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Industrial relations as a key to strengthening innovation in Europe



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European Commission

Industrial relations as a key to strengthening innovation in Europe

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Innovation papers No 36

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Executive summary



This report is the result of an innovation policy study undertaken for the European Commission on 'industrial relations and innovation'. The study has been financed under the 'Innovation and participation of SMEs' programme, which forms a part of the EU 5th Framework research programme. The study was conducted by HIVA-K.U.Leuven, Belgium, supported by three partners (CASA, Denmark; FORBA, Austria and IRES, Italy) for the case study research.

1. Aims of the study

The aim of the report was to examine the impact of industrial relations on innovation. Based on secondary literature and the framework of the European Action Plan for Innovation, the study investigated different levels and fields of European industrial relations systems in terms of potentially positive links with the innovation issue. These links have subsequently been exemplified using case studies about original practices throughout Europe.

In a knowledge-based economy an innovation strategy is important for survival as a company. Liberating and stimulating employee creativity is a key factor in this strategy. Decisions made about this 'people' factor, by management, and by workers and their representatives, both inside and outside the company, constitute the core business of industrial relations. The system approach learns that the innovation of companies is a complex process of interaction and networking with other firms, research organisations, and governmental agencies, etc. **In line with this system approach the study explored the potential influence of industrial relations on innovation.**

Until now, the link between these two major socio-economic domains has received **scant and infrequent attention**. A lot of bias exists between the two sides. From the innovation side, matters like industrial

democracy, listening to trade union demands or collectively agreed regulations are perhaps often seen as time-consuming obstacles, slowing down the development and diffusion of innovation. Within the field of industrial relations, innovations are very often dealt with in a merely reactive way, as solutions to the assumed negative social consequences of technological or organisational advances. Innovation is not seen as a main action target in itself. As a consequence the link between these two major socio-economic domains has received little attention.

Nevertheless, connecting industrial relations to innovation has become **more important in recent years**. Within the e-economy innovation is a very important business factor. In the same 'new' economy, questions have been raised about the role and the place of industrial relations, especially where the innovative ICT sectors are concerned. Investigating how these industrial relations can be aligned with the issue of innovation consequently seems very relevant. We therefore tried to survey the terrain between industrial relations and innovation systematically, to this end adopting the viewpoint of the European Commission. The goal was to detect innovation-friendly approaches within the field of industrial relations in order (a) to show the relevance of industrial relations from an innovation perspective; (b) to raise the awareness of the industrial relations actors on tackling the innovation issue more strenuously in the future; and (c) to indicate possible options for identifying the link between industrial relations policies and innovation in Europe.

2. Policy background

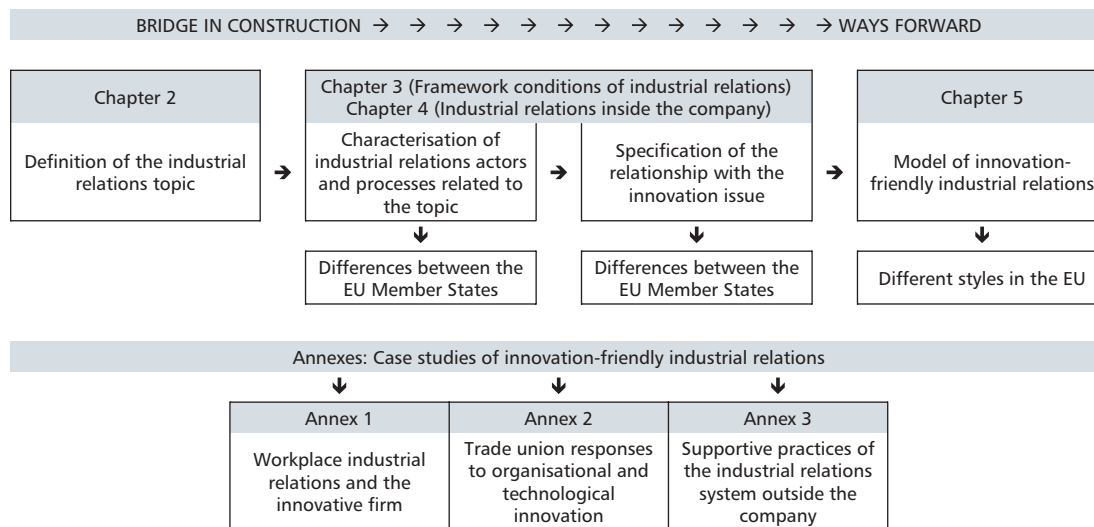
From an EU policy perspective, studying this link is important. Tackling the innovation deficit and modernising industrial relations are important components of what has become known as **the Lisbon strategy** (with Europe as the most successful knowledge-based economy combining competitiveness with social cohesion).

The innovation policy framework belongs within the economic dimension of the 'Lisbon' perspective, while the topic of the industrial relations lies within the social pillar. The European Commission urges the social partners to modernise and renew the European social model. Within these calls for modernisation, a workplace model has already been plotted: improving employment and competitiveness through a better organisation of work based on high skill, high trust and high quality, whereby the social partners are invited to take a leading role. With the 'Lisbon' strategy as a policy framework, the report accordingly investigated how modernisation thinking in the policy area of industrial relations could be defined as an important frame of reference for policy makers in the innovation area. The report demonstrates that to a large extent the **same concepts and ideas** can indeed be used to shape a policy agenda of connecting industrial relations to an innovation strategy.

3. Outline of the report

The following scheme summarises the outline of the report.

Figure 1.



4. Main findings

Based on this step-by-step analysis, the report constructs a generic model of innovation-friendly industrial relations.

4.1 Specific industrial relations inside the company as the main link

Specific kinds of workplace industrial relations form **the core** of the model:

- A growing body of research finds empirical evidence of a **positive link between innovation and high-involvement forms of direct participation**. When a company is considered as a bundle of knowledge flows and resources, then innovation as a business strategy is about exploiting these inner capabilities. Particular sets of human resource policies and work organisation enhance the involvement of employees in these knowledge-based processes of innovation. Forms of direct participation are a central element in this 'innovative' organisation. Direct participation intensifies and enlarges knowledge flows because of better vertical decentralisation, horizontal co-ordination and organisational commitment. The evidence of this main link between industrial relations and innovation is certainly increasing, but questions remain about whether these work practices are particularly suited to every business innovation context (be it the market environment or specific work processes).

Figure 2.

