

The approach as well as the methods employed in this project differs from the most of the studies as follows:
- a focus on functions and professions instead of organisations and individuals;
- a pan-European case study based design, with case studies in several countries;
- qualitative based, following a structured method developed within the WORKS project;
- focusing 'on' and 'crossing' the value chain, analysing effects on both source and destination;
- analysis on the changing processes, as a possible problem or opportunity for health.

Thus, this project expands the total variety of studies of effect of restructuring on health and safety.

2.3   What we will include in the analysis

In this analysis, we will focus on the psychosocial effects on restructuring. We will not analyse in-depth the effects on absenteeism, injuries/accidents, physical or ergonomical working conditions. This is primarily because we find that it is within the psychosocial working environment and quality of work life, that present and future processes of restructuring will have its most profound impact. In addition to this, the organisational case studies form WORKS, which form the empirical basis of the present analysis, have very interesting data on these changes. The empirical data adds less to the existing discussion on more 'traditional' aspects of physical health and safety.

However, some psychosocial issues will not be included in this analysis. The most important is work-family balance. While we know fairly well that organisational change may influence work-family balance (Hammer, Saksvik, Nytro, Torvatn & Bayazit, 2004), and while it is an important topic it will be covered by other reports from WORKS. We also mostly ignore effects on learning and skill development, again a topic for other reports for WORKS.

We will however look more closely at driving forces for restructuring; this being a core WORKS issue. We will also investigate effects on employment and employment conditions (precariousness), again core issues in WORKS. Finally, we will include effects of restructuring on the psychosocial working environment for skilled and unskilled workers, employees with higher education and managers.

2.4 Our model of health and safety and quality of working life

In order to create a common frame of analysis, we have used the following model indicating psychosocial working environment:
- demands in work;
- influence over work;
- social support;
- recognition and reward;
- predictability;
- meaning.

The above six dimensions have originally been developed by Kristensen (1999; 2002) as indicators of work-related stress. The model is grounded in wellknown research, it builds and expands on wellknown models for stress (Karasek, 1979 & 1990) and effort and reward (Siegrist, 1996), and adds predictability and meaning. The Karasek model is explained more in detail elsewhere (cf. Section 3.3). Below we explain the Kristensen model and how it is used in this setting.

The Karasek, Siegrist and the Kristensen models were all originally used as indicators of work related stress. We use them in a slightly alternate form as indicators for estimating the consequences of organisational restructuring. Furthermore, it should be emphasised that although we use these dimensions as a way of focusing the analysis of changes in the psychosocial working environment. Changes within these dimensions do not necessarily result in problems, but they may also lead to new possibilities. Hence we will look for both positive and negative outcomes on these factors.

The first dimension, concerns *demands in work* both in terms of the quantity and quality of work tasks. The *quantity of work* is related to the amount of time allocated. A negative contribution to the psychological working environment can be caused by either too little or too much time set aside for a given work task. However, looking at possible consequences of restructuring, we suspect that it will be most relevant to focus on increased demands on efficiency and thereby on *lack of time*. In addition to this, *the demands in work* dimension also has a qualitative dimension involving changes in the kind of tasks that employees may face. Regarding consequences of restructuring an example could be the appearance of *new types of work tasks* that may require development of new competencies or may result in 'deskilling' because of increased 'routinisation' of work. Both may result in problems within the psychosocial working environment.

The second dimension concerns *influence over work*, which may be regarded as one of the most important dimensions of the psychosocial working environment (Kristensen, 1999 & 2002). In contrast to the impact of *demands of work*, discussed above, it is worth mentioning that *influence over one's own work* and working conditions does not need to be balanced, because research shows that the more influence employees have on their work the better.

The third dimension concerns *social support and social relations*. Social support may also have several expressions. It can be viewed as social acknowledgement and/or more directly related to the character of business functions. Lack of social acknowledgement and contact may lead to social isolation and some work functions are carried out in isolation, some in co-operation with others. Finally, unsocial working hours may reduce social contact outside work. Although, each of these positions may not in itself be problematic, a

high degree of isolation may in combination with other stressful aspects of work, contribute negatively to the quality of working life.

The fourth dimension, concerns *recognition (appreciation) and reward*, which may be defined in terms of mutual reciprocity and a balance between work contribution and reward. Lack of balance between contribution and recognition both in terms of salary and in terms of appreciation from colleagues and leaders will contribute negatively to the psychosocial working environment.

The fifth dimension is about *predictability*. We shall look at predictability in two ways: predictability of employment and predictability of work and workload. First, we shall look at insecurity in terms of employment, because such insecurity contributes negatively to working environment and work as a stress related factor. Second, we shall look at the predictability of work tasks, as it is easier to endure a difficult period at work, if improvement can be predicted.

The sixth dimension is about *meaning.* An estimation of the consequences of restructuring on work life and working environment for employees, may be based on improvement or decrease in the experience of work as meaningful. Reorganising and routinisation of work and work tasks may make work seem less meaningful, whereas work tasks involving new (interesting) challenges or fix increased contact with customers, may make work seem more meaningful.

The analysis of the cases are not entirely based on these six dimensions, but we use them as a way of conceptualising what we consider to be central dimensions in order to estimate possible changes in psychosocial working environment. However, as mentioned above, apart from a few dimensions (influence and recognition), each dimension must be 'balanced' in order to contribute positively to the working environment. Increased demands may be experienced as positive, only if employees have/are given adequate competencies to fulfil them – and although a certain amount of predictability contributes positively to work life, too much predictability in terms of 'routinisation' may not.

In addition to these six dimensions, we will look for drivers of change and effects on employment. We will look for effects on both workers and managers, and with a special emphasis on gender effects.

2.5   Methods and material

The data for our analysis is the occupational and organisational case studies, with the support of the quantitative pillars of the WORKS project. The case studies have been subdivided into sectors:
- ICT R&D and IT production;
- services of general interest/IT services of general interest;
- public administration/costumer service;
- clothing industry (R&D, production, logistics);
- food industry (production, logistics).

For each sector, we produced a short sectoral analysis, employing the six dimensions above, driving forces and development of employment. Building on these sectoral analyses we produced an analysis of general consequences across sectors and policy analysis.

3 Risks at work, the trend in Europe

This section analyses data regarding the phenomenon of psychosocial problems as disclosed by Eurostat[3] and by the European foundation for the improvement of working condition, with the aim to show the general trend for health and safety in Europe and to point out the specific findings related to our analysis on the case studies.

3.1 Accidents and diseases in Europe: the Eurostat data

The number of *accidents* at work in the European Union (15 member countries) in 2005 has declined.

Table 3.1 EU-15 countries: number of accidents at work, more than 3 days lost (4 days absence or more) and fatality; 1995-2005

	More than 3 days		Fatality	
	1995	2005	1995	2005
Total	4,820,451	3,983,881	6,229	4,011
Males	3,754,948	3,043,602	5,341	3,811
Females	895,848	938,914	305	200

Source: Eurostat, LFS, 2005

The standardised prevalence rate of work-related health problems by macro diagnosis groups, using data of a research carried out in 1999, show that at the first place there are the Musculo-skeletal disorders (2,645 per 100,000 workers), followed by stress, depression, anxiety (1,181); 'other not elsewhere mentioned' (1,049) and pulmonary disorders (296) (source: Eurostat, 1999).

It should also be noticed that reporting rates vary considerably between sectors: where conceptual work is prevalent (new sectors), stress, depression and anxiety levels are highest; while Muscolo-skeletal disorders are more frequent in those sectors where work is principally physical in nature (more traditional sectors) (source: Eurostat, 1999).

---

3 It should be observed that the data gathering methodology utilised by Eurostat presents a number of flaws: (a) there are delays in the harmonisation process regarding data collection due to the different normative frameworks in force in member countries; (b) Eurostat statistics do not take into account accidents entailing an absence from work of less than three days; (c) the presence of undeclared work and the subsequent underreporting of accidents differ depending on the national context and the working environment and undermine a correct comparison of data.

Table 3.2 EU-15 Countries: standardised prevalence rate of work-related health problems by economic activity (per 100,000 workers), 1999

Stress, depression, anxiety		Muscular-skeletal disorders	
Education	2,306	Health and social work	4,283
Health and social work	2,188	Transport, storage and communication	3,160
Extra-territorial organisations and bodies	1,422	Construction	3,158
Other community, social, personal service activities	1,340	Agriculture, hunting and forestry	2,895
Public administration and defence; compulsory social security	1,323	Other community, social, personal service activities	2,666
Real estate, renting and business activities	1,199	All sectors - total	2,645
All sectors - total	1,181	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	2,526
Financial intermediation	1,066		
Transport, storage and communication	975	Manufacturing	2,456
Electricity, gas and water supply	928	Real estate, renting and business activities	2,389
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	893	Public administration and defence; compulsory social security	2,202
Manufacturing	723	Education	2,162
Hotels and restaurants	717	Fishing	2,120
Activities of households	572	Electricity, gas and water supply	2,043
Agriculture, hunting and forestry	486	Mining and quarrying	1,988
Construction	476	Hotels and restaurants	1,729
Fishing	n.a.	Extra-territorial organisations and bodies	1,524
Mining and quarrying	n.a.	Financial intermediation	1,519
		Activities of households	1,510

Source: Eurostat, LFS, 1999

One of the principal factors behind this overall diminution is the change in the distribution of workforce. The trend recorded in Europe since 1991 has been that of a declining workforce in agriculture and industry, with a growing number of workers being absorbed by the services sector, where industrial accidents occur at a lower rate. It should, nevertheless, be observed that this trend has ceased starting 2004 following the European Union enlargement, recording significant differences within each member state. In eastern European countries, workforce is mostly concentrated in those sectors where physical risks are higher: manufacturing continues to be the industrial sector that employs the largest number of workers, while agriculture still plays a key role in the economy (the latter absorbs 10 *per cent* of the workforce in Greece, Lithuania, Latvia, Poland; and more than 30 *per cent* in Romania and Turkey – source: Eurostat, LFS, 2005).

The sectors where accidents related to the number of workers occur at a higher rate are: construction; agriculture, hunting and forestry; transport, storage and communication; and manufacturing. Although the hotels and restaurants sector recorded a high rate of accidents, fatalities were rare. Unlike the electricity, gas and water supply sector where accidents were fewer but the death rate higher. Accident risks are lowest in the financial intermediation, real estate, renting and business activities.

As for occupational *diseases*, the number of reported cases (+71.5 *per cent* in the past five years) as well as the reporting rate (+67.3 *per cent*) have increased considerably. This trend

is to be ascribed to an improvement in overall 'work and health culture'. What leads to the reporting of an occupational disease, in fact, is not only the severity of the disease itself but the possibility workers have in determining the occupational nature of the disease and in demonstrating this correlation. Observing the incidence rate, above average sectors were mining and quarrying; extra-territorial organisations and bodies; manufacturing; fishing; construction; while the sectors that recorded the strongest increase of reported case (up by or over 100 *per cent*) were fishing; activities of households; transport, storage and communication; public administration and defence, compulsory social security; electricity, gas and water supply; manufacturing.

Table 3.3 EU-15 countries: number and incidence rate (per 100,000 workers) of occupational diseases by economic activity, (ICD-10). EODS obligatory list, 2001, 2005

	Number of occupational diseases			Incidence rate of occupational diseases		
	2001	2005	*Per cent variation 2001- 2005*	2001	2005	*Per cent variation 2001- 2005*
Agriculture, hunting and forestry	1,036	1,370	32.2	29.5	40.7	38.0
Fishing	25.0	105.0	320.0	20.7	163.0	687.4
Mining and quarrying	5,108	3,351	-34.4	1,584.2	1,949.0	23.0
Manufacturing	17,633	31,403	78.1	84.3	165.9	96.8
Electricity, gas and water supply	231.0	422.0	82.7	27.1	53.9	98.9
Construction	5,769	11,034	91.3	76.8	134.0	74.5
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	3,172	6,183	94.9	20.7	37.6	81.6
Hotels and restaurants	943.0	1,785	89.3	22.1	35.6	61.1
Transport, storage and communication	775.0	1,781	129.8	11.9	28.7	141.2
Financial intermediation	125.0	171.0	36.8	3.4	4.6	35.3
Real estate, renting and business activities	2,225	3,890	74.8	21.7	31.7	46.1
Public administration and defence; compulsory social security	930.0	1,781	91.5	11.6	24.9	114.7
Education	224.0	354.0	58.0	3.5	5.4	54.3
Health and social work	1,562	2,864	83.4	16.4	26.9	64.0
Other community, social, personal service activities	1,057	1,973	86.7	24.2	40.3	66.5
Activities of households	35.0	117.0	234.3	3.3	15.3	363.6
Extra-territorial organisations and bodies	n.a.	46.0	n.a.	n.a.	272.9	n.a.
Unknown NACE branch	7,641	14,529	90.1	n.a.	n.a.	n.a.
All NACE branches - total	48,492	83,159	71.5	47.1	78.8	67.3

* An occupational disease is a case of disease recognised by the national authorities as being caused by a factor at work. International Classification of Diseases (ICD). ICD-10 was endorsed by the Forty-third World Health Assembly in May 1990 and came into use in WHO Member States as from 1994.
Source: Eurostat, LFS, 2005

3.2   The principal results of the European Working Conditions Survey

Following a quantitative analysis of the phenomenon, it would be useful to focus on a number of aspects regarding working conditions. This paragraph presents the principal findings of the European Working Conditions Survey conducted by the European foundation for the improvement of living and working conditions. A specific analysis of the European Working Conditions Surveys has been processed within the WORKS project and presented in the WORKS report of Greenan, Kalugina & Walkowiak (2007). We have collected the main findings of this report adding a direct analysis of the European works council survey data.

3.2.1   Work organisation

- In EU-15 the complexity of work is diminishing rapidly and consequently becoming more repetitive.
- Work is becoming more intensive, especially for high-skilled blue-collar workers.
- Average working hours in Europe have constantly shortened in the past 15 years thanks to an increase in part-time work and a decrease in the number of workers who work very long hours. Average working hours are longest in southern and eastern European countries. Long working hours mostly affect male workers in specific sectors such as agriculture, hotels and restaurants and construction.
- It has been demonstrated that prolonged working hours are associated with health problems, both physical and psychological. However, long working hours may also be associated to increased satisfaction at work especially when it is related to improving career prospects and to broader autonomy in terms of working life.
- There are consistent differences in the organisation of work in EU-15, in the 12 new members and in the acceding countries. As for the latter, work is less complex and intensive, while working conditions are worse.
- The proportion of workers with atypical working hours (night, evening and weekend work) is stable and very low. Most workers have fixed working hours, although the percentage of workers with flexible working hours is growing constantly.
- For most workers, the pace of work is dictated by the demand of consumers and clients, and increases depending on the extension of the services sector.
- The more the production is affected by the market and the less it is possible to influence the rhythm of the work by focusing on the way work is organised. For those countries where the level of production is strongly dependant on the market, labour organisation is less important in defining the rhythm of work. Those countries where the performance of the market is more stable, it is the organisation of work that determines the rhythm of work.
- Workplace autonomy appears to be shrinking. The highest levels of autonomy were recorded in the financial intermediation, electricity and gas and retail trade sectors, while the lowest in the hotels and restaurants sectors and in manufacturing. The degree of autonomy also depends on the type of work: it is higher for managers, professionals and technicians, and lower for machine and equipment operators.

3.2.2   ICT and automation

- The use of computers is on the rise (47 *per cent* of respondents made use of it). There is a correlation between the productive process and the nation. Scandinavian countries and the Netherlands are those that make greater use of IT. An opposite trend was recorded, on the contrary, in eastern and southern European countries, in particular Bulgaria, Romania and Turkey.
- Operating machines is not only the heaviest work but also the most repetitive and monotonous; it also entails the lowest degree of autonomy for the operator. In IT intensive sectors, physical risks are low but not psychological ones.
- Training and retraining initiatives mostly occurred in top-ranking public administration, finance, education and health, and were negligent in the hotels and restaurants, agriculture, construction, trade retailing and manufacturing sectors.

3.2.3   Physical and psychosocial problems

- Though one worker out of four believes his/her health is at risk for working reasons, this percentage has been steadily decreasing over the past fifteen years. However, in the ten new EU countries the level of perceived risk is on the rise with 47 *per cent* of workers considering their health at risk.
- As for the exposure to physical risk factors, the survey revealed that the following health problems have been rising over the past fifteen years: repetitive hand or arm movement (it is the most common risk); painful, tiring positions; noise; vibrations. The countries where workers are more at risk are new members Bulgaria and Romania.
- As for psychosocial risks, 22 *per cent* of workers declared they were under stress. Stress is, in fact, the third most common risk factor, behind backache (25 *per cent*) and muscular pains (23 *per cent*). Irritability and anxiety were perceived by one worker out of ten approximately. Five *per cent* of workers said bullying, harassment, discrimination, violence or threat of violence were present at the workplace, and contributed to provoke psychosocial disorders.
- In terms of sectors, physical health factor ratings were highest in agriculture, a sector where, however, there was a low rating for the psychological health factor. Construction also had a fairly high rating for the physical health factor (although lower than agriculture); however, its rating for the psychological health factor was below average. The opposite applied to the education, health and public administration sectors: here, the levels of reported physical problems were below the average, but the levels of psychological strain were higher. The sectors that were least affected by both factors are the wholesale and retail trade and financial intermediation.
- There was a correlation between the various types of risk. Physical risks were correlated with musculoskeletal disorders (backache and muscular pains), fatigue, injury, stress and headaches. The psychological risks were strongly correlated with anxiety, sleep problems, irritability and stomach ache. The chemical/biological risks were correlated with respiratory problems, allergies, skin and heart problems.
- Workplace satisfaction was moderately high (80 *per cent* of workers). Workers who expressed satisfaction were mostly concentrated in Nordic countries.

3.3 The Karasek model as applied to the results of the fourth European Working Conditions Survey

In the Karasek model (Karasek, 1979; Karasek & Theorell, 1990) two dimensions of working conditions are important to analyse the work organisation: the balance between the psychological and physical job demands on the one hand and the job control on the other hand. Job control refers to the possibility a worker has to decide for him or herself about how to go on with the job and the possibility to use his or her skills.

By this way, the Karasek model explains how workload (fatigue and stress) depends on the interaction with the psychological load, the degree of control exercised by the firm and the work process, and the workers' autonomy. If the workload is intensive, the control on how the work should be carried out is high and managerial autonomy low, leading to a situation that is psychologically hard to handle for the worker. This situation is associated with health problems and workplace dissatisfaction. The ideal situation is when the workload is accompanied by a high degree of autonomy.

This model singles out four types of work organisation, and the application of the model to the results of the fourth European Working Conditions Survey revealed differences in the labour organisation of European countries (Eurofound, Fourth European Working Condition Survey: 59-60):

- *active work organisation*: heavy workload and high degree of autonomy. In these working conditions, workers experience high levels of demands but enjoy at the same time enough possibilities to control these demands. This is characteristic in Nordic counties. It is identified as being the type of work organisation that is the most helpful to get work done with lower consequences on the workers' health: the high demand is counterbalanced by a high degree of autonomy;
- *high-strain work organisation*: heavy workload and little autonomy. In these working conditions, workers experience high demands but have no way of controlling what happens, and they have to adapt passively to ever changing and possibly conflicting demands. It is common in Cyprus, Czech Republic, Germany and Greece. This is the type of work bearing the strongest impact on workers' health;
- *low-strain work organisation*: low workload and high degree of autonomy. In these working conditions, workers experience low demands and have an excess capacity of control to deal with problems. It is common in Belgium, Luxemburg and Netherlands;
- *passive work organisation*: low workload and low degree of autonomy. In these working conditions, workers experience no job demands and have no control over possibly changing features of the work situation It is common in Bulgaria, Poland and Portugal.

4 The consequences of restructuring for the psychosocial work environment by sector

In this section, we organise the analysis of the consequences of restructuring for the psychosocial work environment in accordance with the sectors: clothing industry; food industry; ICT; public administration and service of general interest. At the end of each chapter, there is a summary of the main findings from the cases on the topics related to psychosocial work environment as suggested by Kristensen (1999): demands in work, influence over work, social support, recognitions and reward, predictability, and meaning.

4.1 Clothing industry

4.1.1 Introduction

The case studies analysed in this sector concern: nine organisational case studies, that are three R&D companies (Belgium, Portugal, and Germany), four production companies (Belgium, Italy, Portugal, Greece) and two logistics companies (both in Germany); and the occupational cases studies, as reported in the comparative report (Valenduc, Vendramin, Krings & Nierling, 2008), considering three case studies on the designers workers (in France, German and Portugal) and two case studies on the production workers (in Belgium and Portugal).

The clothing industry is characterised by a strong internationalisation of the working process and an extremely fragmented and dynamic value chain within a very competitive market. Fashion and customers demands are an increasingly crucial factor and the innovation cycle is shorter and shorter. Relations between firms are instable and changes in company policies frequent. Logistics and R&D are the core functions around which relations, also power relations, with production firms are established; some of these firms also try to reach more autonomous positions.

There are various restructuring strategies: outsourcing or insourcing, vertical and centralising integration or fragmentation of the production cycle.

The dominant contract form is long-term full-time standard employment, with a high female participation also in management and in highly-skilled positions; the average age is forty. Some firms, especially those where textile production is carried out, are home workers or very small businesses. There is more non-standard work in the retail subsidiary (especially in Italy and Portugal), even if it is possible that other branded producers moving into retail will increase the proportion of part-time and short-term part-time work in line with the practices of the retail sector. The use of atypical work in the companies

25

analysed is very low and there is a standardised work organisation in production compartments, even though shift work is common but not found everywhere. There is a strong presence of national collective agreements that determine wage, which is not very high (Flecker & Holtgrewe, 2008: 23).

As a matter of fact there is a high union representation (union density is above 50 *per cent* in many cases), but the negotiating power is limited by continuous restructuring in this sector, such as downsizing and fierce international competition (Flecker, Holtgrewe, Schönauer, Dunkel &Meil, 2008: 29).

It is necessary to point out that in the clothing industry, internationalisation is also common outside the European Union, where there are firms working in the worst conditions and which have not been object of this research.

4.1.2   Consequences on working conditions

Restructuring entails, in almost all cases, a *considerable downsizing,* with an increased employment risk for workers and a feeling of uncertainty and anxiety. In this way, predictability decreases and job insecurity increases, and 'workers in several companies make up a small community of 'survivors' of previous downsizing who have had to accept considerable work intensification and no increases in pay for years' (Flecker & Holtgrewe, 2008: 23). Unemployment and salary become two major issues and health and safety conditions become secondary aspects for the worker; this also has an impact on collective bargaining, thus workers have a low social support to improve the attention on this issue, in examples to improve training or new safety procedures.

Production is more and more customer-oriented and market-driven and collections must be renewed every season, and this factor has negative effects for predictability. The working process tends to be continuous and there is an acceleration of business activities and workflows, an increase in workload and a general high stress level, with a general increasing in work demands. The workload increase entails a higher psychological risk for women, both those in high-skilled occupations (for example, women designer find it hard to reconcile their career with family responsibilities; Valenduc & Muchnik, 2007), and those in manufacturing occupations, where production peaks imply the problems in reconciling work and family life, even though this case is considered more normal (Nierling & Krings, 2008).

Internationalisation has an important impact on this process, because it concerns different time zones and implies a continuous co-ordination that changes the concept of working time which becomes more and more flexible (Woll, Vasconcelos da Silva & Moniz, 2007). Designer, management occupations and manufacturing occupations, that must produce the amount of products required by the core firm, experience work intensification and increased flexibility. Flexibility in work organisation increases especially for subcontractors of manufacturing and logistics, that are under intense pressure and it increase stress. However, core enterprises in the value chain also undergo an increased pressure, which cannot be outsourced, since research, development and co-ordination of activities are extremely dynamic (Flecker *et al.*, 2008: 29). This leads to a stress increase among employees.

Work organisation is crucial in defining consequences on health, and is very different depending on the position in the value chain. For employees of core firms that outsource

activities, functional flexibility is based on high skills and long tenure; while production employees mainly work in the assembly line. The work of high-skilled professions, especially for designers, is more creative and meaningful, also if in some cases there is a tension between the autonomous work organisation and the control mechanism imposed by the firms (*i.e.* Nierling, Bechmann & Krings, 2007), and in almost all the cases the interviewees are working longer than the formal work schedule, 'also at night' (Woll *et al.*, 2007: 12). This is a great problem also for the conciliation between work and family life, and the worst consequences are for the women (Bechmann, Krings & Nierling, 2007). In manufacturing occupations work is repetitive and boring. In both cases, creative and manufacturing occupations, during production peaks and before deadlines, working hours can be significantly extended leading to a work overload.

Anyway, there are cases where some changes helped to reduce stress and intensity in work, especially in logistics. In a German case study the problems in the logistic business function – caused by the enormous amount of documents to be drafted – have decreased after introducing a new technological system that helps processing formal files and makes work less-exhausting. This change was introduced with a more ample human resources implementation plan aimed at reducing formal control to improve influence over work, encouraging self-responsibility of single workers. However, this led to an increased social control where workers tend to control each others' work (Bechmann *et al.*, 2007).

Table 4.1 Influence of restructuring for psychosocial work environment in the clothing industry: designers and logistic workers

Dimension	New problems	New possibilities
Demand in work	Intensification of work Long working times; high demands; increased intensity of the workload Stress is increased 'Market and customer orientation': acceleration of business activities and of the workflow Increase in temporal flexibility	A more ample and diverse range of tasks, especially for workers of companies that have outsourced production In some cases through new technological systems and new documentation systems, work has become more effective and less exhausting for workers in the logistic department
Influence over work	Standardisation of the process Increase in 'job on demand': high influence of customers' demand Increase in self-control, individualisation of risks	Skills are often upgraded and expanded Individual creativity can influence some choices in the work
Social support	Lack in corporate training Difficulties in work-life balance	Management of the value chain becomes more integrated High levels of representation Work more closely with other departments
Recognition and rewards	Lack of training	Wages are generally set by collective agreements for the clothing industry in each country
Predictability	Work is sensitive to cost-oriented constraints and there are continuous feedback from consumers preferences	
Meaning		Creativity for high-skilled occupations

Table 4.2 Influence of restructuring for psychosocial work environment in the clothing industry: production workers

Dimension	New problems	New possibilities
Demand in work	Increased pressure on the subcontractors. There are clear differences in employment and working conditions between companies with different positions in the value chain Intensification of work Long working times; high demands; increased intensity of the workload Stress is increased 'Job on demand': acceleration of business activities and workflow. Increase in temporal flexibility	
Influence over work	Standardisation of the process Increase in 'job on demand' Increase in self-control and social control: stress, especially at the beginning Difficulties in work-life balance	Skills are often upgraded and expanded, even though the production work is mostly unskilled or semi-skilled
Social support	Lack in corporate training	High levels of representation Presence of work councils
Recognition and rewards	Wages are not very high Lack of training	Wages are generally set by collective agreements for the clothing industry in each country
Predictability	There is a considerable downsizing after the restructuring process, so workers accept considerable work intensification and no increases in pay for year	
Meaning	Highly-repetitive work Boring work in manufacturing occupations	

The management of the value becomes more integrated and this lead workers to work more closely with other departments, with an increasing in social support but also in demands in work for the rise in meetings and communications. It's happening for high-skilled occupations, especially for designers (*i.e.* Muchnik, 2007b).

Employees of companies that outsource some activities perform more skilled work (Pedaci, 2007a). Nevertheless, there are some cases, where designers and technical workers do not have a specific company training; they learn on the job or attend other training courses individually, because the social support is insufficient, and they have a high level of dissatisfaction and stress, such as in a Portuguese case: 'the management of learning and skills training of the other workers is based exclusively on their will and financial possibility because no one supports their training (not the state or private companies). They assume training has a professional investment, and only take it with the certainty that it will have high profits' (Vasconcelos da Silva, Woll & Paulos, 2007: 12).

For production workers, the majority of tasks are unskilled or semi-skilled, and it is common to learn by doing. Generally, the lack of training in this sector makes it hard for employees to perform new tasks, especially when there is a low influence over work, when highly-standardised and formalised processes are imposed and there are quality levels to be respected. In a Greek case 'there is little training provided for the production

workers, and it takes the form of informal, on-the-job training of a new (to a unit) worker to perform some new tasks. The Company as well as the union consider a past experience with the training seminars provided by the Public Employment Service woefully inadequate and pointless. Thus there are no formal learning opportunities for the production staff, although workers who are personally motivated do take advantage of the bonus incentives involved and do broaden the range of task they can perform' (Gavroglou, 2007a: 12).

As in the food industry, in the clothing industry the worst working conditions, from a physical perspective, are found in production occupations and in marginal positions in the value chain, while there is an increase in psychosocial risk factors in all types of employment, in particular in design and logistic business functions. But, we have found that for these high-skilled or semi-skilled occupational group, there are more possibilities to improve their psychosocial health, by team-group, working time planning, training, new task and new tools, new documentations system to reduce bureaucracy.

4.2   Food industry

4.2.1   Introduction

The food industry is the biggest sector in Europe and its highest number of employees works in the manufacturing sector. The case studies analysed in this sector concern: ten organisational case studies, that are six production companies (Italy, Greece, Denmark, Bulgaria, Norway and UK) and four logistics companies (Belgium, Bulgaria, Greece, UK) and the occupational cases studies, as reported in the comparative report (Krings & Nierling, 2007), considering four case studies on the production workers (in Denmark, Greece, Italy, Norway) and three case studies on the logistics workers (in Belgium, Bulgaria, Netherlands).

Restructuring strategies in the food industry are different, there are outsourcing and subcontracting as well as centralisation and take-overs, and restructuring can lead to very different results such as cooperatives and privatisation processes. In the food industry there is a high share of low-skilled work and traditional forms of work organisation, even though there has been an increase in the use of machinery and technology.

Jobs in business logistics are aimed at adapting the production system to market changes and customer needs and psychosocial risk factors are higher. High levels of physical work can be found in this sector, especially in material production and first food processing stages, in particular during farming-breeding and harvesting-butchering stages which are just the first activities to be outsourced. As a matter of fact, restructuring processes have a common feature: there is a lower level of outsourcing or at least the most knowledge-intensive tasks are performed at the headquarters or at the original site.

In this chapter, psychosocial risks will be highlighted taking into account available information on psychosocial risk factors in both forms of employment.

4.2.2   Consequences on working conditions

Outsourcing and insourcing in particular, entail an increase of two risk factors: on one side there is a change in the structure of the representation system, on the other communication difficulties between management and production employees.

During restructuring, employees, especially those working in production, experience a strong feeling of uncertainty, due to a low participation in the decision making process, and this low predictability usually creates anxiety. Restructuring causes a division between management and 'blue-collars' and this increases a concentration of power in the hands of the core firm, increasing alienation among production employees. Nevertheless, there are examples of good and bad relations. In the Greek case of pea production there is a long tradition of paternalism since the company's founding in 1969, there is a high and unusual (by Greek standards) level of mutual loyalty between workers and management, which causes very long job tenures (Gavroglou, 2007b). On the contrary, in BEERAD (Bulgaria) direct contact with the management is seen as problematic because after privatisation contact with the high management positions became subject to complex and strict administrative procedures. This reduces the influence over work and hinders the opportunities for negotiation of employment conditions, remuneration, *etc.* (Stoeva, 2007).

Representation levels are lower for employees and companies down the value chain and even when union density is higher, health and safety issues are poorly considered, with a lack in the influence over work and in the social support. In some cases there is a committee for working conditions but it has not met for more than a year (Stoeva, 2007). In this scenario, the European legislative framework (the European standards for OHS and working conditions) is an 'external' social support, a useful tool to regulate internationalisation processes. However, there are problems in putting some European regulations into practice.

Standardisation is often codified by the main company, to improve work management and to better monitor external firms. But standardisation can cause serious problems to subcontractors, especially to those where union density is low and there is no consensus on the standardisation process. This fact reduce the influence over work, and the risk is that an excessive standardisation will not completely adapt to the existing working environment, especially in production business function, such as in the case of fishing on boats in Norway. In such cases, work is less meaningful and standardisation is not accepted by production workers and this leads to stress and increases the risk of accidents due to the gap between actual work and its codified 'representation' (Saetermo, Torvatn & Dahl-Jørgensen, 2007).

Food production is dependent on weather and seasonal conditions and this leads to a certain amount of fluctuation in work demands, but the trend is to achieve a continuous production system which is market-driven and customer-oriented. This aspect concerns management employees and packaging workers in particular.

Restructuring processes are followed by a technological modernisation: the introduction of ICT and new machinery entails a reduction in manual work, a increase in standardisation (for production employees) and formalisation (especially for knowledge-based occupations) of the work process and an increased amount of skills needed to perform tasks (for both). After such processes, flexibility suitable to the standardised working process increases, that means more flexibility in shifts and contract conditions, with the risk of a low predictability. Moreover, the introduction of machinery can lead to more

repetitive tasks, especially for production employees, and this provokes a reduction in the meaning of work and a feeling of alienation from work in the long-term, improved by a lack in social support, as explained in a case studies: 'generally, there is a common feeling of alienation from the colleagues of the same department and the loss of community affiliation' (Stoeva, 2007: 10).

Thus, the increase in automation makes tasks less manual, helping the physical working environment of the employees, but automation is also likely to make tasks more repetitive and for this reason it is usually combined with changes in work organisation. A higher level of safety can be found when automation is combined with a good work organisation, in particular: good rotation of tasks; good teamwork; good organisation of workers shifts to help them find a better balance between work and family. So another change concerns the increasing role of the shift manager in controlling and organising production. With automation, work is more supervised, there is more surveillance and a parallel low influence over work. Moreover, other risks brought about by automation are alienation and isolation, even if teamwork is a central factor. But often the tempo is high and the workday stressful: there is a performance pressure on each worker, since if a worker has difficulties this poses problems for the whole line.

Generally, for the majority of production workers, tasks are not becoming more meaningful, challenging or interesting, and the organisation of work does not encourage mobility nor provide learning opportunities for the majority of workers.

This is a common feeling also for workers with logistic occupations: they feel that new task are less challenging and varied and they feel underestimated in their work regarding the skills they have (*i.e.* De Bruyn & Ramioul, 2007).

The *working process is more and more continuous* to optimise investment on machinery and technology, hence there is an increase in demands in work: work shifts, long hours, overtime and extra work, for example during weekends. Such changes lead to worsen psychophysical conditions of individuals, who experience an increase in workload and flexibility of shifts with a consequent high level of stress and problems in reconciling work and family responsibilities.

Hence, the organisation of shifts becomes a central factor in determining the positive outcome of restructuring. For example, some production employees, in order to reduce the amount of weekly shifts and spend more time with their families, prefer to extend daily working hours, but an excessive workload can affect concentration and increase the risk of accidents.

On the contrary, the implementation of teamworking and the introduction of job rotation seem efficient strategies to guarantee psychological well being, as shown by the case of ND in Italy (Pedaci, 2007b). But these improvements in work organisation are mainly introduced at the top of the value chain (in logistics or packaging) and not in harvesting and processing stages. In general, working time arrangements are much less attractive in reduction business functions, for employees of the subcontractor and for seasonal workers, that is to say those down the value chain.

Automation entails the need to perform a good selection of staff working with machinery because the automation process introduces several changes concerning the content of work. In some cases, the ability to use and repair machinery is required to ensure the continuity of the working process, with an increase in demands in work due to these new tasks. This rise in qualifications, also for those who perform less skilled tasks that only require reading and writing skills and basic technical skills, causes stress and an increased

difficulty in advancing in one's career. In these cases, social support, in term of training and national education system, are decisive factors to reduce risks. Anyway, there is also a strong division between production workers as for wage, training and work satisfaction; in fact, there is a wide gap in status and qualification between the different levels of manufacturing occupations.

Automation can be related to a bureaucratic vision of safety: the risk is that health becomes just an administrative item, and not a major issue. There is a risk of a 'strictly economic vision' of health and safety, like two variables in the process that can be measured by money.

The introduction of new technology but also new machinery is a clear example of simultaneous upskilling/downskilling process, where a minority of workers experience an intense increase in technical skills and have increased responsibilities and influence, while the majority of workers have fewer learning opportunities on the job. Moreover the gap between high qualification requirements and low salaries is a source of tension among staff members. This situation can be found both in the mother company and in the others.

A traditional division of labour exists in processing and production/packaging departments with the former having higher levels of skills and higher levels of status (Flecker *et al.*, 2008: 73).

Especially for 'blue-collars', often difficulties in acquiring new skills and problems related to increased responsibility are not awarded with an higher salary and this leads to significant levels of dissatisfaction. Usually the demands of high qualifications are not combined with the supply of training opportunities.

In the food industry working process a strong segmentation of workers based on gender and ethnicity persists. Management is the most skilled position and here female participation is lower; in the production and packaging departments, with a lower level of qualification, more women can be found. In many case studies, staff segmentation has an ethnic dimension, especially in Bulgaria and in Greece.

An additional risk factor is occupational flexibility, due to both seasonal contracts and contracts that are more flexible. In production, there is an important distinction between seasonal (mostly migrants) and permanent workers: seasonal workers have bad working conditions; moreover, they are interested in increasing their salary and not in improving working conditions. For example, in some cases, seasonal migrant workers with temporary labour contracts and low wages were used to cover peak periods, as the case of the Roma workers in Greece and Bulgaria (Gavroglou, 2007b; Stoeva, 2007).

The demands for flexible employment are very high (especially in Denmark and Italy), with a large use of open-ended contract, these lead to a low predictability and an anxiety. Moreover, working conditions of the subcontracting company are not at the same level of the main company (it is clear in the Italian case). This workforce segmentation is related to a *different hierarchy of values*: safety is less important than pay or employment, so, in a certain sense, work is less meaningful.

Finally, the analysis of case studies clearly shows that although psychosocial risks are usually higher in knowledge-intensive occupations, during restructuring processes also production employees experience a significant rise of this kind of problems.

Table 4.3   Influence of restructuring for psychosocial work environment in the food industry: logistics
workers

Dimension	New problems	New possibilities
Demands in work	Continuous productive process: increase in the use of long-hours, shift work, extra-work Intensification of work and overload: operations and responsibilities of each worker are increased In some cases seasonality is dealt with overtime and not with seasonal employment	Work organisation is a key-factor to improve health and safety, especially through a good organisation of shift work Thus, the shift-manager becomes a key role
Influence over work	Formalisation of the working process Formal relations between the main company and outsourced companies, and between blue-collars and the management Lack of training	Specialisation of competences of each worker Upskilling process if there is training
Social support	Lack of representation to discuss work organisation and working conditions in outsourced companies	Teamwork: each worker is indispensable in the working process, this is a danger for health and safety but also a possibility to increase job satisfaction Outsourced companies are strictly forced to adapt their policies to local legislation and also to observe European standards for OHS working condition Presence of the committee for working condition, even if its work is not effective
Recognitions and reward	Low wages Companies require high qualification and offer comparably low salaries Wage related to job performances Lack of training	
Predictability	Anxiety for temporal workers	
Meaning	Repetitive tasks	

Table 4.4 Influence of restructuring for psychosocial work environment in the food industry: productive workers

Dimension	New problems	New possibilities
Demands in work	Continuous productive process: increase in the use of long-hours, shift work, extra work Intensification of work and overload: operations and responsibilities of each worker are increased Wage is linked with productivity	Work organisation is a key-factor to improve health and safety, especially through a good organisation of shift work So the shift-manager becomes a key role Job rotation to reduce the danger of repetitive strain injury
Influence over work	Standardisation and automation of the working process Formal relations between the main company and outsourced companies: the absence of the direct relation with manager is a great danger especially when an urgent situation appears In some cases the individual manual task are very specialised and repetitive Formal respect of safety procedures: more obligations to respect the law and practices for health and safety but less possibility to have an influence on the standardised process (low participation at the definition of the standards)	Specialisation of competences of each worker Upskilling process if there is training Reduction of heavy manual work
Social support	Lack of representation to discuss work organisation and working conditions in outsourced companies High qualifications required, but there are few training opportunities	Teamwork: each worker is indispensable in the working process, this is a danger for health and safety but also a possibility to increase job satisfaction Outsourced companies are strictly forced to adapt their policies to local legislation and also to observe European standards for OHS working condition Presence of the committee for working condition, even if its work is not effective
Recognitions and reward	Low wages	
Predictability	There is a great difference between permanent and temporal workers High request of flexible work with a large use of open-ended contracts and seasonal workers	
Meaning	Repetitive tasks By standardisation work is less meaningful Difficulty in communication for the linguistic differences	

4.3 Information and communication technology

4.3.1 Introduction

In this section we present an analysis of five business function cases in the ICT sector, four in business function R&D (in France, Germany, UK and Norway) and one business function production (in Austria). The cases are all from EU-15 area (Germany, France, UK, Austria), plus a Norwegian case. The cases are rather diverse, ranging from a privatisation of a large telecommunication company (France) to a series of acquisition of a unit (Norway) or a new start up after a bankruptcy in Germany. These cases form the core of the analysis, but in addition we employ data and analysis from the occupational case studies of R&D.