Effects of employee participation on innovation processes

Direct participation	Indirect participation
Insight and commitment to business goals	Guidance for employees during processes of change
Autonomy to make suggestions and improvements	Conflict arbitration
Enhancement of knowledge flows	Feedback opportunity for management
Enrichment of management decisions	Driver and defender of innovations (if effects on the goals of employee representation are positive)
Culture of commitment and support	

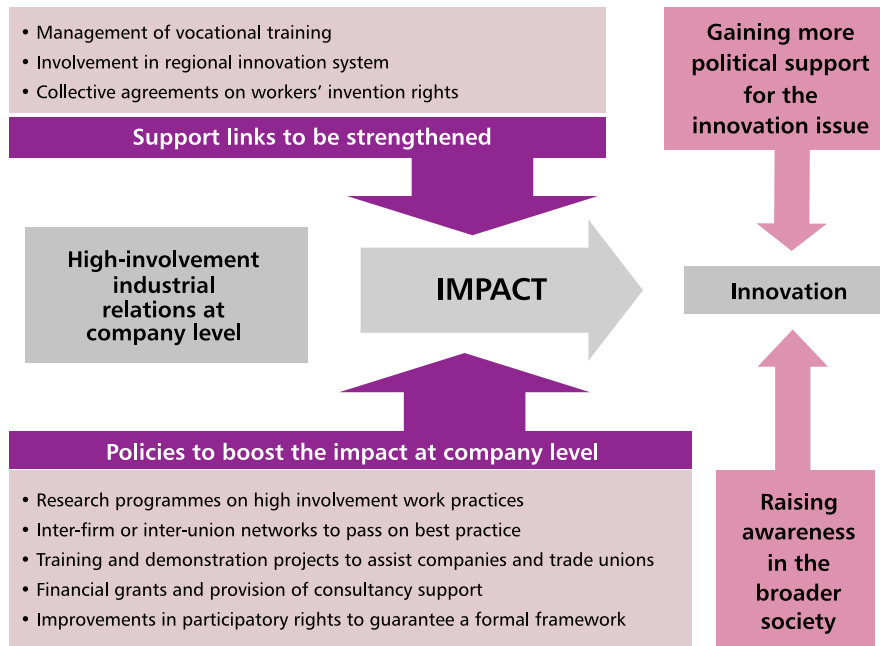
- Although the evidence is still to some extent inconclusive, it would seem that a **mutual and co-operative relationship between management and employee representation** has a positive impact on the innovation culture and performance of a company. On the basis of such a partnership, the employee representation will support the innovation climate of a company not only by pushing management to innovate, but by interfacing communication and removing employee resistance. However, because of the lack of any formal implantation of indirect participation in SMEs, one cannot be sure whether this partnership model has relevance for small enterprises

Nevertheless, the two mutually-reinforcing types of workplace industrial relations can be seen as the major link between the industrial relations system and innovation.

4.2 Framework conditions of industrial relations: supporting and facilitating

Figure 3.

Innovation-friendly framework of industrial relations



In addition to this main link, some distinctive sets of **industrial relations practices outside the company** can be discerned as positively affecting the business ability to innovate. Together with workplace industrial relations, these themes can be seen as an 'emerging' policy model of connecting industrial relations to innovation. (Cases which illustrate these practices and are presented in part two of the study are mentioned between brackets.)

4.2.1 Facilitating the dissemination of the workplace model

The types of employee participation referred to in point 4.1 face a dissemination problem. There are a lot of potential obstacles to the implementation of these participatory systems. The following industrial relations activities outside the company can be seen as **instrumental** to overcome these barriers:

- **research programmes** to build a strong knowledge base of concrete experiences (Finnish workplace development programme);
- **training and demonstration projects** to help companies and trade unions gain access to experience (STV, Belgium, Developing Workplace toolkit, LO Denmark);
- **consultancy support** to transfer the experience (Working Time to Measure, Austria);
- **benchmarking and networking** services to enable companies to highlight strengths and overcome weaknesses (KISS, Germany);
- **financial incentives** to stimulate experiment (Partnership Fund, UK);
- improvements of **participatory rights** of employees (Dutch Works Councils Act; Swedish Development Agreement).

4.2.2 Other support links

Besides these initiatives, other support initiatives connecting the industrial relations system to innovation can be listed:

- management of **vocational training** to tackle the 'skills' question (OBNF, Italy);
- involvement in the **regional innovation system** (building of social capital and learning networks):
 - broad-based support for the regional innovation strategy by participation at the **planning** stage;
 - support by signing a **local pact** or public mission statement on the strategy;
 - managing a regional development **agency** as part of the implementation;
 - the necessary **labour market policies** for strengthening the strategy (for instance by screening and monitoring skill needs);
- agreements on **workers' invention rights**;
- participation of employees in business innovation **networks** (PRYO, Sweden).

Seen from a broader system perspective on innovation, the social partners can play a role in **gaining more political support** for the innovation issue and **raising the awareness** of the wider society on innovation (IT-project Swedish LO). The first of these roles can be located in the action field of **macro-consultation** (Irish social partnership), the second can be developed through the integration of the **social partners** in the science and **research system** of individual countries (French High Council on Research and Technology).

With the study completed, **important questions remain** about other potential links between industrial relations and innovation. What kind of wage bargains or flexibility regulations are needed in order to achieve a positive impact on innovation? Behind these questions lie knowledge gaps on the relationship between industrial relations and innovation, which the report can highlight, but that was unable to deal with. These knowledge gaps are exacerbated by the fact that innovation terms and concepts are rarely used in the field of industrial relations. Given these difficulties in our review of the topic, it seems safe to say that there is still a long way to go in making strong and positive connections between industrial relations systems and innovation.

4.3 Types of industrial relations impact in the EU

These knowledge gaps and policy unfamiliarity in the field of industrial relations also make it extremely difficult to assess how the industrial relations systems of the EU countries differ in their impact on innovation. Nevertheless, the report constructs **a classification of the EU countries** in terms of the impact of industrial relations on innovation. This typology refers not to the nature of the impact (whether positive and negative), but to the overriding 'style' of the relationship and the resulting extent of the relationship.

The following **dominant styles or approaches** can be distinguished in the European industrial relations systems. Each entails different consequences for the strength of the relationship between industrial relations and the innovation strategy:

- **market**: industrial relations are developed on a voluntaristic basis. Corporatist arrangements of co-ordination and co-operation between social partners are practically non-existent. As a consequence, there is a weak involvement of industrial relations in the innovation strategy;
- **conflict**: an antagonistic conflict of interest between the industrial relations parties; little likelihood of mutual corporation, given the zero-sum situations; deficits in organisational capacities and lack of mutual recognition. A low involvement in innovation strategies and policies;
- **state**: co-ordination and regulation depends strongly on political or public state governance. Industrial relations play only a secondary or additional role in the innovation strategy;
- **co-ordination**: to a large extent social partners discuss non-market mechanisms and arrangements in order to establish wage agreements, labour conditions, training and other standards. Defending individual interests while maintaining mutual respect leads to complex rules and procedures governing the stronger linkages between industrial relations settings and innovation issues;

- **co-operation**: long-term ‘positive sum’ conceptions of the common interest between all organised actors. Institutionalised political support and open, co-operative exchange with the state. Co-ordination that is trusting, though not always formerly articulated. Strong involvement of the industrial relations system with or without government action in the field of innovation.

Based on these principles the report presents a tentative typology of the institutional linkages between industrial relations and innovation for the different EU countries. Most of the European countries are **hybrid cases**. In the EU core, the smaller countries in particular are hard to place in this typology, likewise Italy and Ireland. We find the **strongest involvement** in innovation matters in those industrial relations systems governed by the principles of **co-operation** and **co-ordination**. The **Nordic countries** are the most notable examples of this co-operative style of industrial relations.

This classification shows anyhow that vast differences exist between the EU member states in terms of the scope and depth of the linkages between industrial relations practices and innovation. It would, however, be a mistake to see these differences in style and connection as an impassable barrier. Alongside this diversity the report also shows that **in each of the styles** there is **scope for industrial relations** initiatives which are geared to innovation. The geographical diversity of the cases (presented in the appendices) is further proof of this potential for action. Comparable activities can be deployed elsewhere in Europe and within other industrial relations systems. It only has to be borne in mind that different EU countries have different industrial relations structures and styles as an institutional starting point. The introduction and viability of the initiatives will vary according to these industrial relation settings and cultures.