There is one important similarity in this five business function case studies: they all take place within the private sphere. There are no public companies involved. The only public organisations that play an important role here are universities. In two cases (Norway and Germany) companies originate from them. The trade unions are much weaker in these cases than in the public companies, but this has not resulted in very negative processes. In the Norwegian case (Torvatn, Anthun & Dahl-Jørgensen, 2007) the power of having expert knowledge substitutes the power of the trade union, providing the local unit with a strong bargaining position *vis-à-vis* headquarter. Having expert power in a growing sector of course in general supports the employees bargaining position, if it is easy for the employee to find a new job the company will have to consider those during reorganisation. This was also supported in the analysis of an English case: 'The quality of work of staff at LAB UK is in many ways protected due to the fact that they are highly innovative, skilled and autonomous workers' (Gosper, 2007: 12).

There are three drivers behind changes: (a) investment/capital changes that led to close-down and transformation into a new firm The cases from Germany (Meil, 2007) and Norway (Torvatn, Anthun & Dahl-Jørgensen, 2007) are examples of this; (b) opening public services to market competition. The case from France is an example of this (Muchnik, 2007a); (c) internal restructurings of large international companies. The cases from UK (Gosper, 2007) and Austria (Flecker & Schönauer, 2007) are examples of this. However, underlying these three drivers, the underlying and most important driver for change is the market, and all companies need to adapt their organisation in order to meet costumers' demands. How the companies go about this differs, but the underlying trend is clear. Both employers and ICT workers in most of the case experienced the need for strategic organising to be able to develop long-term strategies and position themselves in the market, often in connection with larger projects. Collective strategic efforts towards the market seemed also to be motivated by the high-skilled ICT workers' concern for professional development: to be able to work with interesting projects that would strengthen their position in the market for expert knowledge and make the organisation attractive for expert workers (Håpnes & Rasmussen, 2007).

The direct consequences of these changes are: (a) new problem: workforce reduction; debt and loss of autonomy; (b) but also new possibilities: growth effects; more customer oriented and market driven firms; more strategic and customer oriented production; new possibilities in the market.

It would seem that the restructuring processes have not influenced gender relations or gender structure in the units, and the ICT R&D remains a male dominated business. The case studies do not provide any clear positive or negative picture of impact of restructuring. Restructuring is going on, and transforms the organisations and work, but the transformation has both positive and negative elements. Similar to the situation described for the cases in the services of general interest, it is also in these cases sometimes difficult to narrow down the scope of the restructuring process to a single case. Instead restructuring is a continuous process, a flow of small and large change that redefines functions and organisational units.

4.3.2   Consequences on working conditions

In the four R&D cases (France, Germany, Norway, UK) the companies move in a general direction from 'pure research' to market oriented research and product development. This creates new demands in work, among them more time pressure, less autonomy (market decisions overturn research decisions), more emphasis on reporting, on documentation and tools and processes. However, the processes also become more collaborative, creates opportunities for teamwork across functions and cultures.

Work is becoming more modularised and dispersed, and there is less control/impact on others work/coding and less control over information content. Skills and competences become more flexible in their using, and they are increased.

Working in virtual teams has communication challenges due to time differences between countries, and the communication is more and more indirect, with a lack of face to face human relations. There are also, at the other side, more online communications and collaboration between workers increase. Virtual teamworking has aspects as job enrichments, increased efficiency and benefits gained from harnessing the best attributes of different working styles, but there are also complications due to cultural, language and temporal differences.

There is more competition between sites - also between internal sites - and the individual performance became evaluated more often by the unit manager.

In some cases there is a reduction in creativity and innovation, but there are also cases with reports of more interesting work. In some cases where a small unit becomes connected to a large multinational organisation the restructuring opens new possibilities to visiting the world/travelling as part of the work.

The majority of the employees had permanent contracts, and usually restructuring did not lead to any official changes of employment conditions.

The market orientation in the companies created several problems regarding the demands in work, one of them being higher time pressure in the various projects. This was of course especially important when a project should be completed. Regarding total workload the picture was more mixed. The UK and Austrian cases showed little change in total workload, the Norwegian and German case showed a certain reduction in the *willingness* of workers to work many hours. In both cases there were a period of start-up in which the workers worked really hard to survive, however after the restructurings the workers were more careful when it came to working long hours. This reduction in willingness to work long was not connected to restructuring, but rather connected to a feeling that the start-up period was over, and hence the drive to work very much could not be

sustained. However if they did not want to work as much as they had done earlier also in the German case the company was also facing increasing demands: 'there is more pressure and tighter time constraints from customer demands and schedules' (Meil, 2007: 9).

The French case showed an increase in workload. In France the number of working days were limited, but the working day was extended: '[…] but the working day has no restriction about length and place. As workload increased, people work generally more than before: they work longer - but overtime, that before the 35th agreement, employees could count and compensate taking days off in the month (two or three half-days a month), is no more counted. Geographical mobility, that is to say transport, also extends the working day' (Muchnik, 2007a: 18).

Regarding intensification the total picture was thus very mixed. On a more positive note there were greater temporal flexibility in all cases. However, what had increased in all cases was a need to report, document, increase user support and standardise their work: 'Perhaps the greatest impact on quality of work has been in terms of formalisation: time spent documenting tools and processes because they can't just be explained to a onsite colleague but must be understandable and available in concrete form to someone working on the other side of the world. A number of staff at UK Lab complained about this work taking up increasing amounts of their time' (Gosper, 2007: 21-22). This was echoed in other cases: 'Secondly, there is now more emphasis on user support, documentation, integration and fitness for use in Comp A. This is different from the NOR-SEARCH days. In NOR-SEARCH days the developers did not need to think much about these issues' (Torvatn, Anthun & Dahl-Jørgensen, 2007: 17). 'The case study describes the impact of corporate and value chain restructuring … In particular, it makes clear that standardisation and formalisation support relocation of work and geographically distributed work, that work roles may change considerably in the process, and that new skill needs emerge that are not always officially recognised. And *vice versa*: relocation is likely to require both more standardisation and new skills – both of which seem to be somewhat underrated and individualised in the company' (Flecker & Schönauer, 2007: 16).

The increase in standardisation of course entailed an additional burden on the workers, since this increase was rarely met with additional time/personnel to do the work. Thus, while there was not always an increase in work hours, there was an increase in work demands. In general the power and autonomy of the research units were reduced. They could not follow whatever interest they had, there had to be a market, some outsider interested in their work. The French and German cases illustrate this: 'We want our researchers to understand that we are no more in the world where the aim is public telecommunication research progress: they are here to contribute to have tomorrow, new services commercialised by the company for its costumers' (Muchnik, 2007a: 21).

'You can't survive in the long run on these early prototypes. You have to get the software to a place where it really works as a product' (Meil, 2007: 6).

Although the French case was a rather large multisite research unit within a even larger company, while the German unit was a small company they both faced the same demand to deliver something 'the market' might be willing to pay for. Both the Norwegian and UK case also supported this, while in the Austrian case the development unit got orders for what to do from its owners, the owners being the market. Also, the change of governance brought several conflicts. The French case illustrate this: 'Before, projects were organised locally in the R&D division. Now, the new transversal Marketing division requires for each product line a correspondent project and project manager at R&D. The

37

problem for research units' manager is that several product lines can require the same technical skills, so DC directives lead to have a lot of project managers whose tasks are overlapping' (Muchnik, 2007a: 18).

As mentioned above the market orientation overall reduced the influence of the local unit. The local units now needed to negotiate what they wanted to do, however this was not impossible: 'Priority is somewhat defined by US ... they tell us which verticals are most important now, what features are important ... but ... when we try to find out what we want and compare this to what should be prioritised we manage to find a solution ... we have a large degree of freedom in what we do' (Torvatn, Anthun & Dahl-Jørgensen, 2007: 18).

The reduction in autonomy also created motivational problems. Highly-skilled people who have their own interests to pursue needs to have interesting tasks to work on if they are to do their best. The UK case provide an example: 'I have to take a very active role to keep everyone motivated and interested. So even for the percentage that do development, I sometimes slip in some light research. Like "okay you have developed this, why don't you elevate it, and try to find out what's the problem". Keep them interested, and keep the work interesting' (Gosper, 2007: 21).

The reduction in autonomy also lead to complaints about reductions in creativity and innovation.

Over all social support was not changed much. There was less face to face communication in several cases, but more online communication. While online/virtual communication was good, important and necessary (in the Austrian case so-called 'chat' was the most important communication form between some of the units) this was not always enough: '[...] but still we find that physical presence is irreplaceable. We can do as much as we can using what we have, email, the conference calls and everything. And we see each other quite often. I think they visit us twice a year. We visit them twice a year. So we meet quite often ... Even with that, I find sometimes there is an issue that still can't be resolved if we don't see each other face to face' (Gosper, 2007: 23).

The drive toward market orientation also opened up for more collaboration between R&D and business units. In the French case there was an increase in competition between sites. Recognition and reward was individualised. Wages and bonuses as well as more intrinsic rewards were given to the individual. The Norwegian case illustrate this clearly: 'Work in a global company brought several benefits seen from a NOR's point of view. For one thing the impact of their work is larger. Software developed for Comp A is used in more places, are employed by more people and it enables more searches *etc.* than software developed for NOR-SEARCH' (Torvatn, Anthun & Dahl-Jørgensen, 2007: 14).

The benefits were both tangible and intangible, several workers could reach them, but they were mostly individual. It was the individual researcher/developer who got to travel, it was the individual who was recognised as a star in the larger company, it was the individual who made a career. In the Austrian case the situation was the same, wage negotiations are individualised and individual wages are kept confidential.

Regarding predictability there were relatively small changes in all the cases. Development work is of course in its nature to a certain degree unpredictable, or as it was said in the Austrian case: 'It is not clear how it should look in the end'. However, this basic part of work has not changed in any of the cases, since they all continue to do developmental work, albeit governed more by market demands than their own interests. It should be

mentioned here however that both in the Norwegian and Austrian case perceived job security had increased.

The restructuring as well as the orientation towards market brought about changes in how the workers understood their job and their position in company and society. The research units all experienced a shift from research to development, with a loss of autonomy and an increase in integration in the rest of the enterprise.

For some it was a clear improvement in professional standing, in Norway the workers felt that they belonged to a 'global elite of programmers' (Torvatn, Anthun & Dahl-Jørgensen, 2007: 15). Costumer orientation also meant more customer interaction and a need and demand for more softer/people oriented skills and task. Since project work and teamwork became more common there was also new career opportunities for those who could and wanted to become project leaders/liaison officers, interact with costumers or fill some similar position.

Not everybody liked the changes. In the German case some of the engineers did not want to do sales work, and actually had contracts relieving them of these tasks.

The occupational case studies on R&D workers in ICT sector (Krings & Nierling, 2007) also provides some information on the HSE effects of restructuring regarding the meaning in work. There is relatively little additional information regarding the five first dimensions of our model, but the sections on changes in occupational identity adds to the discussion on meaning some useful information. According to Krings and Nierling (2007) research and industry define two poles where the identity of this occupational group has been developed. On the one end there is a typical academic identity, very autonomous and individual. There is little identification with the company, the identification comes from having done a god job finding solutions to tricky problems. On the other end, there is the industrial identity. Here the workers are not determined to pursue an academic career, but to enjoy interesting work, good collaborative working relations and they have a sense of belonging to the company and a professional group as well there is of course a continuum between these poles.

In the cases we can see a clear movement, the market orientation, from pure research towards more industry type of jobs. The Austrian case, being a software production unit, is already positioned at the industry end of the line. From an HSE point of view it should not really matter which end of this dimension a job belongs to. However, if the occupational identity, and the individual workers interpretation of what is a good job (meaning) differs from the actual content of the job there is a gap between expectations and reality. Such a gap will cause stress, anxiety and frustration. Thus, for those workers who either have an inclination towards more industry type of job identity the market orientation entailed in the restructuring processes works fine. If however the workers is inclined towards a more research identity the move towards industry type of work is likely to cause negative HSE consequences.

Table 4.5   Influence of restructuring for psychosocial work environment in the ICT sector

Dimension	New problems	New possibilities
Demands in work	More market oriented production and management More workload for development projects, higher time pressure Reporting tasks had increased Brought several conflicts Less innovative and autonomous More time spent on documenting tools and processes	More collaboration between business units and the research units Temporal flexibility Working in virtual teams with professionals from different cultures More balanced workload
Influence in work	Research units had lost their power Work is more modularised and dispersed. Less control/impact on others work/coding Less control over information content Reduction in creativity and innovation	More flexible use of skills and competence
Social support	Less face to face communication More competition (French case) between sites	More online communication and collaboration
Recognition and reward	Individual wages and bonuses	Possibilities to visiting the world/travelling
Predictability	No change in working conditions	
Meaning	Cultural, language and temporal differences Negative effects like conflicts and competition between internal sites A gap between occupational identity and real content of the job improve stress	Job enrichments and harnessing the best attributes of different working styles Improved job security Improved professional standing within corporation More interesting content of work and possibilities to collaborate worldwide

4.4   Public sector administration: information services for citizens

4.4.1   Introduction

The following case analysis is based on the nine organisational case studies all concerned with public administration. Seven of these studies concern customer service and two deal with IT. Furthermore, two of the customer service cases concern changes in new post-socialist member states, and here processes of restructuring are in many respects very different from that of 'old Western' member states.

It is not obvious how to apply the concept of value chain to information services for citizens in the public sector administration. Here, we use a definition from one of the case studies: 'Value chain practically means information chain, i.e. from designing, formatting information to citizens, making it affordable and usable, organising feedback or dialogue, integrating information flows from front-office to back-office and *vice versa*' (Devos & Valenduc, 2007: 6).

The case studies regarding customer services in public administration share some sector specific characteristics influencing restructuring and subsequently the quality of work and the psychosocial working environment.

First, they reflect a more general development within the field of customer service, with a new role and increased emphasis on citizens-as-consumers of public social services, which seems to demand a range of changes to improve quality, organisation and efficiency. This tendency is confirmed in the WORKS studies on occupational changes, where front-office work in public services is characterised by an *evolution towards customer orientation* (Valenduc *et al.*, 2008). Thus, we see a movement from the 'old sector' public administration to the 'new sector' information provider. The changing role of customers and the tendency to develop a more customer-oriented bureaucracy (Korczynski, 2001) influence content, conditions, quality of work and skills in a range of ways, especially for front-office employees, whose work is increasingly characterised by a demand for all-round knowledge as well as a demand for social interaction skills in order to be able to cope with customers, who are simultaneously becoming more 'self-managing', and a more integrated part of social service work, formerly 'fenced off' (Shönauer, 2007; Piersanti, 2007; Tengblad, 2007; Dahlmann, 2007a; Devos & Valenduc 2007; Jeleva 2007; Makó, Illéssy & Csizmadia, 2007).

Second, and connected to this growing influence of and concern for customers, we find a tendency in the case-studies of developing a 'one-stop shop' principle, where public information is reorganised by setting up 'walk-in offices', 'all round call centres' or 'one entrance' web pages (Tengblad, 2007; Dahlmann, 2007a; Devos & Valenduc, 2007; Jeleva, 2007; Makó *et al.*, 2007). Although the practical solutions may include various forms of contact (internet, phone or face to face) they reflect the same principle of securing citizens' easy access to public information. Accessibility therefore seems to be another key concern in the restructuring of public social service. These changes have important consequences for the work tasks and work conditions of both front-office and back-office workers, but the case results imply that it is the front-office workers who experience the most negative impact on work life and working conditions, including more precarious types of employment, increased surveillance, increased demand for personal involvement (emotional labour), routinisation or work tasks, lower wages and increased work intensity.

Third, technological development, especially new ICT tools and solutions to a large degree sustain and partly seem to drive the process of restructuring of public information services, and IT technology appears as an integrated dimension in the modernisation processes of public administrations information services.

Fourth, restructuring of information services in public administration takes place in a variety of ways: as private outsourcing (Shönauer, 2007; Piersanti, 2007; Dahlmann, 2007b; Bannink, Hoogenboom & Trommel, 2007) as public/private partnerships (Dahlmann, 2007a) as public/public 'mergers' (Devos & Valenduc, 2007) and as public internal 'externalisation' (Tengblad, 2007; Jeleva, 2007; Makó *et al.*, 2007). A final important characteristic when analysing restructuring in public administration is that cost reduction in itself does not seem to be an important driver, even though cost reduction and downsizing are often part of more general management strategies.

4.4.2 Consequences on working conditions

Restructuring in public administration and information services, mainly target two areas of the information chain: designing and formatting information (back-office and IT work) and making information and 'dialogue' accessible to customers (front-office work). These

two areas of work are carried out by two rather different categories of employees. Where the predominantly male back-office employees usually have a formal (ICT) education and or/specialised acquired ICT skills, the predominantly female front-office employees are without or with a low level of formal education, and they are often combining work with care. In addition, the back-office workers are often more strongly represented by unions, whereas union influence seems more limited in processes of restructuring front-office work. Based on the nine case studies the overall impression is that restructuring of information services and IT in public administration have a rather varied impact on the quality of work life as well as on psychosocial working environment.

The analysis clearly indicates that restructuring has a more severe and more negative impact on the psychosocial working environment of front-office employees. Especially call centre work becomes standardised, routinised and monitored to a very large degree, and this combined with demands of increased efficiency as well as 'standardised' customer orientation create problems in all six dimensions (Shönauer, 2007; Piersanti, 2007). In addition, as one of the cases of outsourcing parts of the customer service to a private call centre consortium shows, employees in call centres may have difficulties getting their skills acknowledged because their previous (and tacit) knowledge is not included in the new (standardised) performance evaluation. This combined with an often tight internal labour market structure, may make it difficult to move out from the call centre jobs (Schönauer, 2007: 15).

It should be noted however that in the cases where public restructuring takes place by means of creating one-stop shop service counters/cells, results are more mixed and include increased possibilities in the dimensions of 'meaning' and 'recognition'. In addition, the one-stop service cases seem to increase learning opportunities and career options, because of a widening of work tasks (Devos & Valenduc, 2007; Tengblad, 2007; Dahlmann, 2007a). As one of the cases concerning a 'one-stop service centre' formulates it: even though customer service work has become more structured and standardised it does not seem to impact negatively on the quality of work ... With regard to skills and knowledge, there has been a diversification and as a result customer service staff feel they have learned more and possess more knowledge (Dahlman, 2007a: 16). Such increased possibilities, however, are accompanied by problems in the 'meaning' dimension as 'expert knowledge' is substituted with 'all round knowledge'. In addition, in the cases where employees are allocated sufficient time to deal with more specific customer requests, this also leads to a positive evaluation of 'meaning'.

Turning to the psychosocial working environment of the back stage employees, both the ones outsourced and the ones indirectly influenced by outsourcing experience their conditions after restructuring more favourably compared to the experiences of front-office workers. The outsourced group, however also experience a greater work pressure and lack of predictability, even though they have retained their wages and social contacts and social working environment. The IT case probably presents a number of negative outcomes as a result of being outsourced to a private provider (Dahlmann, 2007b: 20).

If we turn to the consequences of indirect restructuring (outsourcing of front-office work) we find that the back-office employees have mostly gained from the restructuring, although they too are exposed to increased monitoring and standardisation of their work sustained by the implementation of ICT programs and control systems. Both cases analysing the impact on restructuring for back-office workers, however, complain about the increasing load of 'irrelevant' reporting, registration and documentation.

The consequences for health and safety for the two occupational groups are deeply presented in the following subsections on front-office employees and back-office employees.

4.4.2.1 *Front-office employees (outsourced or internally 'externalised)*

Seven case studies involve restructuring of front-office work. Two of these concern post-socialist member states. In these two cases, restructuring may basically be regarded as positive – but these cases differ from the rest of the cases partly because changes have been financed and influenced by EU programs, and partly because development took place from a very 'low level' (Jeleva, 2007; Makó *et al.*, 2007).

Outsourcing of customer contact in the form of establishing call centres, result in a marked decrease in work quality and worsening of the psychosocial working environment for the front-office employees involved (Shönauer, 2007; Piersanti, 2007). Other forms of one-stop shop services, *e.g.* walk-in centres, web based or even mixed service centres seem to have less impact and/or lead to more mixed or even positive experiences for the employees involved (Devos & Valenduc, 2007; Tengblad, 2007; Dahlmann, 2007a). The difference seems partly related to differences in business functions, including differences in organisation, and partly to the fact that the call centre cases are results of outsourcing to private companies, while the remaining front-office cases describe joint ventures and internal 'externalisation'. Below we list the most important negative and positive impacts on quality of work and psychosocial working environment.

The profound *negative impact* of restructuring for front-office employees mainly from *call centre cases* can be specified as follows: *precarious employment* (from standard to atypical contracts)*; increased work intensity* (ICT speed up the number of calls per day)*; increase in work tasks* (emotional labour and all round knowledge); *lack of control with planning and conducting work tasks* (customers must not wait); *longer working hours* (working hours must be customer oriented); *less flexible working hours; increased surveillance* (performance monitoring); *unrealistic performance targets* (high efficiency); *routinisation of work tasks* ('unlimited' standardisation of work tasks); *deskilling* (little demand for expert knowledge and lack of learning opportunities). The negative impact on front line personnel is also reported by WORKS' occupational study on front-line employees (Valenduc *et al.*, 2007). In their description of front line workers as an occupational group they show how outsourcing particularly in call centres, result in: a peripheral position of call centre workers in terms of lack of social integration, increased workload, increased standardisation and surveillance, weaker job security and systematic staff reduction.

Positive and mixed impact from restructuring on quality of work life and psychosocial working environment is seen in cases concerning walk-in centres and front-line service 'cells'. Such more positive impact consists of: high job satisfaction (satisfactory contact with customers); increased autonomy; standard employment contracts; new career opportunities; increased IT skills; social interaction (meaning); influence on changing work tasks and conditions (soft transition); realistic performance targets; managers taking/given responsibility.

4.4.2.2   Back-office employees (internal 'externalisation' or outsourced)

Back-office work is both directly and indirectly influenced by processes of restructuring (Dahlmann, 2007b; Bannink *et al.*, 2007). Indirectly, because restructuring of front-office work seems to relieve back-office workers of some of the routine information tasks, leaving back-office workers with the more specialised and more creative tasks. Back-office employees are also influenced more directly in the two (!) cases focusing on the outsourcing of back-office work. Indirect influence seems to have more positive influence on the quality of work for back-office employees than direct outsourcing. However, although there seems to be a negative impact on working conditions and quality of work in case of direct outsourcing, the impact still seems less profound and less negative compared to experiences of front-office workers. *The negative experiences of mainly direct restructuring for back-office employees* are: *Increased stress* (unpredictable future); *decrease in autonomy and control*; *standardisation of planning* (less creativity forced to use certain programs); *pressure on developing certain kinds of* (interpersonal) *skills; lack of meaning* (forced shift in identity from public employee to 'consultant'); *increased administration* (registering, counting and documenting activities which is not regarded as relevant work).

Positive *experiences of mainly indirect restructuring of back-office work*: increased specialisation and 'expert role'; more time allocated for central work tasks.

4.4.2.3   Influence of restructuring for psychosocial work environment in the public administration by occupational groups

Table 4.6   Psychosocial working environment for low-skilled front-office employees/call centres

Dimension	New problems	New possibilities
Demands in work	Increased number of calls, time limits for each call work intensity	
Influence over work	Standardised procedures govern all work activity	
Social support	Each employee work alone with limited breaks and limited contact to colleagues	
Recognitions and reward	Low wages – lack of acknowledgement	
Predictability	Precarious employment – atypical contracts	
Meaning	Standardisation of contact with customers delimits involvement and satisfaction	Employees like to have increased contact with customers and help solve customers' problems

Table 4.7 Psychosocial working environment for low-skilled front-office employees/walk-in centres and 'one-stop shops'

Dimension	New problems	New possibilities
Demands in work	Increased demands for ICT skills and documentation	Increased variety of work tasks, Increased competency development Realistic performance targets (managers take control)
Influence over work	Increased standardisation in some cases	High degree of autonomy
Social support		Contact with customers and co-workers
Recognitions and reward		New career opportunities
Predictability		Standard employment contracts (high degree of job security)
Meaning		Employees like to have increased contact with customers and help solve customers' problems

Table 4.8 Psychosocial work environment for skilled back-office employees outsourced

Dimension	New problems	New possibilities
Demands in work	A more intensive workload including more time needed for documentation and administration Demands for interpersonal skills	New possibilities for developing interpersonal skills
Influence over work	Standard programmes introduced result in lack of autonomy and use of individual creativity	
Social support		Teamwork and possibility to discuss solutions with colleagues
Recognitions and reward		Possibility for higher wages if on new contract
Predictability	Uncertainty about future employment	
Meaning	Less creativity and problem solving less use of expertise	

Table 4.9 Indirect influence of outsourcing front-office work for psychosocial work environment of back-office employees

Dimension	New problems	New possibilities
Demands in work	Increased documentation and administration	Possibility of pursuing interests and use education
Influence over work		
Social support		Teamwork
Recognitions and reward		Acknowledgement of expert knowledge
Predictability		Standard contracts – job security
Meaning	Increased administration (regarded as unnecessary)	Emphasis on expert identity

4.5   Services of general interest: postal services and railways

4.5.1   Introduction

In this section, we present an overall case analysis of ten cases within the sector services of general interest. Although this sector initially tended to emphasise postal services and railways, there are among the cases also examples of IT providers within public health (Norway, Portugal), the outsourcing of telecommunication (The Netherlands), as well as the establishing of a logistics function for a food producer (Greece). This diversity and complexity in the cases demonstrates the fact that restructuring often takes various forms, structures and models although the aims nevertheless might be the same. The ten case form the core of the analysis, but in addition we have employed data and analysis from the occupational case studies of the group IT professionals (see Valenduc & Muchnik, 2007).

The most prevalent trend of restructuring within this sector is externalisation of IT business functions, that is the outsourcing of business function related to the operation of computerised work tasks. As a driver for change, outsourcing is done as to improve the efficiency of managerial or organisational aspect, to be on target in the market, to strengthen the core business processes and values within public administration.

Increasing customer orientation is another important factors behind restructuring processes in services.

4.5.2   Consequences on working conditions: IT business function

Empirical findings in the cases on reasons show different goals of restructuring: cost- and service effectiveness, centralisation of the IT systems used, building increased flexibility into the public organisation by means of better and faster integration of the various computerised tools and systems. Besides many new possibilities of the strengthening of the IT business function by means of outsourcing, the emphasis on computerisation also raises concerns over controlling individual work performance as many of the systems are designed according to the principle of traceability and transparency.

Within the context of psychosocial work environment, we see two major areas of concern. Firstly, the outsourcing of IT-based functions often imply the implementation of a new IT system into the public organisation which has recently outsourced their IT business function; an implementation process characterised by huge amount of time spent on learning the new system and to get rid of old systems. For the employees this 'time thief' generates frustration as well as stress regarding less time to actually 'do the work'.

German case where a new IT system was introduced in the police illustrate the discussion: for the police force, there had been negative opinions about the system that policemen 'should be driving their patrol, writing tickets and catching criminals, rather than surfing around on the internet and wasting time'. The project team argued that it makes no difference if someone reads a report on paper or a police newspaper, or if he/she reads it on a computer monitor – it takes just as long or longer and uses as much effort. Most of this resistance seems to be over, according to the project team members. Basically, the system should only enhance the access to information rather than have negative effects on quality of work (Meil, 2007).

Time is also spent on 'user-participation', meaning that in the public administration units a considerable amount of people participate in work groups or project groups together with employees from the IT provider as to develop computerised tools which specifically meets the customer needs. At the same time, however, no evidence is given from the cases on severe dissatisfaction with the functioning and quality of the software when implemented successfully. Secondly, this implementation process demands efficiency and long working hours as to finish in time. Consequently, for shorter or longer periods of time they experience an intensification of work, as well as lack of control of their professional and personal time schedule. These hybrid consequences of flexibility may cause severe challenges in the work-life balance for many of the IT employees due to both increased time spent on work, as well as working on sites nearby the customer and a long way from home.

But what makes work-life balance difficult? The IT workers said that he often arrives late at home (due to overtime) and that he needs to travel a lot (due to customer communication). In general the workers wish to have more stability in terms of balancing life and private life (Vasconcelos da Silva *et al.*, 2007).

In two of the cases this challenge of work-life balance is explicitly said to disfavour women to want a job as an IT consultant, and two managers stated explicitly that they had troubles recruiting women as women often have more family obligations than men.

As pointed out in the introductory section the outsourcing of IT systems and the following implementation of new computerised tools and systems, has demanded increased time spent on the implementation process itself and also participating in the development of 'usable' software. These demands are particularly prevalent for the IT consultants who experience increased demands for working productive time in an even tighter time-schedule. The pull-factor is indeed 'to follow the customer', demanding spatial flow of people which in the next turn challenges the IT consultants' work-life balance.

Within several of the IT providers covered within the case studies of this sector, the employees are committed to a weekly standard working time, but experiencing no direct control of when they perform their hours. This flexitime is an opportunity for controlling the working day individually, but on the other hand it can also produce a constant feeling of 'being at work' or 'should have done some work'. Within these companies the working hours and timeschedules are linked to concrete projects, each employee being measured on the amount of productive time. The problem of increased individualisation of work performance has arisen due to the introduction of bonuses and performance-based wage systems. For the IT provider employees, their autonomy and freedom in work is high as they organise and design their working day both individually and in teams.

In three of the cases (Norway, Sweden, Portugal) teamwork is reported as the core way of organising work in the IT provider organisations. Working in teams is an important way of providing social support among colleagues. It creates a basis and tool for continuously developing their skills and proficiency by means of knowledge- and experience transfer. However, case studies show several problems regarding the 'assimilation' and integration of the new employees. The ITPRO case from Belgium illustrate this: for the workers who have experienced the growth of ITPRO, co-operation and personal relationship have clearly decreased. This fact has two main reasons: on the one hand, workers are expected to be less polyvalent as before; on the other hand, they do not know the whole personnel of current ITPRO staff because of the higher number of workers. Moreover, it seems that workers who have been working in ITPRO before the mergers note a kind of

pressure from the workers who come from the merged companies. Indeed, 'there is more pressure because others companies which merged with us do not have the same spirit; for them, people are sent to customers' office for a middle or long-term, while for us, we use to work inside ITPRO and we feel the pressure to be sent elsewhere for two or three months, in mission … we appreciate our little comfort in the company' (Vandenbussche, Devos & Valenduc, 2007: 23).

Due to different social frameworks (*i.e.* extra-salary benefits, number of days-off, bonuses), jealousy arose, and due to a lack of any integration plan some employees reported that operation and personal relationships have clearly decreased. Indeed, some reported that although teamwork is the rule, the nature of computerised work is loneliness, each person working for him- or herself.

Regarding the public administrative employee, being subjected to even more computerised tools and systems, the sense of being able to influence your work faces several challenges. For instance, some of the software tools are designed as to direct the user (public administrative employees) through various steps before finishing a task. Although this is a systematic and also helpful way of organising the workflow, the rigidity makes the user unable to proceed on successive steps if she or he needs help or other assistance as to complete previous steps, of if the computer crashes in one step. Another source of ineffectiveness regarding this issue is the difficulties of redistributing work task within the work groups in the public administration organisation. Some users reported that this generated ineffectiveness and frustration as it is difficult to help each other. Thus, the IT systems aim at standardising the performance of work and the workflow, but in this process the employees have lost part of their autonomy and flexibility.

There are some important changes on the parameters predictability on the one hand, and meaning on the other, within the context of restructuring. Firstly, the major concern regarding predictability is job security, the knowledge of keeping the work regardless of structural, financial or political situation at the workplace. From the cases, we learn that employees in public administration have few possibilities to lose their job and from this point of view, they have more protection the other workers. Other cases, however, explicitly reports a liberal use of non-standard contracts as people who are hired from small external firms can be laid off easily (*i.e.* German case). A final dimension of predictability worth reporting is the spatial dimension of IT projects. Living with the knowledge that you can be sent off to work somewhere else for a period of time, for instance in the client organisation, produces a lack of predictability within the context of work-life balance. The same goes for the need to work longer working hours.

Regarding any changes on the meaning of work, the most interesting and very important finding is that employees in the public administration say that they don't want computers to replace human contact. On some level this argument is also advocating the fear of becoming superfluous.

Table 4.10 Influence of restructuring for psychosocial work environment in the service of general interest, business function: IT

Dimension	New problems	New possibilities
Demands in work	Increased burden on management, less rotation Increased time pressure and travelling Heavier workload due to IT systems Intensified customer contact	Working conditions has been evened out between employees Reduction of paper work
Influence over work	Increased specialisation in roles and tasks Hunt for productive time IT system driven work, implies more standardisation of work, loss of autonomy Increased documentation	
Social support	New colleagues Reduced communication due to geographical distribution of people	Teamworking together with colleagues with same profession Rotation and empowered teamwork Better communication, sharing of knowledge and experience
Recognitions and reward Predictability	Introduction of bonus and performance creating more individualistic focus Increased use of part-time workers Long-term contracts and little redundancies Increased pressure on longer working hours and spatial distribution	Improved working conditions due to all treated alike
Meaning	Fear of becoming superfluous Human contact is to a certain extent substituted by IT	Increased professional development opportunities To a certain extent more holistic work

4.5.3   Consequences on working conditions: customer service

The most prevalent trend of restructuring within this sector is caused by the liberalisation and deregulation European market the 1990th, within both the postal market, which is the Swedish and the Austrian case, the telecom market, which is the Dutch case, and in the railway sector, which is the German case. Deregulation opened the possibility for new actors to enter the market through new business opportunities, and hence the competition in the market has increased. Liberalisation has brought a strong focus on running business and profit, but it has also created new business opportunities, as illustrated in the Austrian and Swedish cases.

'In 1999 Telecom Austria AG was hived off and the remaining business areas combined into Post AG. The conversion into a private company had two aims: on the one hand, the intention was to position the business for the approaching liberalisation. As a company under private law, the post office could expand through take-overs and the foundation of subsidiaries into new business fields such as logistics and become active abroad. On the other hand, the company was to make a profit in the medium term … As an enterprise operating as a private company and partly also in private ownership, the Austrian Post

49

AG has in recent years attempted to cut costs and make a profit' (Hermann & Schönauer, 2007: 2).

The distribution of mail, letters and packages has since the 17th Century in Sweden been handled by the Swedish Post as a monopoly of the state (formerly 'the king'). In the 1990th the postal market was deregulated and competition allowed on distributing letters. At the same time the Swedish Post was made into a state owned limited company, thus being able to work at the same legal status as a private company, instead of earlier being regulated by rules for state authorities … The most at least publicly recognised change has been the outsourcing of the handling of special mail and packages as well as the sales of stamps to private operators (called service partners or 'postal representatives'). There are about 3,000 one-stop shops in food stores, gas stations and convenience stores' (Tengblad & Sternälv, 2007: 2).

The latter is particular present in the postal market, but also produced by the ICT development in general and internet in particular, *i.e.* an increase in transportation of lighter packages due to increased eCommerce based trading and shopping. Deregulation, privatising and increased competition has put a durable demand for profit. Change in focus from service to sale, increased quality demands and last but not least an intense focus on productivity. This has made it necessary to reduce cost. Cost reduction is taken out through staff reduction, massive investment in technology and information based rationalisation, and centralisation. In both the two postal companies in Sweden and Austria and the railway company in German there has been shut down and fairly high amount of small post offices and stations in small villages. The trend in the postal market is also that local grocery stores have integrated the traditional post service into their business. Realising that contact centres would grow into an important business, as in the Dutch case, and that it would be too expensive to keep it in-house, resulted in a need for cheaper labour and hence an outsourcing of the activity. During the phases of restructuring there is no evidence in that gender composition has changed.

Evident in all of the cases is an increase in both temporal intensity and specialisation. Introduction of IT support systems has created higher workload and greater demands on employees, especially in the subsidiary companies: 'Employment conditions in Company C (subsidiary) are worse than in Company P (parent): there is an overload of work, accompanied by stress for all workers, while there is job insecurity for half of the workers (temporary, seasonal). While there are indications that work has intensified in Company P as well, it is still considered 'heavenly' in comparison to Company C' (Gavroglou, 2007c: 9).

Prevailing in the Dutch telecom case, technologies automate the communicative aspects of transactions, deskilling is a relevant trend; scripts increasingly determine the actions to be taken. Due to this the employees no longer can decide for themselves when they pick up a phone. In the Swedish and Austrian case there is significantly increase in work intensity. This mainly caused by a simultaneously specialisation in customers and products and the fact that more task has to be dealt with synchronised. In the German case the employees experience a new and time wise rougher encounter with customer. On one side they are forced to be more active on selling added products and on the other hand it is more demanding for the service point employees are those concerning irregularities in the schedule - train delays. Cases like this make particular demands on employees' ability to give advice but also require psychological toughness since they became specific targets for travellers' anger. The stronger focus on selling, efficiency, cost reduction and the imple-

mentation of information technology also bring along an increase in and more detailed performance measurement on employees. Pointing out all this there is also, except in the Dutch case, an emphasis on training and development of new skills.

The post office partner activities themselves are very customer-intensive, but at the same time, the work process is highly-standardised and in most cases is structured by the post office's own computer program. Face to face, contact with customers is replaced by use of call centre technologies and internet. There is less influence on work performance due to information technology since the required knowledge is increasingly embedded in the technologies. This situation is also present in the Dutch case, but notwithstanding the tight planning schedules and strict work rhythms, workers have considerable freedom in determining their working hours. The situation is somewhat different in the German case where temporal work rhythm of the Travel advisors swings along with the timetable and the rise and fall of travellers'. The employees at the service point face a continuous workload which can suddenly increase radically and unpredictably if there are disruptions in the rail timetable – and there is (of course) a lack of control over this setting. Even though increased use of information technology in a new way forms how work is carried out, it is brings along new structures and new task, and it is reported that the restructured setting create new career possibilities.

Social support is viewed different after restructuring: to a certain extent teams seems to be the 'new' way of organising the activity. But comprehensive use of information technology puts rather thorough constraints on people's ability to support each other. In the Swedish and Austrian and to certain extent the German case there is an increased lack of acknowledge from society in how experience being 'taken care of'. In addition, the increased focus on sales, use of information technology and performance measurement creates a more individualistic attitude towards work accomplishment.

Except from the Dutch case, there is long tradition of keeping employment conditions steady. Most employees have fixed contracts and wages. Within the German case the Travel advisor, get individual commission based on sales of first class and railcard tickets. This involvement of employees in the enterprise's success is indeed welcomed by both the employed and the union. Another finding reported is that customer contact are in itself related to positive experiences when a competent response to a customer evidently in need of help leads to a successful action, which then prompts the customer to give the employee due recognition. Beyond this, there is no clear pattern of changes due to restructuring.

A general internal reaction, though reported differently in the cases but still evident, is tiredness with many reorganisations. In both the Swedish and the Austrian case a number of local post branches have been laid down. But there is an increase of employees in the customers' services and recruitment has been made among those redundant. However, there was a range of transfers, with some workers being confronted with new working situations and, sometimes, new demands. Employment agencies have been used to cope with the need of increased flexible work force, due to new and extended opening hours. In the Dutch case, time flexibility is more important than careering. Next to this, most of the employees prefer the tasks they have familiarity. Flexibility in deciding when to work makes contact centres jobs attractive regarding the work-life balance to such categories as students and/or people with caring obligations. It is also important to put forward the role of work council and the high degree of collective agreements that has been prevailing

51

during the restructuring process. However, it seems that the agreements only last for a specific period, and that no one can tell what will happen when this period is over.

Findings from the cases show that there is an increased spatial division of labour along the value chain, also known as geographical distributed work. There is a tendency towards splitting up the new enterprise in a number of business areas, and this creates a more narrow scope of work, and that there is a loss of being a part of meaningful entirety. Also important to notice is that employees do not so much complain about the time constraints or the production targets per se, the decreased level of their services makes the job less attractive. Without some few exceptions, all employees are expected to accomplish all the tasks. However, it is necessary to point out that the changer also produces new professional demands and in all the cases has conveyed more developing tasks. Therefore, there is no clear pattern of reduced meaning in tasks and work performance. Even in the Dutch case the outsourcing has enlarged the opportunities for careering as a contact agent, as the range of jobs at different skill-levels has become much wider.

Table 4.11   Influence of restructuring for psychosocial work environment in the service of general interest, business function: customer service (occupational groups: front-office employees)

Dimension	New problems	New possibilities
Demands in work	Focus on sales promotion Specialisation on customers and products Increased use of IT technology Increased work intensity Increased measure of performance	New skills and abilities
Influence over work	Less influence due to increased use of IT technology Customer driven tempo and attention	
Social support	Society's lack of acknowledging new products and services creates	
Recognition and reward	Fixed contracts Wages – but no clear pattern in changes	Sales provisions Reward trough experience customer satisfaction New career opportunities
Predictability	Tiredness of long-term structural changes – what comes next Decreased long-term employment security Less stable and increased differentiated working hours	To some extent increased flexibility in choosing working hours
Meaning	Increased division of labour Loss of ability to both 'see' and act on behalf of the totality Employees experiences decrease abilities and possibilities to perform at expected service and quality level	Change in professional demands has lead to more developing tasks

5 The consequences of restructuring for the psychosocial work environment across sector

5.1 Introduction

In this chapter, we conclude on the empirical findings across sectors focusing on each of the six dimensions that we have used as indicators for estimating consequences of restructuring for the psychosocial working environment: demands in work; influence over work; social support; recognition and reward; predictability; meaning. After each dimension, we give a brief description of cross sectoral variations and differences related to business function, education and occupational groups. At the end of the section we present a 'cross sectoral summary' of the findings for each dimension of the Kristensen model.