5. Ways forward

The general conclusion of the report is therefore that a distinctive set of industrial relations practices can indeed be discerned as positively affecting the business ability to innovate. Together these themes can be seen as an ‘emerging’ policy model for connecting industrial relations to innovation. A **bridge** between the two policy areas of industrial relations and innovation is **under construction**. However, besides intercultural differences, obstacles still have to be overcome: lack of awareness, struggles over implementation, unexplored terrain, ...

The report therefore concludes that, in order to reach the full potential of innovation-friendly industrial relations throughout Europe, **new and greater policy efforts** are needed. These efforts will have to be focused on:

- raising the awareness of industrial relations actors and innovation policy makers;
- enhancing the capacities of companies and workers to adopt high-involvement work practices;
- investigating and evaluating the existing structural links between the industrial relations system and innovation issues/policies for each policy level (especially at the national level).

These initiatives will have to be taken by employers’ organisations, trade unions and public authorities. The instigation of these efforts can be seen as **a collective responsibility** of the industrial relations actors (employers and their organisations, trade unions and public authorities).

Figure 4.

Tasks of industrial relations actors in strengthening policy efforts

Theme	Social partners	Trade unions	(Innovation) Policy makers
Raising awareness	<ul style="list-style-type: none"> • Campaigns to raise awareness of industrial relations actors at company level • Programmes for employees within business innovation networks 	<ul style="list-style-type: none"> • Campaigns to stimulate workers' awareness and acceptance of innovations 	<ul style="list-style-type: none"> • Involving social partners in planning innovation policies • Mainstreaming initiatives taken by social partners
Dissemination of high-involvement practices	<ul style="list-style-type: none"> • Set up research, training, networks, consulting, funding 	<ul style="list-style-type: none"> • Explore the win-win situations of partnership 	<ul style="list-style-type: none"> • Support programmes social partners
Investigation and evaluation of existing structural links	<ul style="list-style-type: none"> • Assess the current legal procedures on information and consultation of employees on their contribution to innovation processes at company level • Enhance management efforts towards vocational training • Strengthen involvement in regional innovation strategies • Make appraisals of collective bargaining outcomes more sensitive to innovation 		

Three **principles** are of cardinal importance for the success of these efforts:

- **partnership**: this core value of the traditional European industrial relations model remains pertinent in tackling the issue of innovation in the field of industrial relations;
- **transnational mutual learning**: the transfer and diffusion of expertise are still needed for many of the links to be established. Open, mutual learning throughout Europe is therefore an instrument that continues to be needed in this effort;
- **reciprocal interest**: If an industrial relations system is to be interested in the innovation strategy, the latter will have to demonstrate its interest in policies designed to look after 'losers' in the innovation processes. The question of how innovation practices can contribute to the goals of industrial relations was not a major part of the study. Nevertheless, the social sustainability of the innovation strategy crucially demands further attention.

6. Accelerating efforts: the European policy perspective

The European Commission could play its recognised role of catalyst for integrating the policy agendas of industrial relations and innovation as outlined. This role would have four bridge-building components.

- **Mediating** in building the **shared vision** of the social partners:
The European Commission could play a mediating role in the development of the shared vision that is now emerging at national and workplace levels. A consultation document could be the basis for inviting the social partners to give their views on the future of an innovation strategy connected to industrial relations. Which principles and which existing mechanisms would best further such a goal?
- **Stimulating bridge-building processes** by:
 - from an innovation perspective the **new Directive** on information and consultation of employees;
 - **catch-up processes** for currently adversarial industrial relations styles and cultures;
 - demonstration projects from existing programmes;
- **Monitoring the bridge-building**:

The overall goal would be to keep track of progress and stimulate the sharing of successful experiences, while comparing initiatives and results of innovation-friendly industrial relations.

- **Acquiring more knowledge**:
 - innovation impact of stable vs. flexible employment relationships;

- which strategies and environments does 'high involvement' produce the maximum added value to innovation performance?;
- union involvement in national technology and research policies varies a great deal between EU member states. There is a lack of comparative insight into experiences such as foresight programmes, national councils on research policy and technology assessment procedures;
- the field of labour economics, there is a particular need to examine the interaction between innovation, competition and wage bargaining.

Chapter 1

Introduction



In business life today, knowledge and innovation are increasingly recognised as decisive factors for competitive advantage. To remain competitive, companies need to add new features to products and services; they also need to integrate new methods and technologies in the business process. The European Commission shares this business view and sees knowledge and innovation as the main drivers of economic growth, employment and wealth creation. Therefore, it aims to develop a comprehensive and coherent innovation strategy for the advancement of the European Union in the knowledge-based economy. To support these innovation strategies, particular policies have been developed over recent decades.

From the start, the European Commission has adopted a system-based approach to its innovation policy. Although companies will be the key players for success in the knowledge-based economy, innovation involves many different processes and many different actors and institutions. It is therefore important to try to link existing institutions and policies (e.g. fiscal or education policies) to the emerging innovation challenges and needs which arise from new economic and technological trends. This amounts to a properly functioning innovation system, underpinning the innovative capacities of enterprises (EC, 2000b; EC, 2001c).

In line with this system approach, our study explores the potential impact of industrial relations on innovation. From the innovation side, issues such as industrial democracy, responsiveness to trade union demands or collectively agreed regulation, are very often seen as time-consuming obstacles which slow down the development and diffusion of innovation.

Within the field of industrial relations, innovations are very often dealt with only in a re-active way, as solutions to the assumed negative social consequences of technological or organisational advances. Innovation in itself is not seen as a main action target. Consequently, the link between these two major socio-economic domains has received only scant and infrequent attention.

Nevertheless, connecting industrial relations to innovation has in our opinion become more important in recent years. Within the 'new' knowledge-based economy, innovation is a very important business factor. In the same 'new' economy questions have arisen about the role of industrial relations, especially in relation to the innovative ICT sectors (Boes & Baukrowitz, 2002). As a result, investigating how industrial relations fit in with the issue of innovation seems very relevant. It is our intention, therefore, to survey the terrain between industrial relations and innovation systematically, adopting to this end the viewpoint of the European Commission. In this introduction we first clarify how, from a EU policy perspective, the study of the link between industrial relations and innovation has become more important in recent years. A second introductory part formulates in detail the objectives of the study and the outline of the report.

1. Policy background of the report

In March 2000, the European Council in Lisbon confirmed innovation's central role as an engine of growth in employment and competitiveness, and as a cornerstone of enterprise policy. Significantly for our field of study, this confirmation was formulated in a broader and more ambitious mission statement: that the European Union has to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, with more and better jobs and greater social cohesion. To reach this goal of the 'new' knowledge-based economy, in addition to the importance of the innovation strategy, the policy declaration also mentioned the crucial part to be played by a renewal of the European social model.