5.2 Demands in work

1. There is one main trend across all the dimension; namely *intensification in work*. The exact form of intensification varies, but in all sectors variants of intensification is reported. The question remains whether or not this is a general trend in itself, or if this is a result of restructuring.
2. Another prevalent tendency is increased *reporting, administration and documentation*. This trend should probably be interpreted as part of the standardisation processes mentioned in the 'influence over work' section. The increase in reporting probably is at least partly caused by standardisation, since new organisational borders would tend to increase the need for reports crossing those borders with information, if production is to proceed.
3. Most other findings are sectoral, demonstrating that effects of restructuring to a large degree depends on where the restructuring take place. ICT researchers experience different effects of restructuring than food producers. Note that 'where' also refers to where in the value chain, the low-skilled public administration workers experience a harsher restructuring than the high-skilled.
4. The overall trend is one towards specialisation and *increase in skills*. The strong focus on core business that frequently is part of the restructuring process results in a need for upskilling or at least reskilling. Thus new demands for skills result in new possibilities for specialists with higher education (in the new sectors) whereas there seem to be either less possibilities for upskilling or less demands for the low-skilled. Of course this also leads to a need for *training*, which was not always provided.

53

5. By the intensification in work, women appear generally to face more problems in reconciliation than men.
6. Intensification of work often brings to an *individualisation of responsibility*: the single worker is the responsible of his part of the productive process, of his machinery, of his target related to the wage.

Demands in work are changing in several ways at least partly related to restructuring. First, with minor exceptions, increased intensification of work seems to be a dominant characteristic across sectors as well as across occupational and other differences. Sectoral differences rather prevail in terms of the form the increase in demand takes. The clothing industry experience increased working hours and increased workload, whereas public administration, services of general interest and ICT, experience intensification in terms of increased flexibilisation, rapidly changing requirements (*e.g.* competencies) and pressure on the work/family balance. Second, looking at problems *versus* possibilities it seems that all sectors experience both negative and positive aspects of the new work demands, however, negative aspects seem to dominate. Finally, increasing demands in work differ according to occupation, education and position within the value chain. In particular, we found the more intense increasing in demands for production workers (in clothing and food industry) and in office/call centres employees. This seems to reproduce, perhaps even reinforce a core/periphery as well as a manager/blue-collar divide, where a peripheral position within the (prolonged) value chain is associated with the most negative consequences of restructuring.

5.3   Influence over work

1. Across all sector there is an *increase in standardisation*. Even in the ICT R&D case there is an increase in standardisation, through use of modularised work. The research process is not completely standardised, but it is contained in smaller parts and the whole process becomes more manageable and less open.
2. In a context of increased standardisation, formalisation and specialisation is not surprising that several sectors report *loss of autonomy* and innovation. To some degree this is inherent in standardisation processes. As for intensification this is a finding the in European Working Conditions Survey 2005. This is in itself a negative consequence of the restructuring. It is even more negative combined with the intensification going on. The combined effects of intensification and loss of autonomy is a drive towards what Karasek called 'the high strain work organisation', the most stressful of all work organisations.
3. On the possibilities side the overall trend is one towards *specialisation* and increase in skills. Of course this also leads to a need for training.
4. Market and customer orientations influence the work content and reduce the worker control on the productive process.
5. The standardisation of procedures and individualisation of responsibility make it difficult to negotiate influence over work.
6. Standardisation and formalisation improve the surveillance on the working process and on the workers.

Summing up the consequences of restructuring for experiences of influence over work, the overall (problematic) development is an increase in standardisation and decrease in control over one's work. In a few cases, we also find the creation of new possibilities *e.g.*, food and clothing and textile experience a positive development towards less physically exhausting work, more 'upgrading' and improvement of safety procedures. Also services of general interests and public administration-customer service experience new career opportunities and better sharing of knowledge, *etc.* among employees with higher skills. The overall picture, however, suggest a decrease in influence, which is regarded as problematic. Looking at occupational differences, it seems that all occupational groups are influenced by standardisation, but that it takes different forms depending on position within the value chain – and educational level. Certainly, for the occupations where creativity is a central factor (as well as for designers in clothing industry or researchers in ICT), the influence over work is more guaranteed, also if standardisation and the market-customer constrictions are more and more relevant.

5.4   Social support

1. A parallel process to the loss of autonomy is increase use of *teamwork*. As the individual looses autonomy, work processes become more collaborative, broader, harnessing skills and knowledge from several workers. It should however here be noted that the content of a word like teamwork is quite different in different sectors and along different positions in the value chain.
2. The use of teamwork brings an increase in *informal control* (between workers), especially the wage is related to the production, with a corresponding reduction of the influence in work.
3. There is an increase in *virtual social contact* here – for some groups this may result in increase in social communication and in the sharing of experiences (the case of IT experts) while for others (teleworkers) it brings to worker isolation.
4. The high frequency of changes results in a high frequency of *new relations*, it is a cause of stress for the low-skilled occupations, and for the high-skilled occupations, it is an opportunity to improve their knowledge and to do new work experiences.
5. On the other side, the lengthening of the value chain brings to *less stable contacts*, especially in the traditional sectors, and it is a cause of the *lack of representations*.
6. In outsourcing the *social contest,* influence the social support, by the local legislations, the local level of representations, the local welfare state, the local framework.
7. For the *migrant* there is a lack of social support, and the previous relations created among them are the primary font of psychological support.

The overall picture in terms of social support points towards a rather significant change of the social relations in which work is embedded taking place in all sectors under study. On the one hand, there is an increase of individual responsibility of risk and control. On the other hand, teamwork is gaining a more conditional character as employees tend to become more dependent on each other. In other words, individualisation of responsibility is accompanied by increased mutual dependencies. This development raises concerns about a possible discrepancy between individualisation of responsibility and conditional mutuality. In addition to this, collaboration in the 'old production sectors' seems increas-

ingly to take place between changing partners, 'colleagues' increasingly consists of a range of subcontractors. As the value chain becomes longer, more complex, less stable and more virtual, social support seems to become more fragile and shifting. However, also in this respect, experiences depend on one's position, educationally, occupationally and in terms of core/periphery of the value chain rather than differences between sectors. An important finding in this respect is that high-skilled 'communication' workers increasingly develop virtual social relations, and the relations along the value chain are more collaborative and integrated, as well as for the logistic workers in clothing industry. Certainly, representations is a key tool for the worker to have a support during restructuring, as we have seen in clothing and food industry.

5.5   Recognition and reward

1. Overall there seems to be a trend towards more individually based recognition, where the individual becomes an expert (and is acknowledge as such), and is also more paid on performance. This is in line with the increase in skills and specialisation earlier reported.
2. The link between wage and productive performance creates a *gap also in the psychological health between high-skilled and low-skilled occupations*, because it is related to the amount of the wage. That which is an opportunity for some workers is a cause of stress for others.

If we look at the consequences of restructuring for recognition and reward, we find a general tendency towards individualisation and new possibilities for higher wages for some groups and standardisation of low wages for others (*e.g.* clothing and food). In particular, high-skilled employees in the new sectors (*e.g.* in ICT, public administration information services) experience new possibilities of recognition, based on individual performance. For the low-skilled manual workers in the food and clothing industries, standardisation of employment contracts seems to contribute to better employment conditions and wages. In some cases, also in the low-skilled occupations, restructuring can open new career opportunities, as for the workers in the service of general interest.

5.6   Predictability

1. Overall there is a trend towards more *uncertainty*, caused by the fear of the frequently changes, of the unemployment and, generally, by a more precarious work:
    ▪ the *high frequency of change*, lead to an uncertainty about the future of work: in the load of work and in the worktasks, especially in the sector market or customers-oriented;
    ▪ the *downsizing* after the restructuring process is a cause of uncertainty, in this case (fix in clothing sector and service of general interest) workers have fear of *unemployment*, and it brings them to accept a considerable work intensification, a longer working hours, a low wage;
    ▪ again, this was not a very strong trend, but in several sectors, we found that restructuring created *work that is more precarious. Precarious employment* is certainly a cause of stress and anxiety, for different reasons: there is an uncertainty linked to the tem-

poral contract, but also a low opportunity to have training, a career, a right wage, a professionalisation of the skilling, a representation.
2. In several cases, we can see an increase in job security for the high-skilled occupations and for the workers in the core company.

The general picture looking at predictability suggests a decrease in predictability. The situation, however, differs according to education, occupation and position in the value chain. High-skilled core workers experience the least precariousness in employment, although they may experience precariousness connected to the performance of their everyday work tasks. Low-skilled, periphery workers increasingly face problems as temporal contracts and unstable and/or seasonal work dominates their situation. This is especially true for production workers in clothing and food industry, low-skilled workers in PA, workers in customer service, also if there are similar cases also in other high- or semi-skilled professions in IT and logistics.

The increased customer orientation, therefore, seems to have a negative impact on predictability of employment as well as of work tasks. However, there are also sectoral differences, and job security seems to be higher for workers in the clothing industry compared with the food industry. High levels of representation in the clothing industry seem to be crucial in explaining this difference. Finally, an increased demand for flexibility in working hours seems to influence short term planning negatively for employees in several sectors. Flexibility may change employment and work plans with short notice, especially for the low-skilled workers in practice result in a lack of predictability in terms of employment as well as time schedules as employers. On the contrary, a wide margin for the worker to choose working hours is obviously a key instrument to improve predictability, and this relation between flexibility and 'influence over work' has positive results, as in some cases for workers in customer service.

5.7   Meaning

1. The standardisation and the decrease of the workers influence *delimit involvement satisfaction, and the acquisition of a professional identity*, especially in the low-skilled occupations and in the manufacturing sector with high automation.
2. High standardisation reduces the creativity and the problem solving capacity of the worker.
3. In the ICT and R&D sectors the possibility of a more interesting content of work and the possibility to improve the relations (fix the world wide collaborations) increase the satisfaction level a create a meaningful work.
4. It should be mentioned that in some cases the employees, or groups of employees, felt their work to be more meaningful because they were *more market-orientated*.
5. For the *migrant worker* there are problems caused by cultural and language differences.

It is difficult to establish a clear picture of the development of the meaning of work related to restructuring. Perhaps not surprisingly, consequences are mainly negative and there are very limited positive reports from both clothing and textile industry and from food production, with exception of the high-skilled occupation that work creatively, as designers. However, meaning is influenced in several ways by processes of restructuring. First,

there is a clear tendency towards increased market and customer orientation. The impact that this may have on meaning seems to be directly related to the organisation and management of work. A high degree of standardisation of the contact between workers and customers tend to result in a decrease in meaning, whereas a form of organisation that leaves a 'space of negotiation' seems to result in an increase in meaning as employees tend to like having social contact with both co-workers and customers. Second, a lengthening of the value chain, rapidly changing work forms as well as unstable work partners, tend to result in a diminishing of meaning as employees fail to see the 'totality' or 'whole' of the work process. In particular the periphery of food and clothing sectors, but also the externalisation of ICT support within public administration experience such a lack of connection and meaning of work. Third, standardisation may lead to an increase of repetitive work especially at the peripheral end of the value chain, where many low-skilled workers are employed. This may decrease the meaningfulness of their work. For the high-skilled IT, communication and HR workers, standardisation contribute differently, as increased documentation, reporting and other administrative tasks regarded as 'waste of time' is increasing. There are some positive findings for the high-skilled workers in research and development business functions, as in clothing industry or ICT, where there is a job enrichment.

5.8   Six dimensions model across sector: an analytical summary

For each section a table lists the findings for that dimension across all sectors. In the tables we also indicate which sector the particular finding is from. If a finding is present in more than one sector, all sectors we have found it in is listed.
The following abbreviations are used:
- Cl P: clothing and textile industry, production workers;
- Cl DL: clothing and textile industry, designers and logistic workers;
- Fo P: food industry, production workers;
- Fo L: food industry, logistic workers;
- ICT-RD: information and communication technology, business function R&D;
- PA-ISC-LS: public administration, information services for citizens, low-skilled;
- PA-ISC-BO: public administration, information services for citizens, back-office (highly-skilled);
- SgI IT: service of general interest, IT;
- SgI CS: service of general interest, customer service.

Table 5.1   Demands in work

New problems	Sector	New possibilities	Sectors
Increased pressure on the sub-contractors	Cl P, Cl DL	A more ample and diverse range of tasks for workers of companies that have out-sourced production	Cl DL
Intensification of work	Cl P, Cl DL, Fo P, Fo L, ICT-R&D, PA-ISC-LS; PA-ISC-BO, SGI IT, SGI CS	Work organisation key factor to improve health and safety	Fo P, Fo L
Stress is increased	Cl P, Cl DL	Shift manager becomes a key role	Fo P, Fo L
'Job on demand': acceleration of business activities and workflow; increase in temporal flexibility	Cl P, Cl DL	Collaboration between different functions	ICT-R&D
More market orientation	ICT-R&D, SGI CS	Temporal flexibility increases	ICT-R&D
Increased reporting/documentation/ administration	ICT-R&D, PA-ISC-BO, SGI IT	More balanced workload within organisation	ICT-R&D, SGI IT
Increase in temporal flexibility	Cl DL	Developing interpersonal skills	ICT-R&D, PA-ISC-BO
Several conflicts	ICT-R&D	Pursuing interests and use of education	ICT-R&D, PA-ISC-BO
Change of governance	ICT-R&D	Reduction of bureaucratic workload by technological system	Cl DL,
Increased demand for interpersonal skills	PA-ISC-BO	Job rotation to reduce repetitiveness	SGI IT
Increased burden on management	SGI IT		Fo P
Intensified costumer contact	SGI IT		
Increase in travelling	SGI IT		
Focus on sales promotion	SGI CS		
Increased use of ICT	SGI CS		
Increased use of performance measurement	SGI CS		
Wage is linked with productivity	Fo P		

Table 5.2   Influence over work

New problems	Sector	New possibilities	Sectors
Standardisation of the process	Cl DL, Cl P, Fo P, Fo L, ICT-R&D (through modularisation) PA-ISC-LS, PA-ISC-BO, SGI IT	Skills upgrading and specialisation	Cl L, Cl P, Fo L, Fo P, SGI IT, SGI CS, ICT-R&D
Increase in 'job on demand': high influence of customers' demand	Cl P, Cl L	Reduction of heavy manual work	Fo P
			SGI IT
Formal relations between main company and outsourced, and between blue-collar and management	Fo P, Fo L	Better communication and sharing of knowledge	
Lack of training	Fo P		
More modularised work. Less control/impact on others coding	ICT-R&D		
Less control over information coding	ICT-R&D		
Loss of autonomy	ICT-R&D, SGI IT, SGI CS		
Less innovative	ICT-R&D, PA-ISC-BO		
Increase in self-control and social control	Cl P, Cl DL		
Difficulties in work-life balance	Cl D		
More specialisation	SGI IT		
Hunt for productive time	SGI IT		
Research unit lost their power	ICT-R&D		
Reduction in creativity	ICT-R&D, PA-ISC-BO		
Formal respect of safety procedures: more obligations to respect the law and practices for health and safety but less possibility to have an influence on the stan-dardised process (low par-ticipation at the definition of the standards)	Fo P		

Table 5.3   Social support

New problems	Sector	New possibilities	Sectors
Lack of representation in out-sourced companies	Food	High levels of representation and international standard	Cl P, Cl L
Individualisation of risk	Fo P, Fo L, PA-ISC-LS	Presence of work councils.	Cl P, Fo L, Fo P
Less face to face communication	ICT-R&D	Teamwork (including virtual)	Fo L, Fo P, ICT-R&D, PA-ISC-BO, SGI IT
More competition between sites	ICT-R&D (one case)	Outsourced companies are forced to adapt to local legislation	Fo P, Fo L
New colleagues	SGI IT	More online communication and collaboration	ICT-R&D
Society's lack of acknowledging new products and services	SGI CS	Integrated management of the value chain	Cl DL
Lack in corporate training	Fo P, Cl DL, Cl p		

Table 5.4   Recognition and reward

New problems	Sector	New possibilities	Sectors
Wages are not very high	Cl P, Fo P, Fo L, PA-ISC-LS, SGI CS (but no clear patterns in this sector)	Wages are generally set by collective agreements for the clothing industry in each country	Cl P, Cl L
Performance/individual based wage system	Fo L, ICT-R&D (partly), SGI IT	Higher wages through new contract	PA-ISC-BO
Fixed contracts	SGI CS	Acknowledgement of expert knowledge	PA-ISC-BO
Lack in training	Cl P, Cl L, Fo L	All treated alike	SGI IT
High qualification required but there is a low salary	Fo L	Sales provision	SGI CS
		Customer satisfaction	SGI CS
		New career opportunities	SGI CS

Table 5.5   Predictability

New problems	Sector	New possibilities	Sectors
There is a considerable downsizing after the restructuring process, so workers accept considerable work intensification and no increases in pay for years.	Clo P	Improved job security	ICT-R&D, PA-ISC-BO
Difference between permanent and temporal workers	Fo P	Long-term contracts and little redundancies	SGI IT
High request of flexible work with a large use of open-ended contracts and seasonal workers	Fo P	Increased flexibility in choosing working hours	SGI CS
Precarious employment	PA-ISC-LS, SGI IT, Fo L		
Uncertainty about future work	PA-ISC-BO, Cl L		
Increased pressure on longer working hours	SGI IT		
Tiredness of change	SGI CS		
Decreased long-term employment security	SGI CS		
Less stable and increased differentiated working hours	SGI CS		

Table 5.6   Meaning

New problems	Sector	New possibilities	Sectors
Cultural, language and temporal differences	ICT-R&D-Fo P	Job enrichment	ICT-R&D
Internal conflicts and competitions	ICT-R&D	Improved professional standing within co-operation	ICT-R&D
Standardisation delimits involvement and satisfaction	PA-ISC-LS, Fo P	More interesting content of work and possibilities to collaborate world wide	ICT-R&D
Less creativity and problem solving	PA-ISC-BO	Increased contact with costumers offers more opportunities to solve costumer's problems	PA-ISC-LS;
Emphasis on expert identify	PA-ISC-BO	Increased professional development opportunities	SGI IT
Fear of becoming superfluous	SGI IT	To a certain degree more holistic/developing work	SGI IT, SGI CS
Highly repetitive work	Cl P, Fo P	More interesting work	ICT-R&D
Human contact is to a certain extent substituted by ICT	SGI IT	Interesting travel through work	ICT-R&D
Increased division of labour	SGI CS	Creativity for high-skilled occupations	Cl LD
Loss of ability to both see and act on behalf of the totality	SGI CS		
Employees experiences decrease abilities and possibilities to perform at expected service and quality level	SGI CS		
Increased unnecessary administration	PA-ISC-BO		

6 Changes as risk factors for psychosocial health at work: conclusions and recommendations

6.1 Introduction

In the previous chapters (Chapter 3, 4) we have analysed the consequences of restructuring within various sectors and business functions. Here we will try to identify the most important findings related to the main changes which take place during restructuring. The aim of this section is to understand which factors have an influence to create new problems or new opportunities for psychosocial health during restructuring.

At first (Paragraph 6.2) main changes during restructuring are described, considering their consequences for the six dimensions model (at the end of the paragraph there is a summarising table); secondarily (Paragraph 6.3), we present the consequences for psychosocial health related to the changes; finally (Paragraph 6.4), we summarise new challenges leaded by restructuring with the aim to propose some recommendations.

6.2 Changes in work as risk factors

Some of the changes that take place during restructuring processes have a strong influence in determining health conditions of employees. In particular, as shows by the analysis of case studies, changes that lead to very serious consequences on the six dimensions of the Kristensen model are:
▪ market and customer orientation;
▪ standardisation, formalisation and centralisation;
▪ increase in surveillance;
▪ intensification of work;
▪ specialisation and increase in skills;
▪ teamwork;
▪ increasing flexibility;
▪ restructuring of working time;
▪ change in work force consistency;
▪ the high frequency of the organisational change;
▪ changes in industrial relations.

These trends are interconnected and they do not have the same strength and importance. In the following paragraph, each change will be analysed and the main consequences found in the case studies concerning the six dimensions of the Kristensen model will be highlighted, with an eye to their interdependence - a change often causes, or is a conse-

quence, of another problem - and to the different repercussions on regions, sectors, business functions and occupations. At the end of the paragraph, a chart shows the relation between changes and the six dimensions of the Kristensen model as well as new problems and/or opportunities.

6.2.1 Market and customer orientation

The need to meet market and customer demand is obviously a crucial element for enterprises, hence it is the reason at the basis of many restructuring processes. In sectors where there is a greater need to restructure the enterprise according to market demand and customers' needs, changes in work contents are more marked too. Market and customer orientation is stronger especially in some sectors and for some employees. It is very strong for R&D workers in IT, software professionals and clothing industry professions, where innovation and fashion deeply influence production. Services and public administration are the most market-driven sectors, in particular management, customers and front-office services. Market instability and frequent changes in customers' needs make it difficult to predict workload, therefore reduce *predictability*. Furthermore, market changes and changes in customers' needs strongly influence the companies' decisions and this leads to a reduced decision making power and a low *influence over work* for employees. It should be mentioned that, in some cases, the employees felt their work to be *more meaningful* because they were more market orientated. On the other hand, the R&D cases also showed that some of the workers felt their professional identity where destroyed by such an orientation (cf. Paragraph 4.3).

6.2.2 Standardisation, formalisation and centralisation

Restructuring is usually followed by an increased standardisation and formalisation of the whole working process, which is often combined with a centralisation of decision making and control power in the core organisation of the value chain. In some cases, standardisation was the start of the process being a necessary precondition to outsourcing/restructuring (Hermann & Schönauer, 2007). The standardisation process is more intensive in manufacturing occupation and service occupations, but it can be found in knowledge-based creativity occupations as well, even though to a lesser extent. As for logistics, customer service and IT function; standardisation comes with an increased use of information technology, while in production compartments automation is the main factor.

While not disputing Ritzers theories (Ritzer, 1996) of benefits from standardisation in terms of efficiency, calculability, predictability and control for costumers, we see in our case studies a large cost side for the workers. One of the most problematic aspects of standardisation is a lower *influence over work* for single employees, because working time and methods become strictly regulated and formalised. The employee's influence on his or her job obviously suffers from the negative consequences of the standardisation process and it depends on the surveillance level of employees: a higher standardisation entails a more careful surveillance (cf. Paragraph 6.2.3), hence the influence of employees on the production process is lower. In knowledge-based creative occupation, employees have more influence over their work although creativity must cope with strict market deadlines.

Automation and standardisation of the production process reduce the employee's capacity to influence it. In those jobs where employees are in direct contact with customers, such as services and public administration, there is a lack of influence over planning and in carrying out work tasks. This is even more true in restructuring and privatisation processes related to new public management policies (to increase efficiency by individualising work target). Moreover, standardisation and formalisation of working processes reduce the employee's autonomy in particular for those who work for non-core organisations in the value chain. Highest levels of autonomy are found in firms at the top of the value chain or those with a strong intermediate position; however, firm targets and work projects formalities must be respected. The knowledge-based, or creative professions enjoy a higher level of influence over work and autonomy, which nevertheless must be balanced in accordance to market pressure. The service sector has the highest level of autonomy, but also in this case, the type of occupation and the position in the value chain are crucial factors.

Standardisation also simplifies the division of production processes into production units, facilitating their management and, in case, their outsourcing to other firms or regions. Standardisation facilitates the management of work relations between core firm and outsourcing destination firms as well as the relations between firms and customers, and this can have positive consequences both on *predictability* and *social support*, by strengthening and integrating the relationship system of the employees. This happens in particular when there are high levels of representation which allow employees to take part in the decision making process. Major difficulties arise when there are problems and emergency situations not envisaged by standardised procedures which entail that single employees must take responsibility and this also happens when an excessive formalisation of relationships does not allow a direct contact between employees and their superiors. The isolation of employees in these circumstances entails an *assumption of risk which falls on the single individual*.

The high standardisation, in particular when it is caused by automation, reduces creativity and the employee's problem solving opportunities, it leads to repetitive and boring tasks and therefore makes work *less meaningful*. This aspect, in its extreme manifestation, can lead the employee to be alienated from the tasks he carries out.

Finally, standardisation and procedures are - and have always been - obvious tools in this drive towards *bureaucracy*. This entails an increase in reporting, administration and documenting, and hence an increase in the *demands in work*.

6.2.3   Increasing surveillance

The control that the company has on employees affects their *influence over work*: the higher the surveillance, the lower the employee's influence over work. In general, restructuring tends to increase surveillance levels on employees. Surveillance on work processes is carried out *formally* or *informally*, playing on both an external order and a self-regulation of employees, that is adopting various disciplinary technologies (Foucault, 1975). Surveillance is more explicit and codified in highly-automated sectors and business functions, where work surveillance is very strong to the point that it is imposed by the pace determined by the speed of machinery. On the contrary, surveillance is less close and more

informal in less codified work processes, where the outcome is the main goal and the employee manages the work process.

Formal surveillance is carried out with different tools, such as the definition of work pace and intensity, working time, the respect of specific processes and practices, compliance with production standards, identification of tools needed to achieve goals, the setting-up of targets, the definition of roles within the company (with a higher or lower level of hierarchy), the structuring of career paths, and the codification of access to specific benefits such as training.

Informal surveillance on the other hand, is not explicit and it is carried out by disciplining employees who must work to achieve specific goals and hence must self-regulate their performance. Serving as an example, forms of control are very informal in all cases of IT R &D: 'most employees don't have to formally record their hours – they tend to keep their own records, and the expectation seems to be that they would tend to work more rather than less of the required hours. Furthermore, strict presence in regulated working days was also the exception. The control comes almost completely from the requirements of the project-based organisational structures. Project time is booked and project schedules have to be met. This means that the control structures are almost all indirect for R&D organisations. The appearance of autonomy in terms of the absence of obligatory starting and ending times, and formal records is very high. On the other hand, performance in the projects is part of the evaluation process, in almost all of the cases, for wage negotiation and bonuses' (Holtgrewe & Meil, 2008: 40).

Therefore, employees who have more opportunity to negotiate deadlines, working stages and wage will have more formal control on them; on the contrary, employees with a low capacity of negotiating deadlines will easily be subject to an informal control, even if the only requirement is to respect a deadline.

Such considerations lead us to think about the close surveillance of employees who work in marginal segments of the production chain, both knowledge collaborators in the core firm and production employees of external firms. Since they have less opportunities to negotiate deadlines and methods, these employees are subject to a closer control by the firm. This is due to the fact that 'occupational instability 'trains' individuals; it leads them to acquire specific skills, internalise ideas and attitudes, change their behaviour, adapt it to the 'codes', prefer some instead of other behaviours, if not to internalise values and identity models. It leads them to portray themselves in their daily life as tireless, flexible, highly-motivated, cooperative, understanding, adaptable employees who are ready to meet any requirement and do not cause too many problems' (Pedaci, 2008: 169).

It is also interesting to note that the link between wage and production levels - in some firms a portion of wage is variable depending on outcomes - entails an increased self-regulation of single employees who manage their performance aiming at a higher wage. This informal surveillance, carried out individually, becomes a *collective and horizontal surveillance* in teamwork processes where each employee exerts control over his/her colleagues to achieve production targets. The distribution policy is organised in such a way that distributors could have bonuses at the end of the month. 'This in practice means that the ends of the months are very heavy in terms of workload, as it was already said. In the peak periods the logistics could deal at the same time with 20 to 28 trucks, to load from eight to twenty types of beer to each of the trucks and this could cause problems and confusions' (Kirov, 2007).

Moreover, restructuring strengthens *inter-firm control*, where the core firm controls secondary firms. 'Control strategies in outsourcing relationships not only impact on the supplier or service provider companies but also on their workers. Service level agreements, for example, regulate the service in detail and usually also contain contract penalties in case of missed targets' (Flecker & Holtgrewe, 2008: 139).

6.2.4   Intensification of work

The process of standardisation is often linked to an increased use of a 'continuous productive process' - with intensification of work - and to an increase of shift work, overload, extra work, long hours and overtime work. This obviously entails an intensification of the *demands in work* for the single employee, especially as for the need to respect deadlines and targets established from above. Moreover, the intensification of the work pace increases problems in reconciling work and family life, in particular for women, and this is strongly influenced by the local welfare state (cf. Altieri, 2007).

6.2.5   Specialisation and increase in skills

Overall, in Europe a few instances of deskilling have been found although the analysis on restructuring processes shows the clear trend of unskilled and heavy work being outsourced in favour of knowledge occupations performing the core business processes in a firm. The increase in skills makes work more *meaningful* but, in some cases, the competencies required do not concern the content of work but rather the knowledge of practicing work. The redefinition of individual knowledge and competences is marked in knowledge-based creative occupations, such as in business function of design in clothing industry and in research in software, while in manufacturing occupations the competences developed are inferior and mainly technical. In some cases, 'employees in the restructured value chains need new skills in project management, intercultural communication, management of inter-firm relationships and "transaction work". Such competencies are often not certified, or they are certified in a more informal way than the skills learned in traditional occupations, as training and coaching in these fields becomes a part of marketised further education' (Flecker & Holtgrewe, 2008: 144-145). This can also cause problems to the system of *recognition and reward*, also because, after restructuring, employees who achieved more formally recognised skills have increased their career prospects. This phenomenon is more marked in knowledge-based creativity occupations, where many competences are acquired individually, while it is less marked in manufacturing occupations, where competences are often acquired through company courses. In those cases where competences are developed individually, based on experience with flexible and volatile work situations, the lack of appropriate training programs for employees leads to a lower *social support*, and can also result in an increase of the *demands in work* which falls on the single employee who is obliged to carry out a self-training. In few cases, the acquisition of new skills improves the possibilities for the workers to increase their *influence over work*, because there is a link between the worker's skills level and his capacity to participate actively at the working process using his personal knowledge and creativity.

6.2.6   Teamwork

The introduction of IT has increased the opportunities for co-operation at the international level, while the introduction of automation has strengthened co-operation among employees belonging to the same production unit. As a consequence, teamworking seems to have increased and *social support* tends to be stronger. However, often teamworking takes place within an increasingly standardised production process and in a codified work context, so relations between workers tend to be ever more formal. Moreover, in some cases the individual worker seems to have shorter and less stable social relations. Therefore, it is hard to understand whether teamworking is actually increasing or if it is only increasing formally.

6.2.7   Increase in flexibility

Flexibility is a key factor which is increasingly affecting both relations within the firm and relations between firms of the same value chain. In both cases, flexibility reduces *predictability* and *social support*, because changes in work relations and methods are frequent. Within the firm, there is more flexibility in working time, shifts organisation and number of employees. Work contracts are looser and more flexible as companies try to adapt the production process to workload schedules. Such contracts are used not only by contractor firms, but also by firms that are undergoing a restructuring process. The most affected sector is that of services of general interest. Outside the firm, flexibility increases in the discontinuity of relations between external and core firms (especially in services) and in the content of work that the external firm carries out on behalf of the central enterprise, since work is more and more market-driven, dependent on customers' needs and on corporate policies shaped by core firms in the value chain.

   Work-life balance harms female workers in particular, since in lower-skilled occupation a given temporal framework reinforces inequalities between man and woman (Altieri, 2007). Flexibility, which is considerable in higher-skilled occupation, provides more opportunities to reconcile work and private life, even if such opportunities are reduced when work is very demanding and when there are scant opportunities of negotiating deadlines, work procedures and wage. As a recent Italian research demonstrate, dissatisfaction and stress due to a difficult work-life balance are relevant for women, but, on the other side, a part of the male workers feel the forced absence from their family, due to an high workload, as a problem (Di Nunzio, 2007).

6.2.8   Restructuring of working time

Work shifts organisation is essential to manage the *demands in work* and *predictability*. Restructuring working time sometimes entails an increased work flexibility, while in some cases the need to manage and control shifts implies a strong codification and planning of working time to optimise speed of the production process by increasing working time rates. Influence over working time is different according to the occupational sector, lower-skilled occupations are more closely linked to a given temporal framework, while higher-skilled occupations provide greater flexibility to employees in defining work hours even though such flexibility is in inverse proportion to workload and in opportunity to negoti-

ate deadlines. When working time is more formalised the importance of the shift-manager role emerges, a figure with a strong decision making power, especially in manufacturing jobs where automated machinery is used. This role is essential to manage in the best possible way levels of *predictability* and *demands in work.* However, this managerial role is not necessarily a formal position being held by a particular person. Rather, within team-based organisations or other structures aimed at developing and using the full potential of workers' competencies, interests and talents, management may as well be a function taken care of by several workers or even ICT systems.

6.2.9 Changes in work force consistency

Restructuring processes entail a change in the number of employees, for both the core firm and external companies. Each restructuring process leads to a marked positive or negative change in the number of employees with permanent contracts (due to the introduction of automation, outsourcing of activities, increase and reduction of activities carried out by the main firm), and more flexibility in work relations (due to the structure of the production model which is more and more market-driven and customer-oriented). This factor has a significant impact on *predictability*, because the employee experiences an occupational uncertainty, especially in case of downsizing. This uncertainty entails an increase of the *demands in work*, because the employee is more prone to accept a considerable work intensification, longer working hours, as well as a low wage. Obviously, the legislative framework, that is the different national employment models, has a significant influence on the definition of company strategies on labour force. 'The case studies in the food industry, for example, showed how companies in different countries reach numerical flexibility in different ways: while the Italian and the Bulgarian companies relied on fixed-term contracts, the Danish slaughterhouse uses standard employment relationships both because of the strong institutionalised industrial relations system and the low degree of employment protection in Denmark. This company however also uses more precarious forms of flexibility in a plant that was set up in Germany and employs Polish workers' (Flecker & Holtgrewe, 2008: 139).

6.2.10 The high frequency of the organisational change

Change takes place all the time: looking at all the cases, the most general condition is the high frequency of intended change. All case organisations which have been studied in the project have been subject to dramatic changes but there is no indication of a return to a more stable situation with less change. On the contrary most cases report about both ongoing, and future plans for changes. The continuous situation of change creates uncertainty (due to a low *predictability*) and tends to decrease *influence over work*, because worker involvement is low, information is limited, and plans are often changed or do not come through as expected. Moreover the new roles and skills required after such changes are often very unclear, and this increases *demands in work*, and decreases the *meaning* of work. A further negative factor is the decrease in *social support*, because employees must adapt to the new working processes, working groups and increasingly changing social relations. The strain from continued change can be reduced by a high quality of change management but that is not reflected in most of the cases.

69

6.2.11 Changes in industrial relations

Industrial relations differ depending on sectors and are influenced by models and different regulations of working relations applied in various countries. The general trend is that restructuring processes and internationalisation reduce the capacity of trade unions to negotiate even in sectors with a high level of representation. Overall, this reduces the possibility to have some *influence over work*.

In the clothing industry there is a high level of unionisation, but the power of trade unions is constantly eroded by continuous change in firms and production processes as well as strong internationalisation. Also in the food sector, the union density is usually high, but this does not ensure the power to negotiate the management of restructuring processes, as in the Italian case of a clothing industry. In this sector, many firms have committees for working conditions according to directive 89/391 of the EU on the Occupational Health and Safety (OHS) at work, but they do not play an effective role (Pedaci, 2007b). In the R&D sector there is a low union density (a high density can only be found in Austria and Norway according to case studies). In the IT software sector, union density reaches very low levels; as shown by the case studies analysed, working conditions in this sector are perceived as being better compared to those of the national context. In the IT software outsourcing in the public sector, trade union representation generally plays a significant role, even though there are huge differences depending on countries; the British and Swedish cases show the complexity of managing the shift of employees from one company to another and highlight the need to manage it properly. In general, there is a strong union density in the public sector and, in many cases, trade unions are involved in the restructuring process, even though there is a big gap in union density between back-office, with a higher union representation, and front-office, where the unionisation rate is lower. Finally, when there is a low unionisation, also *social support*, on which employees rely, disappears.

6.2.12 Six dimensions model across changes: an analytical summary

Table 6.1 Positive and negative consequences of restructuring on psychosocial health: influence of the main changes on the six dimensions of the Kristensen model (- = new problems; + = new possibilities)

Changes during restructuring	Six dimensions					
	Demands in work	Influence over work	Social support	Recognition and rewards	Predictability	Meaning
Market and customer orientation	-	-			-	- and +
Standardisation, formalisation and centralisation		-	- and +		+	-
Increasing in surveillance		-				
Intensification in work	-					
Specialisation and increase in skills	-	+	-	- and +		- and +
Teamwork			- and +			
Increasing in flexibility			-		-	
Restructuring working time	- and +				- and +	
Change in work force consistency	-				-	
The high frequency of the organisational changes	-	-	-		-	
Changes in industrial relations		-	-			-

6.3   General consequences for psychosocial health related to the changes

As shown in Chapter 5 there were very few findings repeated across sectors and occupations. The problems and possibilities identified in a sector or occupation were as a general rule not repeated in other sectors. Thus, health and safety consequences of the restructuring processes described here are mixed, and few general conclusions can be drawn. The following paragraphs will be an attempt to highlight the link between risk factors, caused by restructuring processes, and consequences on the workers' health.

6.3.1   New problems: health and safety consequences of the changes

If we consider the effects on all six dimensions, we can easily see that negative effects outweigh the positive ones. Over all, we see a trend towards a more passive (low influence in work) and intense (high demands) work organisation, with an uncertain (low predictability) and individualistic (low social support) work life for the workers involved in the various restructuring. This leads to very stressful working conditions and, when grouped together, the casestudies tell a story of a worsening psychosocial work environment as a result of restructuring.

A high level of stress will over time cause various health problems, ranging from various psychic problems like anxiety, sleeping problems, fatigue, mental disorders (de Lange, Taris, Kompier, Houtman & Bongers, 2004); muscle-skeletal (ergonomical) problems (Ariëns, Van Mechelen, Bongers, Bouter & van der Wal, 2001; Bongers, De Winter, Kompier & Hildebrandt, 1993; Sjøgaard, Lundberg & Kadefors, 2000), as well as more physical problems. A large review by Belkik, Landsbergis, Schnall and Baker (2004) show a clear and consistent relationship between high job strain (high intensity, low control) and cardiovascular disorders. Kang and colleagues (Kang *et al.*, 2005) also confirmed this. An increase in perceived imbalance between effort and reward showed similar results, increased stress over time was also related to cardiovascular disorders. Other studies have pointed to relationship between stress and arteriosclerosis (Hintsanen *et al.*, 2005). Finally increased job stress may indirectly increase health risk through the unhealthy lifestyle connected to a stressful job life. Both smoking and training habits are correlated to high-stress job (Kouvonen *et al.*, 2005). Diabetes II is wellknown as a 'life style' illness and has also been linked to the psychosocial work environment, both directly and indirectly (Jensen & Wærstad, 2004).

To summarise, there are several physical and mental health problems associated with poor psychosocial work environment, and in addition to these direct negative health effects there might be indirect negative effects connected to an unhealthy lifestyle associated with high-stress work.

6.3.2   High demands in work and low influence over work: a combined effect during restructuring

The analysis of the consequences of restructuring on the six dimensions of the Kristensen model, also shows that a clearest and problematic finding is the combined effect of intensification in demands in work and loss of autonomy through an increase in standardisa-

tion. This creates a drive towards what Karasek called the most stressful of the four types of organisations described by his model: the 'high strain organisation', characterised by a low influence over work and a high demand. The trend toward the increase in demands in work and the reduction in work influence, as shown also by other research projects, leads to an increase in the risk of psychological strain (Karasek & Theorell, 1990; Dhondt, Kraan & Van Sloten, 2002). During restructuring, workers experience high demands but have no way of controlling what happens, because the procedures are strictly standardised, so they have to adapt passively to changes that become more and more frequent.

We should note that both increasing in demands in work, as well as loss of autonomy alone would contribute towards an increase in stress, if all else was the same. The combined effect is of course even worse. Both high demands in work and loss of autonomy were factors found across the sectors and occupations. They are the clearest and strongest factors and the findings of the cases are consistent with findings from the European Working Conditions Survey in 2000 and 2005 (cf. Paragraph 3.2).

6.3.3 New opportunities

It must be stressed here that restructuring will not always have negative consequences on the psychosocial work environment, even though those we found are usually negative. The main opportunities for workers are: an increased meaning in their job thanks to customer orientation and the increase in skills; more social support thanks to teamwork and the presence of clear, non strict standard procedures; benefits of recognition and reward and, rarely, in the capacity to influence the work through the acquisition of new skills; and a good restructuring of working time can help coping with the increase of demands in work and increased predictability.

The exact consequences of any restructuring will of course depend on a large set of contextual and intervening factors, ranging from the management of the change process, to local legislation, local level of representation, local welfare state, change content, status and bargaining power of the work force, position in the value chain, gender, educational level of work force and so on. Under the right circumstances restructuring can be benign, even positive for the workers, see for instance (Flecker & Schönauer, 2007). However, while it is not predetermined that a restructuring will have such negative outcomes, our cases seem to indicate a predisposition towards them. The challenge for policymakers, managers, labour activists and others is to change this predisposition.