This modernisation of the European social model was already on the EU policy agenda and has been given greater emphasis since the introduction of the European Single Market. The idea of renewal has entailed the view that Europe must compete by improving employment and competitiveness through a better organisation of work, based on high levels of skill, trust and quality (EC, 1997a, p. 5). This 'high road' model seeks to combine flexibility with employment security, stresses the need for lifelong learning, promotes direct participation (empowerment) of employees along with the indirect participation (partnership) of employee representatives (Gill & Krieger, 2000; Sisson, 1999). "To favour a new approach to work organisation in such a way that EU firms are able to cope with economic change while reconciling both security and adaptability, and allowing individuals to participate in lifelong training" (EC, 1999, p. 7). The industrial relations actors or the social partners have at all times been urged to play an active role in these renewal activities.

Figure 1.1

Overview of important EU initiatives in the two policy 'pillars'

	Innovation	Industrial relations and social model
Founding EC policy document	Green Paper on Innovation (COM(95)688)	Green Paper - Partnership for a new organisation of work (COM(97)128)
EC policy programme	First Action Plan on Innovation, 1996-1999 (COM(96)589) Innovation in the knowledge-driven economy (COM(2000)567)	Adaptability pillar of the European Employment Strategy (europa.eu.int/comm/employment_social/empl&esf/es_en.htm) Industrial relations and industrial change (part of social agenda) (COM(2000)379)
Leading directorate-general	Enterprise (europa.eu.int/comm/enterprise)	Employment and social affairs (europa.eu.int/comm/employment_social)
High level groups of experts	Competitiveness Advisory Group (1998) Group of Senior Officials Innovation Policy (1997- ongoing)	High level group on economic and social implications of industrial change (1998) High level group on industrial relations and change (2002)
Network of experts	Trendchart on Innovation (www.trendchart.cordis.lu)	European Industrial Relations Observatory (www.eiro.eurofound.ie)
Funding programme	Innovation and SMEs programme (www.cordis.lu/innovation-sme)	Article 6 ESF; Equal, local employment pacts
Policy studies	Innovation policy studies (www.cordis.lu/innovation-policy/studies)	Industrial relations and industrial change, reports
Statistical survey	Community Innovation Survey (since 1991) (www.cordis.lu/innovation-sme/src)	
Performance indicators	Innovation scoreboard (trendchart.cordis.lu/scoreboard)	National Employment Action Plans (parts of) Quality of work indicators
Benchmarking initiative	Trendchart on Innovation	European Monitoring Centre on Change (www.eurofound.ie/emcc)
Legal initiative		Directive on information and consultation of employees (Directive 2002/14/EC)

Most of these initiatives are extensively documented on the websites of the respective directorates-general of the European Commission.

In the 2002 evaluation of the 'Lisbon' process at the Barcelona summit, the European Council pressed for a higher co-ordination between the economic and social dimensions of the mission statement (and again invited the social partners to participate in this effort). Within this 'Lisbon' perspective, the innovation policy framework is part of the economic dimension, while the modernisation debate on the industrial relations system belongs to the social pillar. In this EU strategic perspective, the importance of linking issues of industrial relations and innovation is apparent. In our study, we execute such a linking process by using the innovation perspective to look at what is happening in the field of industrial relations.

Figure 1.2

Location of the field of study in the European policy framework (Lisbon strategy)



This is a ‘bridging’ exercise because:

- on the one hand, modernisation thinking within the policy area of industrial relations has not until now been defined as an important frame of reference for policy makers in the innovation area;
- on the other hand, the modernisation discourse of the ‘social’ pillar doesn’t make explicit links with the innovation strategy and vision. Although this line of reasoning constantly refers to competitiveness goals, as well as tackling the flexibility problem and discussing the productivity question, it only rarely uses innovation terms and concepts to motivate and inspire the proposed changes in methods and initiatives.

2. Aims of the study: innovation-friendly industrial relations

How does the report proceed in this ‘bridging’ exercise?

The first aim of the study is to analyse the connections and impact of industrial relations on innovation. By establishing the links and investigating the impact of industrial relations on innovation, we hope to contribute to:

- raising awareness about the relevance of industrial relations from an entrepreneurial perspective;
- showing that close co-ordination and co-operation between the two policy pillars has unquestionable relevance.

Bearing in mind the EU diversity of innovation cultures and industrial relations traditions, a second aim of the report is to present original approaches and interesting practices of innovation-friendly industrial relations throughout Europe. In these terms, the study can be read as an EU exercise in ‘mutual learning’ (for policy makers).

3. Structure of the study

Figure 1.3

Project methodological steps

Project aim	Research step	Applied method
1. Raising awareness about the potential links and impact of industrial relations on innovation	1. Translation of innovation-related policy themes into industrial relations topics	1. Theoretical interpretation of classified themes of European Innovation Action plan (Trendchart)
	2. Analysis of defined industrial relations themes for the EU Member States	2. Extensive literature review (see bibliography)
2. Exemplifying the positive connections for 'mutual learning'	3. Presentation of original approaches and interesting practices	3. Quick scan of 60 possible cases provided by the network of research partners
		4. Case study research of 20 cases presented in the annexes of the report

The research progress of the project was discussed twice with an international expert panel, comprising representatives from management, trade unions, public authorities and academic research.

We apply the innovation systems approach – the current dominant analytical framework of innovation policies – to the field of industrial relations. This is a bottom-up story. The 'black box' between industrial relations and innovation is a broad field, very little of which has been explored. A classification scheme based on the European Action Plan on Innovation serves as our guide for this bottom-up exploration, after we have defined the field of industrial relations and classified the industrial relations systems of the EU Member States. The themes of the Action Plan are translated into the terms of our subject of study. The industrial relations systems of the EU Member States are explored on practices and initiatives, which have a positive or negative connection with the innovation issue.

As such, the report can be read as a kind of synoptic inventory, which concludes with:

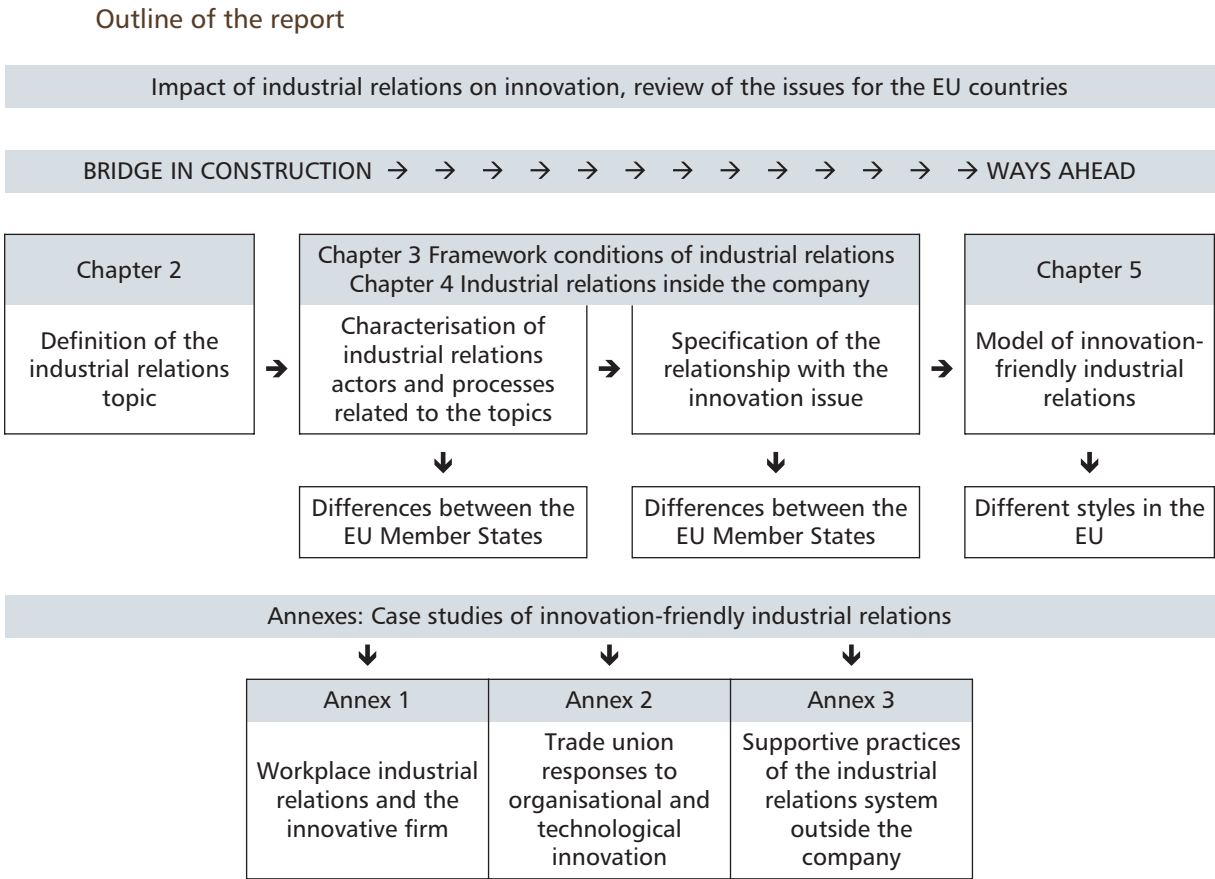
- an overview of important industrial relations themes and practices for the innovation issue;
- where possible, a comparative assessment of the EU countries on the application of these different industrial relations practices;
- a list of pending questions, deriving from certain information gaps;
- an insight into the diversity of the industrial relations' impact on the innovation system of the EU Member States;
- a translation of the main findings into guidelines and recommendations to the different target groups of the study:
 - industrial relations actors or the social partners (employers and their representatives, trade unions and public authorities);
 - innovation policy makers.

A policy agenda on connecting industrial relations to the innovation strategy is formulated and presented as a ‘bridging’ field of policy for the industrial relations systems of the EU Member States. In a concluding paragraph we present ideas about the possible roles the European policy level can play in this area. This main part of the study is based on an extensive literature review.

The annexes of the report shift the direction. There, in concordance with the assignment of the European Commission, we present ‘good’ practices. Case study research is reported to illuminate the positive links between industrial relations practices and innovation. Five company cases have been selected to illustrate in an original way the relationship between workplace industrial relations and innovation management at company level. Next, we present original strategic responses of European trade unions concerning the innovation question. A final annex deals with the broader institutional environment of industrial relations. Exemplary practices of the social partners and supporting governments are presented to illustrate the diversity of positive policy links between industrial relations and innovation within the EU countries. References are made in the main part of the report to these cases.

The following scheme summarises the outline of the report.

Figure 1.4



Chapter 2

Defining the relationship between industrial relations and innovation



The 'black box' between industrial relations and innovation is a broad field, very little of which has been explored. We begin, therefore by elaborating a structure for this purpose. We define the field of industrial relations and summarise briefly the industrial relations systems of the EU Member States. Secondly, a classification scheme based on the European Action Plan on Innovation serves as our guide for the bottom-up exploration. The themes of the Action Plan are translated into the terms of our subject of study. Based on the list of innovation policy themes, a range of important industrial relations topics can be discerned, and in the following two chapters (3 and 4) these will be presented and investigated for the industrial relations frameworks of the EU Member States.

1. Definition of industrial relations

To define industrial relations, we first have to introduce another concept, namely the employment relationship. The core requirement of an employment relationship is that one person or group of persons is defined as working for another person or organisation. As compensation for doing the work the employee receives a wage (income). In our economic system this employment relationship is organised and bounded by formal and informal rules (belonging to the work organisation and the labour market). It is here that we can situate industrial relations, as a second-order system of rule-making. *Industrial relations is about structuring and*

regulating the employment relationship by means of interaction, dialogue, bargaining, argument and dispute between the employers' and employees sides. Industrial relations is by definition a participatory process: it is a process which allows employees to exert some influence over their work and the conditions under which they work. Industrial relations refers in this way to the involvement of employees in the decision-making process which traditionally has been the responsibility and prerogative of a different group (namely employer(s) and manager(s)).

Based on this definition, the subject of our study can be re-formulated as discovering how, in the EU countries, the processes of regulating and organising the employment relationship, through the involvement of employees and/or their representatives, make a contribution to the business strategy of innovation in a positive way.

These regulation processes of the industrial relations system take place at multiple levels. This complexity is the result of three historically intertwined processes (Hyman, 2001):

- the creation of organised interest groups, especially trade unions, but also employers' organisations at sector, national and supra-national level;
- the recognition of these interest groups as actors who can play a major part in the system of industrial relations and fulfil multiple tasks within this system;
- the growing interest of governments in this industrial relations system.

As a result, the following forms of industrial relations or rule-making processes of the employment relationship can be distinguished (based on Pinaud, 1996; Muller-Jentsch, 1997):

- **bipartite collective bargaining:** negotiations between organised workers (mainly trade unions), management and/or employers' organisations on the terms of the employment relationship. The bargaining issues may include the organising and bargaining rights of trade unions or other workers' bodies. Collective bargaining may take place at any level of the industrial relations system from the workplace to sector or national level (other less important levels are the regional and supra-national levels);
- **tripartite co-management or policy consultation:** found in regional, national or international bodies made up of trade union officers, employer representatives and public officials. They can manage, for example, the unemployment insurance system or funds for vocational training. They can also be a forum for policy consultation and concertation. Consultation is a process of discussion and debate that does not necessarily imply bargaining and joint agreement. Concertation is the method of managing economic and social affairs by means of consultation between public authorities and the social partners (organised for instance as social and economic councils);
- **indirect participation at company level or co-determination:** a process in which workers gain access to company decision-making via representation. This representation can be organised by works councils and/or trade-union representatives. The representation may be involved in decisions from shop-floor to higher levels in the company. An extreme form of indirect participation is board-level representation;
- **direct participation (at company level):** "opportunities which management provide, or initiatives to which they lend their support, at the workplace level, for consultation with and/or delegation of responsibilities and authority for decision-making to their

subordinates, either as individuals or as groups of employees, relating to the immediate work tasks, work organisation and/or working conditions" (EPOC, 1997).

Two types of direct participation are noted: consultative participation, where management encourages employees to make their views known on work-related matters, but retains the right to take action; and delegatory participation, where management gives employees increased discretion and responsibility to organise and do their job.

To summarise, industrial relations practices take place at the company level (internal regulation or workplace industrial relations) and at levels above the company (external regulation or industrial relations outside the company) (Huiskamp, 1995, p. 29). The company level of industrial relations and its impact on innovation will be dealt with specifically in chapter 4 of the report; the levels outside the company will receive most attention in chapter 3.