6.3.4 Unequal risk exposure along the value chain

Consequences of restructuring for health and safety and quality of work life appear partially sector specific. As far as health conditions and security are concerned, the analysis of restructuring processes clearly shows that risks are higher for firms down in the value chain and for more vulnerable and marginal organisations and workers in the production process.

The position within the organisation, employment terms, industrial relations' situation along with educational level and degree of specialisation are all significant for the outcome of a particular reorganisation or restructuring. Therefore, although there are dominant tendencies and patterns in showing particular negative and positive effects of

restructuring on health and safety and the quality of work life, these are seldom inevitable outcomes of particular types of restructuring.

The first conclusion is simply that effects of restructuring varies across sectors, position in value chain, employment groups, skills level and the restructuring process. Moreover, gender and ethnicity are clearly related to some specific psychosocial health problems, and the level of representation and the legislative coverage, at European and local level, are important intervening factors:

- regarding *sectorial differences* we can distinguish between old and new sectors. Old sectors are 'food', 'clothing', 'services of general interest', 'public administration' and new are 'information and communication technology', 'costumer service' and 'public information services'. Old sectors are well-established, enterprises can have more than 100 years of existence, and started out long before any IT systems, while the new are younger and have all been based on IT systems since starting. We find that the process and consequences of restructuring are different in 'new sectors' as compared to 'old sectors': overall restructuring seems to have more negative effects in the old than in the new sectors. Note also that there is some movement from old to new sectors, when public administration outsources parts of its staff to public information services this constitutes a move from the old sector to the new for the employees involved. Restructuring in the 'old sectors' has impact on physical health and safety, especially for the employees at the lower end of the value chain, as well as involve changes more similar to the 'new sectors' *e.g.* outsourcing of ICT, customer contact, increased market influence and customer oriented development, which have more impact on psychosocial working environment;

- we found *different effects from organisational changes at different levels in the value chain.* The 'lower' end of the value chain (those doing the outsourcing, closest to the costumer, *etc.*) faced the most problematic effects: more precarious employment, standardisation of work resulting in routinisation and increased surveillance, a lack in social support and with few opportunities for recognition and reward;

- note that we have not found any differences based on business function, however we have found that restructuring tended to have different effects for *different employment groups*. Since different business function tend to employ different educational groups it is difficult to ascertain what is the final underlying factor, further studies would be needed here but, generally, social groups with low educational and social level tended to be more vulnerable in restructuring processes than groups with higher educational and social level. Not only does this seem to result in differences regarding the terms of *employment* resulting from for example outsourcing, it usually seems to result in more influence over ones work, better opportunities for developing new competencies;

- *skills levels and the opportunity to access training* courses are other crucial factors in determining a meaningful work and the individual satisfaction level. A high level of skills allows workers to have a stronger position in the labour market and to reduce insecurity caused by the fear of unemployment during restructuring processes. Moreover, skills needed to carry out tasks in the new organisation allow workers to fit easily in the new productive process and to reduce the level of stress caused by changes. In some cases high-skilled occupation have less repetitive and meaningful work then the low-skilled workers, also if the standardisation process can reduce the creativity in work process. In some cases, restructuring can open new career opportunities also for low or semi-skilled occupation, and the access training plays a key role;

- *the process in itself made a difference.* The level of involvement, information, the willingness of management to negotiate with worker representatives and so on influence the outcomes: more involvement led to less negative effects. *Outsourcing can also have direct and indirect results.* Generally improvement of working conditions fix upskilling and more creative work tasks may be the result for the core work force at the top level of the value chain, whereas it results in a general worsening of working conditions at the lower end *e.g.* subcontracts, seasonal employment, standardisation, surveillance and possible deskilling (increased in routinised work);
- *women* seem to be more vulnerable than men, in almost all occupations and within all sectors, because they hold more marginal positions (especially in traditional and manufacturing sectors) and because they have to combine work with family care activities. Major difficulties in their career paths are an additional source of stress. On the other hand, entering the labour market brings about the opportunity to become emancipated (thanks to the role they play and income earned) and flexibility can provide new opportunities to balance work and family as well as lead to individual achievements, therefore to a higher level of work satisfaction;
- *ethnicity*, for migrant workers, is a risk factor when there are bias concerning access to the profession, career opportunities and occupational stability. Usually, migrants, who have less options to choose from, tend to have more vulnerable positions, especially in manufacturing occupations and services, in particular as for jobs in contact with customers and freight transport. A strong ethnic segregation can be found in the food industry, in particular between seasonal and permanent workers. Moreover, linguistic barriers are a problem for communication and relations, ghettoising the workers along the productive process. Linguistic barriers also entail problems in acquiring the skills needed to keep the job after restructuring processes or to advance in one's career. Migrants have a lack of social support and, consequently, a lack of representations, of involvement in the productive process and in the restructuring. Finally, migrant worker usually have the economic responsibility for themselves and their family, and their familiars are far away: great responsibility and solitude are a cause of psychosocial problems;
- *level of representation* and coverage of the *European and national Standard for health & safety* have a direct relationship with health protection. Workers in sector, occupational group and companies with a low level of representation, with a lack in the coverage of the European Standard for h&s or with a difficulty for the real application of existing international and national rules, suffer more health problems than others. In a sense, representation is a useful tool to have 'voice' and influence during restructuring, and European and national standard are a guaranty for equality in the health safety between workers and an instrument to extend guaranties by new legislative bills. By these instruments, as in some cases in the food sector, companies have to adapt their policies to a given framework, and restructuring have to take place considering the workers' health consequences as legislated at national and international level.

6.4   Recommendations

Our analysis shown which are the new challenges for the European and national policies, following we try to present five recommendations with the aim to improve the quality of work life and health and safety of the workers.

6.4.1   Legislative acts for an extended coverage of changes and restructuring along the length of the value chain

In general, there is a tendency towards a lengthening of value chains. While restructuring has many variations the overall is a move towards specialisation, ever increase in division of labour, and reaction of new units along the value chain.

The lengthening of the value chain creates some very important challenges for good occupational health and safety. One of the consequences of restructuring is the distribution of both material production and services over several units in the supply. Thereby the responsibility for health and safety is also distributed, but not necessarily on to similar units in the chain. Quite often, a client is ordering a service from a supplier and at the same time defining how the work has to be carried out. Thereby the client has a key role in controlling the health and safety conditions of the employees, but the supplier at the legal employer has the responsibility for health and safety. This is particularly the case when the client specifies how services are to be carried out.

Supply networks and outsourcing, therefore may involve the risk of social dumping because clients can move work to suppliers with cheaper and more hazardous working conditions. The restructuring practice is subsequently a challenge to the social clauses of the EU open market policy.

This issue has been discussed in the literature (Marchington, Grimshaw, Rubery & Willmott, 2005; Hasle, 2007) pointing out that client tends to increase the influence on the supplier in order to secure the loyalty and commitment of the employees of the supplier. At the same time, the formal employer loses influence on working conditions and consequently the employees lose influence because the employers' reactions to employee concerns quite often will be a reference to contract conditions. Supply networks and outsourcing may therefore undermine the influence of the employees on health and safety.

Moreover, the change situation in itself is a psychosocial strain which is mentioned in the EU regulations (as in framework directive 89/391), but the situation now is to a great extent unregulated and the consequence is that there are possibilities for social dumping, and control of health and safety is not efficient because the employers with responsibility have in many cases only limited power to make the necessary decisions. Instead, the client who has only limited responsibility for health and safety takes decisions. Many countries do have certain legal provisions for client responsibility for health and safety but they are in most cases fairly weak and only require the client to give information and to avoid hindrances for the employers' control of health and safety. As for the EU framework directive it focuses on the employer and does not cover the problems related to supply networks and outsourcing. Therefore, there is a need to revise both national and EU legislation on division of responsibility for health and safety between clients and suppliers.

A more explicit *coverage of change and restructuring* should be included in both national and European health and safety legislation. An example of this can be found in the new

Norwegian work environment act of 2005, where the law now requires the enterprises to: 'during planning and implementation of changes in the undertaking, assess whether the working environment will be in compliance with the requirements of this Act, and implement the necessary measures'.

However, it is probably not sufficient with legislation and enforcement. It is also necessary to develop other measures which can give a voluntary push for higher quality of change management, and which can reduce workload and improve workers influence.

6.4.2   High quality changes for a high quality development

Higher quality of change management is not only a benefit for workers health, it is also a clear benefit for employers because it would make the implementation more efficient and avoid unnecessary cost to compensate for unexpected problems. It is well-known that many change processes, mergers, restructurings and so on, fail to bring the intended results. *High-quality change management* should therefore also be promoted by business organisations and government programs calling for business development.

Moreover, the high frequency of the changes needs *a reflexive and participative process to avoid the strain, as seen.* Key process criteria may involve the ability to learn from failure, participation and negotiation, resistance, role clarification, leadership, and organisational complexity (Saksvik *et al.*, 2007). These criteria reflect wellknown and accepted aspects of organisational change processes behind successful change, such as the importance of providing relevant information and adopting good communication strategies, the significance of employee participation and ownership and establishing a clear vision and goal (Øyum, Andersen, Buvik, Knutstad & Skarholt, 2006). Saksvik *et al.* (2007) build on these general principles in his establishment of operational criteria for healthy change management. The following five criteria were established: *awareness of norms, awareness of diversity within and between units of organisations, early role clarification, manager availability* and *constructive conflicts*.

Based on the general principles and the more detailed recommendations by Saksvik *et al.* (2007) and Øyum, Andersen and Saksvik (2006) we will recommend a high-quality change management to be build on the following principles:

- involvement of workers (possibilities for voice, influence on decisions, feedback on worker concern organisation);
- awareness of local norms, history, diversity, products, processes of whatever is changed;
- clear and early information about changes (providing a vision as well as a reason for change);
- two way flow of information, middle managers must communicate questions and information from shop floor level to superiors and get feedback from the top on issues raised at lower levels;
- transparent decisions processes (when are decisions to be taken, what are the premises for the decision, who are involved in making the decision, when are information given about decisions);
- resources for the implementation of changes (time, money, skills, people);
- early role clarification (who does what, who has what responsibilities in the future organisation);

- accept diversity and some conflict as a normal situation and something that could promote creativity and innovation and thus improve change;
- high focus on the welfare of the people involved.

6.4.3 Management of the demands in work

Increasing in demands in work seems to be a dominant characteristic across sectors, Countries, occupational groups as well other differences. Demands in work is due not only from the intensification in work (cf. Paragraph 6.2.4) – even if this is the main factor – but also from other processes, as well as the need in training and self-training (cf. Paragraph 5.1.5), the standardisation and the related increase in bureaucratic activities and formal documents (cf. Paragraph 5.1.2), the negative change in the number of employees and the related uncertainty that lead worker to accept a considerable workload (cf. Paragraph 5.19), the high frequency of the changes (cf. Paragraph 6.2.10). Thus, the right government of these processes certainly plays an important role to reduce the workload and to avoid new problems. To be more precisely, we have seen that work shift organisation is a key factor to manage the demands in work, by a specific role (the shift manager) or by a team agreement (cf. Paragraph 5.1.8). Moreover, another intervening factor, as we could see in the next paragraph, is the workers' involvement in the work process and in the restructuring, to better manage demands in work considering workers' needs.

6.4.4 Workers influence: work organisation, safety committees and works council

After and during the restructuring process the influence of employees on the changes and on the work content is lower, thus, an important challenge is to secure their influence over work. Lack in influence is a cause of stress, uncertainty and anxiety, nonetheless, the case organisations report very limited worker influence on restructuring, both formal and informal consultation are very limited. Worker involvement is important not only from a democratic rights point of view, but also for health and safety reasons. Involvement improves quality of work due to more predictability and control but there is also good evidence for more effective preventive health and safety measures (Walters & Nichols, 2007). We register the need for the workers to be involved into the changes and into the new work organisation with a higher decisional power, so one important question is how worker influence can be strengthened during the restructuring process.

Most countries have either legislation or labour market agreements on works councils. In addition, there are EU requirements for European works councils but this possibility only exists for multinationals. The EU framework directive 89/391 also requires employers to consult workers and most countries have in correspondence with that requirement made legislation about health and safety representatives and health and safety committee but, they have rarely been involved. The client has in many cases the power to take decision about work organisation and other matters influencing quality of work but the workers do not have in access to discuss these matters with the client. The worker involvement stipulated in the framework directive 89/391 is therefore undermined by restructuring with supply networks and outsourcing. Even though national legislation regarding worker involvement in health and safety often requires involvement of workers when change may have adverse consequences, it rarely happens as we have seen in our case

studies. It would therefore be beneficial to strengthen the requirements for workers involvement in change situations. It could for example happen through a more explicit reference to change in the provisions for health and safety organisations and for works council.

Recently, academics have argued for the need for unions to come up with new strategies to fight the presumable weakening of trade unions' bargaining power caused by globalisation (*i.e.* Slaughter, 2007). This argument is recognition of the threat of unions becoming nothing but a 'passive actor responding to economic pressures and social forces, seemingly without independent capacity to shape events or determine outcomes' (Turnull & Wass, 2007: 583). Further, Slaughter (2007) has studied the econometrical link between falling unionisation and rising globalisation, his main finding being a statistically and economically significant correlation between falling union coverage and greater number of inward FDI (foreign direct investment) actions in US affiliates. This suggests that international investment may be the dimension of globalisation that is particularly threatening to the bargaining position of labour in industrial relations (Slaughter, 2007: 345). At the core of such arguments is the spread of labour resulted by the removal of restrictions on direct foreign investment. The enlargements of value chain control, effectively combined with investments in low wage countries, have transformed trade unions' ideology of protecting and securing working conditions for workers an issue which need to be bargained and protected for on the global arena.

Moreover it is important to consider the aspect concerning the division of worker influence in health and safety committees and works council.

Psychosocial factors have in many respects a quite different character compared to traditional physical and chemical hazards. It has to do with the management rights to define demands at work, division of labour and much more concerning work organisations. It is therefore not given by nature how the treatment of psychosocial factors should be dealt with in health and safety committees and works council, and this unclear situation may weaken both committees. The problem with this situation is that when a safety representative or health and safety organisations begin working on such issues they take on a responsibility traditionally belonging to unions. Moreover, usually, issues such as health and safety at work become minor issues in the face of other problems and needs of employees, like income, occupational continuity that are even more serious and immediate during restructuring processes. This also happens in those sectors, such as textile and food industry, with a high union density. Therefore, there are strong possibilities of role conflict between the two types of worker representatives. Good co-operation might of course ameliorate the problem, even evade it, but the possibilities and problems are there. It could be noted here that in a study of safety representatives in Norway, few role conflicts between traditional trade unions and safety representatives were found (Torvatn, Forseth & Andersen, 2007). However, this study, and our case studies confirm it, also showed that the safety representatives tended to focus on the traditional physical/safety concerns, thus to some degree avoid the conflict area.

In addition, the managers face a problem: which workers representation should he or her listen too in case of disagreement? Who is the 'true' worker representation? A possibility could therefore be to unify the two functions/committees, although this might weaken the traditional work with physical, chemical and safety hazards.

There is however more than ten years of experience with such a strategy in the public sector in Denmark (Mathiesen & Hvenegaard, 2001; Hasle & Petersen, 2004). It has so far

proven to be a beneficial strategy both for health and safety and for worker influence because all aspects of a change situation are discussed in the same forum.

6.4.5 Flexibility and health and safety

Flexicurity, that is the need to combine market flexibility with workers protection, can be a misleading concept if it only concerns economic and occupational aspects of the problem. Besides the economic-occupational issue, flexibility entails another problem, that is an increased health risk for workers. Insecurity is at the same time psychological and physical and it is determined by specific features of non-standard contracts, non-standard work process, non-standard tasks. Different reasons makes flexibility a danger for psychosocial health:

1. there is a disproportion in bargaining power of non-standard workers who have less rights and influence over work compared to those with standard contracts. Moreover, unemployment, and fear of unemployment, creates a group of disadvantaged workers who are ready to work with low wage and worse conditions than those of workers with a stronger position on the labour market. Therefore, during restructuring, people with fixed-term contract needs a specific attention, to reduce demands in work and anxiety of unemployment;

2. non-standard workers usually have an ineffective normative protection: the security of workers is always guaranteed by the law but, often, normative systems do not regulate this kind of flexible jobs efficiently in each national contest;

3. high frequency in changes - in working hours, in work organisation, in workplace, of the colleagues and the working groups, in tasks, in professions - could be causes of health problems;

4. the working biography of workers in a flexible market is remarkably heterogeneous, not only at the beginning of their career. In the European Union there is a high mobility of labour, changes - determined by work flexibility and mobility between firms and even between professions - lead workers to develop a high psychological stress and a physical insecurity due to the different contexts and productive processes where they are embedded.

6.4.6 Short summary of the recommendations

These challenges are not only relevant in order to protect quality of work and workers right but also due to more efficient change. A higher quality of change will strengthen the ability of private and public organisations to achieve their core goals.

Summarising, core elements should be:

- a clear responsibility for clients for health and safety in supplier organisations in the case that client demands influence health and safety;
- requirements for implementation of change in a health and safe manner, for a high quality development;
- a right management of the restructuring process to avoid an increase in demands in work, especially evaluating which is the best tool to organise the work shifts;

- arrangements which can secure workers' voice in the relations between clients and suppliers, in the work organisation and during the restructuring as well as, generally, their influence over work;
- a strong attention to the consequences of flexibility for health and safety, especially considering: the low bargaining power, the low influence over work, the ineffective normative protection, the specific difficulties for health and safety due to a flexible work biography.

Bibliography

Altieri G. (2007), *Uomini e donne moderni. Le differenze di genere nel lavoro e nella famiglia: nuovi modelli da sostenere* (Modern men and modern women. Gender differences in work and in family context: new models), Ediesse, Roma.

Ariëns G.A.M., Van Mechelen W., Bongers P.M., Bouter L.M. & van der Wal G. (2001), 'Psychosocial risk ractors for neck pain: a systematic review', *American Journal of Industrial Medicine,* vol. 39, n° 2, p. 180-193.

Bannink D., Hoogenboom M. & Trommel W. (2007), *IT outsourcing in public administration. GBA and Easttown municipal government. Organisational case study on IT service providers in public administration – The Netherlands*, Internal working paper, WORKS project.

Bechmann M., Krings B.-J. & Nierling L. (2007), *MENSWEARCO. Organisational case study on design in the clothing industry – Germany,* Internal working paper, WORKS project.

Beck U., Giddens A. & Lash S. (1994), *Reflexive modernisation: politics, tradition and aesthetics in the modern social order*, Polity Press, Cambridge.

Belkic K.L., Landsbergis P.A., Schnall P.L. & Baker D. (2004), 'Is job strain a major source of cardiovascular disease risk?', *Scandinavian Journal of Work, Environment and Health*, vol. 30, n° 2, p. 85-128.

Birindelli L. & Rustichelli E. (2007), *The transformation of work? Work flexibility in Europe: a sectoral and occupational description of trends in workhours, part-time work, temporary work, and self-employment,* WORKS report - D9.2.3, HIVA-K.U.Leuven, Leuven.

Blau G. (2003), 'Testing for a four-dimensional structure of occupational commitment', *Journal of Occupational and Organisational Psychology*, vol. 76, n° 4, p. 469-488.

Bongers P., De Winter C., Kompier M. & Hildebrandt V. (1993), 'Psychosocial factors at work and musculoskeletal disease', *Scandinavian journal of Work, Environnment & Health*, vol. 19, n° 5, p. 297-312.

Bordia P., Hobman E., Jones E., Gallois C. & Callan V.J. (2004), 'Uncertainty during organisational change: Types, consequences, and management strategies', *Journal of Business and Psychology*, vol. 18, n° 4, p. 507-532.

Braczyk H.J. (1993), 'Das Paradox technisierter Kommunikation in Arbeitsorganisationen', in H.J. Weißbach & A. Poy (Hrsg.), *Risiken informatisierter Produktion: Theoretische und empirische Ansätze*, Westdeutscher Verlag, Opladen, p. 311-327.

Brynin M. & Longhi S. (2007), *The transformation of work? Occupational change in Europe,* WORKS report, D9.2.4, HIVA-K.U.Leuven, Leuven.

Clegg C. & Walsh S. (2004), 'Change management: time for a change!', *European Journal of Work and Organisational Psychology*, n°13, p. 217-239.

Dahlmann S. (2007a), CUSTOMER. *Organisational case study on customer service in the public sector – UK,* Internal working paper, WORKS project.

Dahlmann S. (2007b), *Occupational case study on IT services in the public sector,* Internal working paper, WORKS project.

De Bruyn T. & Ramioul M. (2007), *Export the export – Restructuring of logistics in a global company in the beverage industry. Organisational case study on logistics in the food industry – Belgium,* Internal working paper, WORKS project.

De Lange A., Taris T., Kompier M., Houtman I. & Bongers P.M. (2004), 'The relationships between work characteristics and mental health: examining normal, reversed and reciprocal relationships in a 4-wave study', *Work and stress*, vol. 18, p. 149-166.

Devos V. & Valenduc G. (2007), *EWA – Restructuring of customer services in regional administration in Belgium. Organisational case study on customer service in the public sector – Belgium,* Internal working paper, WORKS project.

Dhondt S., Kraan K. & Van Sloten G. (2002), *Work organisation, technology and working conditions,* European Foundation for the improvement of Living and Working Conditions, Office for Official Publications of the European Communities, Luxembourg.

Di Nunzio D. (2007), 'L'esperienza familiare: atteggiamenti e comportamenti' (Family experience: attitudes and behaviours), in Altieri G., *Uomini e donne moderni. Le differenze di genere nel lavoro e nella famiglia: nuovi modelli da sostenere* (Modern men and women. Gender differences in work and in family context: new models), Ediesse, Roma, p. 95-126.

Emery F. & Thorsrud E. (1969), *Form and content in industrial democracy*, Tavistock, London.

Emery F. & Thorsrud E. (1976), *Democracy at work,* Martinus Nijhoff, Leiden.

European Agency for Safety and Health at Work (2007), *Expert forecast on emerging psychosocial risks related to occupational safety and health*, Office for Official Publications of the European Communities, Luxemburg.

Eurostat (1999), *Labour Force Survey. Work related health problems and accidental injuries* (*ad hoc* module), Eurostat, Bruxelles.

Eurostat (2005), *Labour Force Survey*, Eurostat, Bruxelles.

Flecker J. & Holtgrewe U. (2008), 'Conclusions', in J. Flecker, U. Holtgrewe, A. Schönauer, W. Dunkel & P. Meil (eds.), *Restructuring across value chains and changes in work and employment. Case study evidence from the clothing, food, IT and public sector*, WORKS report, HIVA-K.U.Leuven, Leuven, p. 131-145.

Flecker J., Holtgrewe U., Schönauer A., Dunkel W. & Meil P. (eds.), *Restructuring across value chains and changes in work and employment. Case study evidence from the clothing, food, IT and public sector*, WORKS report, HIVA-K.U.Leuven, Leuven, p. 131-145.

Flecker J. & Schönauer A. (2007), *Messenger. Cross-border software development. Organisational case study on software development in the IT industry – Austria*, Internal working paper, WORKS project.

Foucault M. (1975), *Surveiller et punir. Naissance de la prison*, Gallimard, Paris.

Furnham A. (1997), *The psychology of behaviour at work. The individual in the organisation*, Psychology Press, New York.

Gavroglou S.P. (2007a), *A bloodless outsourcing of clothing production to a neighboring country. Organisational case study on production in the clothing industry – Greece*, Internal working paper, WORKS project.

Gavroglou S.P. (2007b), *Opting for vertical integration in an era of outsourcing. Organisational case study on production in the food industry – Greece,* Internal working paper, WORKS project.

Gavroglou S. P. (2007c), *Virtual outsourcing through a subsidiary. Organisational case study on customer service in the services of general interest – Greece*, Internal working paper, WORKS project.

Geurts K., Coppin L. & Ramioul M. (2007), *The transformation of work? Tracing employment in business functions. A sectoral and occupational approach,* WORKS report - D9.2.1, HIVA-K.U.Leuven, Leuven.

Gorm Hansen B. (2007), *Come together? Organisational case study on production in the food industry – Denmark*, Internal working paper, WORKS project.

Gosper A. (2007), *UK LAB – Research and Development in Speech Technology. Organisational case study on research and development in the information and communication technology sector – UK,* Internal working paper, WORKS project.

Greenan N., Kalugina E. & Walkowiak E. (2007), *The transformation of work? Trends in work organisation,* WORKS report - D9.2.2, HIVA-K.U.Leuven, Leuven.

Gustavsen B. (1992), *Dialogue and development*, Van Gorcum, Assen, Netherlands.

Hammer T.H., Saksvik P.Ø., Nytrø K., Torvatn H. & Bayazit M. (2004), 'Expanding the psychological work environment: workplace norms and work-family conflict as correlates of stress and health', *Journal of Occupational Health Psychology,* vol. 9, p. 83-97.

Håpnes T. & Rasmussen B. (2007), 'From post-bureaucratic organisations to market regulations? Changes in employment relations in knowledge work', paper presented at the *Work, Employment and Society Conference*, September 12th-14th, Aberdeen, Scotland.

Hasle P. (2007), 'Outsourcing and employer responsibility. a case study of occupational health and safety in the Danish public transport sector', *Relations Industrielles/Industrial Relations*, vol. 62, n° 1, p. 96-117.

Hasle P. & Petersen J.V. (2004), 'The role of agreements between labour unions and employers in the regulation of the work environment', *Policy and practice in health and safety*, 2004, vol. 2, p. 5-24.

Hermann C. & Schönauer A. (2007), *Postpartner. Organisational case study on customer service in the services of general interest – Austria*, Internal working paper, WORKS project.

Hintsanen M., Kivimäki M., Elovainio M., Pulkki-Rabak L., Keskivera P. & Jounala M. (2005), 'Job strain and early atherosclerosis: the cardiovascular risk in young Finns study', *Psychosomatic Medicine*, vol. 67, p. 740-747.

Huws U. (2006), *The transformation of work in a global knowledge economy: towards a conceptual framework*, WORKS report, HIVA-K.U.Leuven, Leuven.

IPESL (2004), 'Stress e lavoro nell'Europa in espansione' (Stress at work in enlarged Europe), ISPESL-Dipartimento di medicina del lavoro, Rome, Italy.

Jeleva R. (2007), *The Bulgarian national employment agency: the continuing change. Organisational case study on customer service in the public sector – Bulgaria*, Internal working paper, WORKS project.

Jensen J. & Wærstad M. (2004), *Psykologiske og sosiale faktorer og helse* (Psychological and social factors and health), STAMI, Oslo.

Kang G., Koh B., Cha S.B., Park K.J., Bajk K.S. & Chang J. (2005), 'Job stress and cardiovascular risk factors in male workers', *Preventive Medicine*, vol. 40, n° 5, p. 583-588.

Karasek R.A. (1979), 'Jobs demands, jobs decision latitude and mental strain: implications for job redesign', *Administrative Science Quarterly*, vol. 24, p. 285-307.

Karasek R. (1990), *Healthy work*, Basic Books, New York.

Karasek R. & Theorell T. (1990), *Healthy work: stress, productivity and the reconstruction of working life*, Basic Books, New York.

Karen M. & Hvenegaard H. (2001), 'New Works Councils: expanded co-operation in the public sector in Denmark', *Human Factors and Ergonomics in Manufacturing*, vol. 11, n° 2, p. 145-157.

Kirov V. (2007), *BEER AD. Organisational case study on logistics in the food industry - Bulgaria*, Internal working paper, WORKS project.

Kivimaki M., Vathera J., Elovainio M., Pentti J. & Virtanen M. (2003), 'Human costs of organisational downsizing. Comparing health trends between leavers and stayers', *American Journal of Community Psychology*, vol. 32, n° 1, p. 57-67.

Korczynski M. (2001), 'The contradictions of service work: call centre as customer-oriented bureaucracy', in A. Sturdy, I. Grugulis & H. Willmott (eds.), *Customer service. Empowerment and entrapment*, Macmillan, Houndmills, London, p. 79-101.

Korunka C., Scharitzer D., Caratons P. & Sainfort F. (2003), 'Employee strain and job satisfaction related to an implementation of quality in public service organisation: a longitudinal study', *Work & Stress*, vol. 17, n° 1, p. 52-72.

Kouvonen A., Kivimäki M., Elovainio M., Virtanen M., Linna A. & Vahtera J. (2005), 'Job strain and leisure-time physical activity in female and male public sector', *Preventive Medicine*, vol. 41, n° 2, p. 532-539.

Kramer M.W., Dougherty D.S. & Pierce T.A. (2004), 'Managing uncertainty during a corporate acquisition: a longitudinal study of communication during airline acquisition', *Human Communication Research*, vol. 30, n° 1, p. 71-101.

Krings B.-J. & Nierling L. (2007), 'Occupational monograph. R&D workers in information and communication technology', in G. Valenduc, P. Vendramin, B.-J. Krings & L. Nierling (eds.), *How restructuring is changing occupations. Case study evidence from knowledge-intensive, manufacturing and service occupations*, WORKS report, HIVA-K.U.Leuven, Leuven, p. 49-71.

Kristensen T.S. (1999), 'Challenges for research and prevention in relation to work and cardiovascular diseases', *Scandinavian Journal of Work Environment & Health*, vol. 25, n° 6, p. 550-557.

Kristensen T.S. (2002), 'Stress og psykosomatiske sygdomme', in L. Iversen, T.S. Kristensen, B.E Holstein *et al*. (eds.), *Medicinsk sociologi - samfund, sundhed og sygdom*. København, Munksgaard Danmark, vol. 10, p. 225-253.

Landsbergis P.A., Cahill J. & Schnall P. (1999), 'The impact of lean production and related new systems of work organisation on worker health', *Journal of Occupational Health Psychology*, vol. 4, n° 2, p. 108-130.

Linardos P. (2007), *Co A. Creation of a logistics division. Organisational case study on logistics in the food industry – Greece*, Internal working paper, WORKS project.

Makó C., Illéssy M. & Csizmadia P. (2007), *Modernisation of the 'Intermed' in the perspective of value chain approach: reorganisation of the internal value chain through task delegation. Organisational case study on customer service in the public sector – Hungary*, Internal working paper, WORKS project.

Marchington M., Grimshaw D., Rubery J. & Willmott H. (2005), *Fragmenting work, blurring organisational boundaries and disordening hierarchies*, Oxford University Press, Oxford.

Martin H.P. & Schuman H. (1996), *Die Globaliserungsfalle. Der angriff auf Demokratie und Wohlstand*, Rothwoll, Germany.

Mathiesen K. & Hvenegaard H. (2001), 'New works councils: expanded co-operation in the public sector in Denmark', *Human Factors and Ergonomics in Manufacturing*, vol. 11, n° 2, p. 145-157.

Meil P. (2007), *Organisational case study on research and development in the information and communication technology sector – Germany*, Internal working paper, WORKS project.

Muchnik M. (2007a), *Squeezed between research and market? Restructuring of R&D in a big ICT company in France. Organisational case study on research and development in the information and communication technology sector – France,* Internal working paper, WORKS project.

Muchnik M. (2007b), *Fashionable work. Restructuring of the design function in a medium-size enterprise in the French clothing industry. Organisational case study on design in the clothing industry – France,* Internal working paper, WORKS project.

Nguyen H. & Kleiner B.H. (2003), 'The effective management of mergers', *Leadership & Organisational Development Journal*, vol. 24, n° 8, p. 447-454.

Nierling L., Bechmann M. & Krings B.-J. (2007), *Trouser's Company. Organisational case study on logistics in the clothing industry – Germany*, Internal working paper, WORKS project.

Nierling L. & Krings B.-J. (2008), 'Occupational monograph. Production workers in the clothing and food industries', in G. Valenduc, Vendramin, Krings & Nierling (eds.), *How restructuring is changing occupations? Case study evidence from knowledge-intensive, manufacturing and service occupations*, WORKS report, HIVA-K.U.Leuven, Leuven, p. 99-118.

Noel D. (1998), 'Layoff survivor sickness. What it is and what to do about it', in M.K Gowing, J.D. Kraft & J.C. Quick (eds) *The new organisational reality, downsizing, restructuring and revitalisation*, American Psychology Association, Washington, DC.

Olsen J.P. (2006), 'Maybe it is time to rediscover bureaucracy', *Journal of Public Administration Research and Theory*, vol. 16, n° 1, p. 1-24.

Øyum L., Andersen T.K., Buvik M.P., Knutstad G. & Skarholt K. (2006), *God ledelsespraksis i endringsprosesser: Eksempler på hvordan ledere har gjort endrinigsprosessen til en positiv erfaring for de ansatte* (Good leadership in change processes: examples of how leaders have transformed change processes into positive experiences for employees), Nordisk Ministerråd, København, Denmark.

Øyum L., Andersen T.K. & Saksvik P.Ø. (2006), 'Good leadership in healthy change processes', *7th Conference of the European Academy of Occupational Health Psychology*, Dublin, Proceedings 8-10 November 2006, p. 191-193.

Paoli P. & Merlie D. (2000), *Third European Survey on Working Conditions*, European Foundation for the Improvement of Living and Working Conditions, Dublin.

Pedaci M. (2007a), *Occupational case study on skilled and semi-skilled production workers of the food industry - Italy*, Internal working paper, WORKS project.

Pedaci M. (2007b), *The fragmentation of work and of working conditions in the diversified quality production. Organisational case study on design in the clothing industry – Italy,* Internal working paper, WORKS project.

Pedaci M. (2008), 'L'instabilità occupazionale come dispositivo disciplinare' (Employment instabilty as disciplinary mechanism), *Quaderni di Rassegna sindacale*, Lavori, n°2 (forthcoming), Ediesse, Rome.

Piersanti M. (2007), *DVLA. Organisational case study on customer service in the public sector – Italy,* Internal working paper, WORKS project.

Polanyi M. (1967), *The tacit dimension,* Anchor Books, New York.

Proctor T. & Doukakis I. (2003), 'Change management: the role of internal communication and employee development', *Corporate Communications*, n° 8, p. 268-276.

Quinlan M., Mayhew C. & Bohle P. (2001), 'The global expansion of precarious employment, work disorganisation, and consequences for occupational health: a review of recent research', *International Journal of Health Services,* n° 31, p. 335–414.

Ramioul M. & Huys R. (2007), *Comparative analysis of organisation surveys in Europe. Literature review of secondary analysis,* WORKS report - D8.2, HIVA-K.U.Leuven, Leuven.

Ravn J.E. & Øyum L. (2008), 'Renegotiating union identities: bringing salaried staff into industrial relations', Paper presented at Conference on *Insightful Encounters - Regional Development and Practice-Based Learning*, Porvoo, Borgå, Finland, March 5th-7th, 2008.

Ritzer G. (1996), *The McDonaldisation of Society*: an investigation into the changing character of contemporary social life, Pine Forge Press, Thousand Oaks, CA.

Saetermo T., Torvatn H. & Dahl-Jørgensen C. (2007), *'The Fishing Company'. Changes in the value chain. Organisational case study on production in the food industry – Norway*, Internal working paper, WORKS project.

Saksvik P.Ø. (1996), 'Attendance pressure during organisational change', *International Journal of Stress Management,* vol. 3, n°1, p. 47-60.

Saksvik P.Ø. & Gustafsson O. (2004), 'Early retirement from work. A longitudinal study of the impact of organisational change in a public enterprise', in *Policy and Practice in Health and Safety,* vol. 2, p. 43-55.

Saksvik P.Ø., Tvedt S.D., Nytrø K., Buvik M.P., Andersen G.R., Andersen T.K. & Torvatn H. (2007), 'Developing criteria for healthy organisational change', *Work and Stress*, vol. 21, n° 3, p. 243-263.

Schönauer A. (2007), '*Citylife*': property management for council housing. Organisational case study on customer service in the public sector – Austria, Internal working paper, WORKS project.

Seashore S.S. (1982), 'Quality of working life perspective', in A.H. Van de Ven & W.F. Joyce (eds.), *Perspectives on organisation design and behaviour*, John Wiley & sons, New York, p. 89-120.

Siegrist J. (1996), 'Adverse health effects of high-effort/low reward correlations', *Journal of Occupational Health Psychology*, n°1, p. 27-41.

Sjøgaard G., Lundberg U. & Kadefors R. (2000), 'The role of muscle activity and mental load in the development of pain and degenerative processes at the muscle cell level during computer', *European Journal of Applied Physiology*, vol. 83, n° 2-3, p. 99-105.

Slaughter M.J. (2007), 'Globalisation and declining unionisation in the United States', *Industrial Relations*, vol. 46, n° 2, p. 329-346.

Stoeva S. (2007), *BEER AD. Organisational case study on production in the food industry – Bulgaria,* Internal working paper, WORKS project.

Tengblad P. (2007), *The police contact center. Customer relations in the public sector. Organisational case study on customer service in the public sector – Sweden,* Internal working paper, WORKS project.

Tengblad P. & Sternälv P. (2007), *Swedish case study on services of general interest. Strategies for working with customers in the Swedish post Ltd. Organisational case study on customer service in the services of general interest – Sweden,* Internal working paper, WORKS project.

Torvatn H., Anthun K.S. & Dahl-Jørgensen C. (2007), *Comp A Technologies Norway. Effects of changes in value chain on an IT R&D unit. Organisational case study on research and development in the information and communication technology sector – Norway*, Internal working paper, WORKS project.

Torvatn H., Forseth U. & Andersen T.K. (2007), *Partner for arbeidsmiljø- det norske verneombudets rolle og funksjon* (Partner for work environment – the role and function of the Norwegian Safety Representative), Report no. STF38 A99511.

Torvatn H., Lamvik G. & Næsje P. (2007), *Hyper bureaucracy – our new work form. Towards a new conceptual understanding of modern bureaucracy*, NEON-dagene, Trondheim, 20-22 November.

Torvatn H. & Molden T.H. (2001), *HMS-tilstanden i Norge i år 2001* (Occupational health and safety in Norway in 2001), SINTEF Teknologiledelse, Trondheim.

Trist E.L. & Bamforth K.W. (1951), 'Some social and psychological consequences of the Longwall method of coal getting: an examination of the psychological situation and defences of a work group in relation to the social structure and technological content of the work system', *Human Relations*, n°4, p. 3-38.

Turnull P.J. & Wass V.J. (2007), 'Defending dock workers – globalisation and labour relations in the World's Port', *Industrial Relations*, vol. 46, n°3, p. 582-612.

Valenduc G. & Muchnik M. (2007), Occupational monograph. Designers in the clothing industry, in Valenduc, Vendramin, Krings & Nierling (eds.): *How restructuring is change occupations? Case study evidence from knowledge-intensive, manufacturing and service occupations,* WORKS report HIVA-K.U.Leuven, Leuven, p. 29-48.

Valenduc G., Vendramin P., Krings B.J. & Nierling L. (2008), *How restructuring is changing occupations? Case study evidence from knowledge-intensive, manufacturing and service occupations*, WORKS report, HIVA-K.U.Leuven, Leuven.

Vandenbussche I., Devos V. & Valenduc G. (2007), *ITPRO. Organisational case study on IT service providers in public administration – Belgium.* Internal working paper, WORKS project.

Vasconcelos da Silva A., Woll T. & Paulos M. (2007), *Occ Report, Occupational case study on designers - Portugal*, Internal working paper, WORKS project.

Virtanen M., Kivimaki M., Joensuu M., Virtanen P., Elovainio M. & Vahtera J. (2005), 'Temporary employment and health: a review', *International Journal of Epidemiology*, n° 34, p. 610-622.

Walters D. & Nichols T. (2007), *Worker representation and workplace health and safety*, Palgrave Macmillan, Basingstoke.

Weber M. (1922), *Wirtschaft und Gesellschaft*, Tubinga.

Westerlund H., Ferrie J., Hagberg J., Jeding K., Oxenstierna G. & Theorell T. (2004), 'Workplace expansion, long-term sickness absence, and hospital admission', *The Lancet,* vol. 363, p. 1193-1197.

Woll T., Vasconcelos da Silva A. & Moniz A.B. (2007), *WW-DK Têxteis. Organisational case study on design in the clothing industry – Portugal*, Internal working paper, WORKS project.

Worrall L. & Cooper C.L. (1998), *Quality of working life survey of managers' changing experiences*, Institute of Management, London.

● This report analyses the consequences of restructuring on health and safety and quality of work life with a specific focus on psychosocial risks. Drawing on an analysis of 58 organisational and 33 occupational case studies, it outlines some cross national trends concerning health and safety issues in the contemporary European labour market, focusing on the known causes of stress: demands in work; influence over work; social support; recognition and reward; predictability and meaning.

The report concludes that:

* in general, negative effects outweigh positive ones, with trends towards lower influence in work, high demands, greater uncertainty and lower social support. This leads to very stressful working conditions, and the case-studies tell a story of a worsening psychosocial work environment as a result of restructuring;

* however, restructuring may also bring new main opportunities, including increased meaning and recognition; upgrading of skills; more social support thanks to team-work;

* positive restructuring of working time can help workers cope with the increasingly demanding and unpredictable work requirements.

The report's recommendations include: a more explicit coverage of change and restructuring in both national and EU health and safety legislation; improved change management with a focus on reducing workload; greater worker participation in restructuring process; and a strong attention to the consequences of flexibility for health and safety.

works
CHANGES IN WORK
www.worksproject.be