2. Industrial relations regimes in Europe

In Europe the most important features of the industrial relations systems have been characterised as (Sisson, 1999b; Aust, Leitner & Lessenich, 2000):

- centralised and strong organisations on both sides (employers' associations and trade unions);
- relatively centralised and co-ordinated forms of collective bargaining;
- policy concertation in the socio-economic field (the social partners);
- the integration of labour at enterprise level through mechanisms of information and consultation (for instance, works councils).

Legal frameworks and trade union involvement are important characteristics of the European models of industrial relations. The model is furthermore characterised by co-operative relations

Box 2.1

Indicators used to illustrate industrial relations regimes in Europe

Re. composition and strength of trade unions:

- union density: union members as percentage of dependent labour force;
- no. of peaks: number of main trade union confederations (weighted by share).

Re. the system of collective bargaining:

- index of bargaining co-ordination: the index captures both horizontal and vertical co-ordination and varies between 0 and 1 (= all bargaining by one organisation at the national level); index for 1993-1997 (Calmfors et al., 2001, p. 73-74);
- main level of collective bargaining;
- coverage: share of employees covered by collective bargaining.

Re. output of the industrial relations system:

- employment protection regulation: index of the strictness of protection against dismissal (regular workers);
- net replacement rates of previous wages offered by unemployment insurance (proxy for safety net of employees);
- level of minimum wages as an index to wage disparity.

between capital and labour, a high degree of centralised co-ordination, and multiple forms of state intervention to balance the conflicts between the two industrial relations parties.

However, this model is no more than an over-generalised stereotype of the industrial relations systems within the European Union. The industrial relations systems of the EU Member States differ substantially on these main characteristics. The following table summarises these characteristics.

Table 2.1

Indicators industrial relations systems EU countries

	Union density	No. of Peaks	Bargaining co-ordination	Main level collective bargaining	Coverage bargaining	Employment protection regulation	Unemployment benefit	Minimum wage, % of average wage
Nordic								
Denmark	75.9	1,7	0.341	sector	69	1.6	81	54
Finland	78.8	2,0	0.465	national	95	2.1	59	52
Sweden	87.5	2.0	0.389	sector	89	2.8	67	52
Core								
Austria	38.9	1.0	0.648	sector	98	2.6		62
Belgium	59.8	2.2	0.422	national/ sector	90	1.5	59	60
Germany	26.5	1.4	0.243	sector	90	2.8	54	55
Netherlands	22.9	2.3	0.393	sector	81	3.1	69	55
Anglo-Saxon								
Ireland	44.4	1.2	0.759	firm	>70	1.0	31	55
UK	32.0	1.4	0.141	nat./firm	47	0.5	51	40
Mediterranean								
France	8.6	4.2	0.079	sector/firm	82	3.1	55	50
Italy	32.4	2.5	0.324	sector	70	3.3	19	71
Greece	11.2				90	3.7		
Portugal	31.8	2.0	0.284	sector	79	3.7		
Spain	12.5	2.3	0.343	sector/firm	>70	3.2	49	32

Most of the indicators are based on Ebbinghaus and Visser (1997) and recent OECD Employment Outlook data used by Miura (2001).

On the basis of these indicators, Ebbinghaus (1998) divides the European industrial relations systems into four types or regimes (see also Heise, 2000):

- **Nordic corporatism:** the dominant form of industrial relations in the Scandinavian countries (Denmark, Finland and Sweden). Organised interests are relatively centralised. Membership is high. The industrial relations parties recognise each other at all levels, and are regularly consulted by the state in political decision-making. With the support of the state, the collective bargaining system is highly institutionalised and fulfils self-regulatory

functions via bipartite collective agreement or tripartite co-management. All the Nordic countries have one main (social-democratic) trade union confederation which organises blue-collar workers in particular;

- **'Core' countries:** Ebbinghaus calls this model the continental social partnership. The organised interests are more segmented than in the largely homogenous Nordic countries. Nevertheless, industrial relations actors have acquired an important role in co-ordinating non-market elements of the economy. Although the state partially intervenes in the industrial relations system and gives legal backing to the system, the 'social partners' have a lot of regulatory functions;
- **The Anglo-Saxon system** has been dominant in the United Kingdom and due to its historical legacy, also in Ireland. This industrial relations system has a voluntaristic basis ('free' collective bargaining). The industrial relations actors lack strong central organisation for co-ordination of interests. Only occasionally do industrial relations actors play an influential role in government policy-making (by the system of lobbying). Collective agreements are not legally binding and are worked out most of the time at company level. In Ireland this system has in recent times been complemented by a strong system of national concertation;
- **The Mediterranean system or Roman polarisation**, as Ebbinghaus defines this dominant industrial relations regime in the southern European countries. Strong statist traditions, intersecting politicised trade union divisions, weak institutionalisation and adversarial relationships between the industrial relations parties provoke further state intervention. Uneasy experimentation with forms of corporatist co-management initiatives by the state and the industrial relations actors. Trade unions rely more than in other countries on radical and political mobilisation to demand state intervention.

3. Relating industrial relations actions to the innovation issue

In order to pinpoint the direct and indirect links of the industrial relations framework with innovation in more detail, we have adapted the classification scheme of the European Trend Chart on Innovation to the needs of our analysis. The structure of the Trend Chart consists of a set of seventeen sub-themes divided up according to the three priorities of the European Commission's Action Plan on Innovation: (a) fostering an innovation culture; (b) establishing a framework conducive to innovation; (c) gearing research to innovation. In order to explore the relationship between industrial relations and innovation, these sub-themes have been translated into relevant issues of industrial relations.

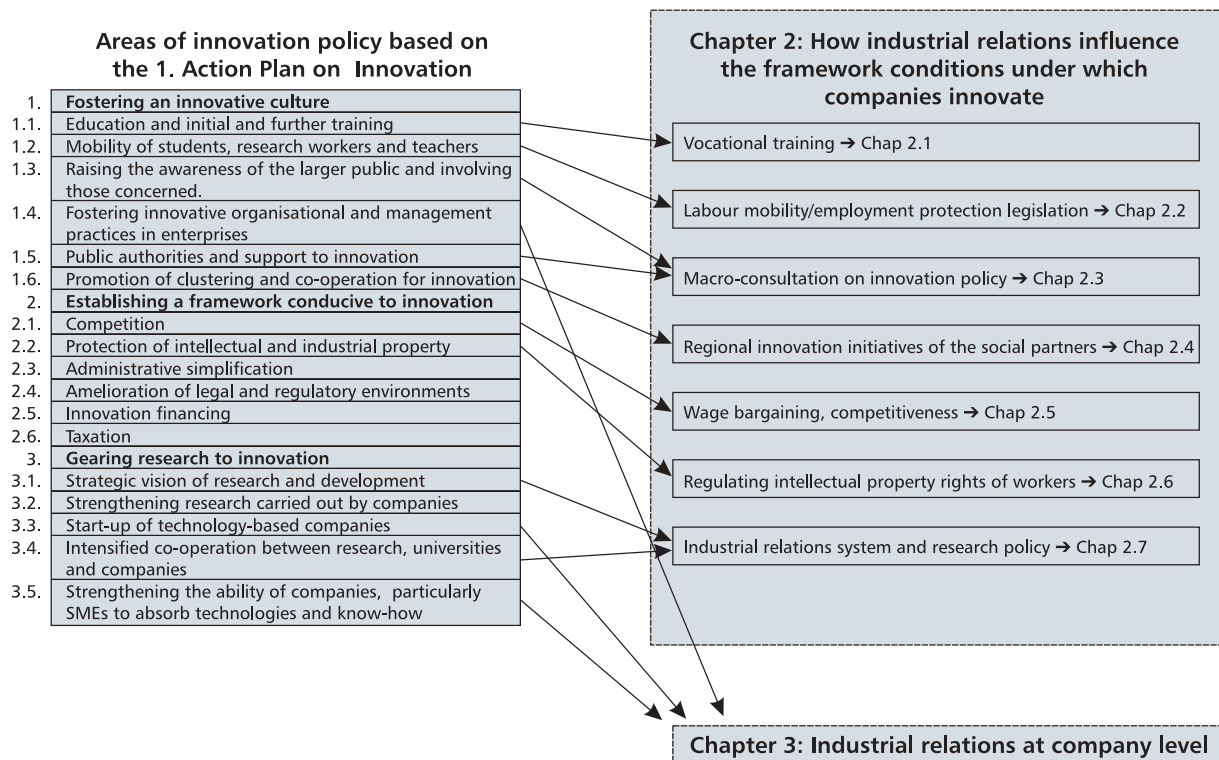
The following figure presents this translation of the innovation themes for use in the field of industrial relations. A number of preliminary remarks can be made about this translation:

- the Trend Chart concentrates on detecting and summarising new initiatives. Our task is to present the current status quo in a synoptic way;
- the Trend Chart deals mainly with government policies and initiatives. Our focus is the interaction of the industrial relations actors at different levels;

- the entire topic of the institutional framework of industrial relations and innovation can to a large degree be subsumed under theme 2.4 of the Trend Chart, namely the legal and regulatory environment;
- three or four of the Trend Chart themes specifically deal with the organisational level of companies (1.4, 3.2, 3.5). In our categorisation we decided to subsume these themes under a single category: ‘industrial relations at company level and innovation’.

Figure 2.1

Adapting the Trend Chart’s innovation policy classification system to the topic of industrial relations and innovation



In this list of industrial relations topics which are potentially relevant to the innovation issue, it is clear that some are primarily within the domain of industrial relations inside the company while other topics are more strongly determined by industrial relations outside the company.

As a company strategy, innovation demands a unique set of activities and commitments from employees. Their awareness has to be raised and their involvement has to be secured. In these terms, workers can be seen as a primary target group for awareness-raising and for creating involvement in innovation (theme 1.3 in figure). The necessary forms of work organisation and managerial practices have to be developed to stimulate this awareness and involvement (theme 1.4). Structuring this kind of work organisation, with employee involvement and participation at company level is what we have demarcated in point 1 as a possible

prerequisite of workplace industrial relations. Chapter 4 will therefore be dedicated entirely to the exploration of the relationship between these workplace industrial relations and innovative organisation. Specific attention will hereby be paid to the industrial relations framework of small and medium-sized enterprises. This is a type of company which is specifically targeted within the scope of innovation policy, because while a lot of successful innovative companies belong to the SME-sector, a lot of SMEs nonetheless have difficulties in being innovative (theme 3.5).

Other topics mentioned in the figure belong more in the sphere of industrial relations actors outside the company. These issues are more influenced by methods of collective bargaining, joint-management or tripartite consultation. They contain elements for which the link with the innovation issue perhaps cannot always be pinpointed, but which could repay attention if one adopts a broader perspective on how the innovation performance (of a company, sector or country) can be influenced. As we have noted in the introduction, a broader 'system' vision of this kind has in recent years gained influence within the policy field of innovation, and can be seen as the theoretical basis of the European innovation action plan. The system approach reveals that the innovation of companies is a complex process of interaction and networking with other firms, research organisations, governmental agencies, etc. The educational system, the scientific community or the financial climate are all factors affecting the innovation capabilities and performances of the whole economy and specifically of companies.

This same 'broader' vision, prompted by the themes of the European innovation action plan, allows us to distinguish a range of additional industrial relations issues which deserve attention in relation to industrial relations and innovation. These issues are explored for the EU Member States in chapter 3. They are topics which transcend the innovation activity of one company, and are more situated at the level of a whole economy (sector, regional, national) and its industrial relations system. Here we give a brief overview of their potential relationship with innovation.

Fostering an innovative culture means in the first place providing people with the necessary skills for adapting innovations and acquiring the knowledge to come up with innovative ideas (theme 1.1). Training or the acquisition of new skills and knowledge is a major policy issue of the industrial relations system in a lot of European countries and therefore deserves attention in our analysis.

The labour mobility of students, researchers and teachers from one country or industrial sector to another, or between academic research and industry, is seen as an important factor of technology transfer and knowledge dissemination in the European innovation action plan, and consequently for an innovative culture (theme 1.2). The main industrial relations component of labour mobility is the regulation of employment security or labour contract rules (the opposite of mobility). This topic of employment protection regulation is in turn a significant sub-theme of the larger flexibility debate within the industrial relations arena of the EU countries. It therefore seems important to investigate existing studies on the relationship between these employment protection, flexibility and innovation issues.

The support given by public authorities is of course a major determinant in the building of an effective innovation system (theme 1.4). In a lot of European countries the social partners are involved in advisory boards set up by states and governments. How these consultation

activities relate to the innovation policy is therefore another link between industrial relations and innovation, which is analysed in point 3.

Recently, the regional dimension of innovation and the corresponding regional policy have acquired increasing weight. Networking and clustering for innovation purposes at the regional level is described as an important strategy for successful specialisation in the global economy (theme 1.5). Regional institutional settings are seen as significant factors in the building of advantageous innovation systems. The question of how industrial relations actors are involved in these regional strategies is dealt with in point 4 of chapter 3.

Wage bargaining is a central activity of the industrial relations system. There is a vast amount of literature analysing the impact of this collective bargaining and its output (wage costs) on economic performance and competitiveness. How the innovation topic relates to these models and theories about wage bargaining, competition and economic performance accordingly deserves attention in our study. This is especially the case because the Innovation Action Plan determines competition as a driving force behind innovation (theme 2.1).

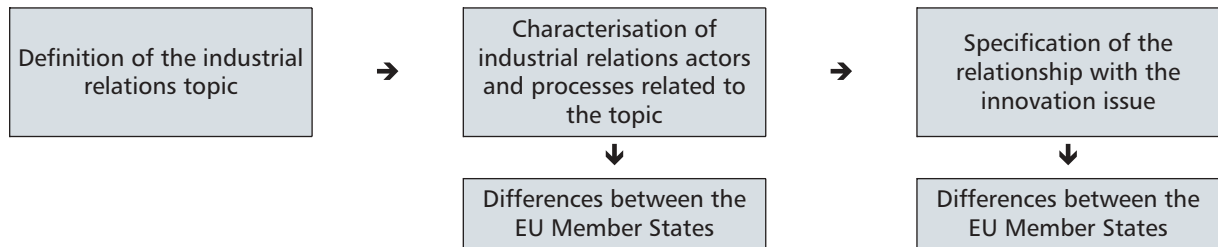
The protection of intellectual and industrial property is an important aspect of the legal and regulatory framework of innovation: who owns a new idea or invention, who has to pay to adopt the innovation and who receives this payment (theme 2.2)? Intellectual property rights of workers is a sub-dimension of this issue. Therefore we will summarise briefly how the different regimes of industrial relations of the EU countries are involved in this protection topic.

The European innovation action plan stresses the importance of improving the way in which the fruits of research are transformed into innovative outputs. As a consequence it pays a lot of attention to strategic planning of research policy, the strengthening of business-related research and the intensifying of links between academic research and business life. How social partners are involved in these research policies and programmes of the EU countries (theme 3.1 and 3.5) is summarised in the last point of chapter 3.

The following figure illustrates how the topics are approached, based on the available literature.

Figure 2.2

Steps in approaching each selected industrial relations topic



The division of the EU Member States into four industrial relations regimes as presented in point 2 is often used as a structuring element, for instance in tables and diagrams. Occasionally, figures of the European Innovation Scoreboard are connected to the topic dealt with. For example, when the industrial relations/vocational training issue appears, the life-long learning indicator of the Scoreboard is also presented. The material is furthermore illustrated by cases, which are presented in the annexes of the report. In the main text of the report we will indicate whenever a case is relevant to the topic dealt with.

Chapter 3

The influence at economy level – The innovation system



Market and non-market institutions that influence the direction, speed and diffusion of innovation within a single country can be said to constitute a national innovation system (OECD, 1999). Innovation is in other words embedded within the framework of institutions. Starting from a system perspective, this third chapter connects the framework of industrial relations to innovation, with a concentration primarily on the external framework of industrial relations. Levels of industrial relations outside the company, such as collective bargaining between social partners, policy consultation of the social partners and joint management initiatives are linked to the innovation issue. This connection at economy level is elaborated in a thematic way. The following themes are studied (see point 3 of the previous chapter):

- vocational training;
- employment protection regulation;
- macro-economic consultation and national innovation policy;
- the involvement of social partners in regional innovation strategies;
- wage bargaining and competitiveness;
- workers' invention rights and collective agreements;
- social partners and national research systems.

The themes are introduced with a clarification of how they are related to the innovation question, then in each instance the question of a link with industrial relations is checked. If the relevant information is available, the industrial relations systems of the EU countries are compared in terms of these links and involvements. In the chapter's conclusion, we summarise its main findings in a table and establish which are the important issues having an impact on innovation that are dealt with by the industrial relations systems (outside the company).

Annex 3 of the report describes a range of industrial relations initiatives or activities throughout Europe, which offer concrete illustrations of these themes.

1. The management of vocational training

Training as an innovation theme: initiatives which concentrate on imparting the skills that are needed to produce and implement innovation.

1.1 The link with innovation

Innovation confronts companies and employees with new problems and challenges which demand the acquisition of new knowledge and skills. These are vital for exploring innovative new ideas. The subject of education and vocational training is therefore a major policy domain of an innovation system.

Traditionally, vocational training systems have been set up to provide people with the qualifications needed within the labour process. The main policy strategy was reactive adaptation: the shaping of vocational training as closely as possible to the 'real' developments in the production process. Today the notion of a learning economy is gaining currency (Lundvall, 1997; Tavistock, 1999). This concept makes it clear that due to the speed of contemporary business innovation, economic performance depends strongly on the ability to learn continuously rather than mere reliance on the acquired stock of knowledge or qualifications. For the training system this means that employees must be equipped with the necessary learning competencies for active and continuous participation in innovation processes. This strategic turning point results in greater attention being given to informal learning processes (on-the-job training) and to tacit knowledge (non-codified knowledge). It also results in emphasis being put on the element of lifelong learning: people need ready access to learning throughout their working lives.

1.2 Involvement of social partners

Policy attention to the subject of vocational training has risen sharply in the last decade (Descy & Tessaring, 2001; Mitchell, 1998). The topic of vocational training has been fully developed as an instrument of employment policy. Initial and continuing vocational training is used to integrate young people and other groups into the labour market and to promote equal opportunity. Increasingly, this employment policy is making the link between technological/organisational innovation and the skills of workers as a key factor of business success. The general idea is that competitive advantage can be stimulated by creating easy access to a well-educated and trained workforce which is able to adapt to new ways of working and to develop new products. Throughout the European Union, therefore, efforts are being made to

raise the skill level of the workforce and to improve its capacity to adapt to changes in job content and working methods. Vocational training is seen as a means by which the 'employability' (the chance of getting and keeping a job) of workers and the competitiveness of companies can be enhanced together.

As a result of these converging interests and the stronger policy focus, the issue of vocational training has become a major field of bargaining and co-operation between the industrial relations actors in recent years. EU-level policy has played an intermediate role in the growing attention being given to this issue. The European policy makers see the promotion of training and lifelong learning as a major employment strategy. The social partners are being urged to take initiatives in the field of vocational training (see EU Employment Summit, Luxembourg, 1997).

Improving skills – OBNF, Italy

Annex 3, section 1 presents the Italian case as a good example of involvement of the social partners in the management of vocational training (see page 142).

However, the involvement of the social partners in the steering and co-ordination of the vocational training system within the EU member states depends on the characteristics of the industrial relations system, and on the configuration of the vocational training system within the general educational system of a country (Lassnigg, 2001). Vocational training can be divided into three domains:

- initial vocational training: the vocational development of the young starter in the labour market;
- continuing vocational training: professional lifelong learning;
- vocational training for the unemployed: training for the unemployed designed to help the jobless return to work by raising their general qualifications and skills.

In all these domains, the social partners play their part in the policy-making process. Any attempt to give an overview of this involvement would go beyond the synoptic aims of this chapter, instead the focus is on the involvement of the industrial relations system in the continuing vocational training system, because this is the most important field of industrial relations participation - and probably the most interesting one from the point of view of business innovation.

The various systems of continuing vocational training can be divided into four types, according to the involvement of industrial relations (Lansbury & Pickersgill, 2000; Green et al., 2001).

- **Regulation by social partnership:** the system of vocational training is based on agreements between the employers' organisations and the trade unions. Such a model is characterised by:
 - a national collective agreement laying out the roles, obligations and rights of the various partners in training;
 - an obligatory financial contribution by companies in funding the system;
 - joint management by the social partners;
 - a major role being played by sector-level bargaining and consequently a complex mesh of voluntary agreements and regulations.

This type of system exists in Belgium, the Netherlands and Spain. France was the first country to develop it (in 1970), while in Austria it is organised by the Chambers of Commerce, which are semi-public organisations. A tripartite agreement, concluded in 1996, introduced a similar system in Italy.

- **Limited state-led system:** in countries like Greece and Portugal continuing vocational training is a specific part of the public employment policy and therefore largely the responsibility of the government. Public administration plays a major role in the financing and organisation of the training. Vocational training is seen as a basic instrument of employment policy, being developed with the support and subsidies of the European structural funds. Social partners play an advisory role.
- **Broad state-led system:** Scandinavian countries have a tradition of seeing continuing vocational training as an integral part of the general system of adult learning. The system of adult learning is provided, regulated and financed by the state. The social partners play an advisory role at different levels.
- **Demand-led market regulation:** there is no state legislation, which forces enterprises themselves to undertake initiatives on continuing vocational training. Continuing vocational training depends largely on the initiative of the individual employer. The state is only involved in the exchange of information, setting standards and providing subsidies to firms or individuals. This is the dominant situation in Germany, Ireland and the United Kingdom. In Germany some sector collective agreements alter this basic arrangement by organising the funding and involvement of works councils. In the UK, trade unions and, recently, also the state, are promoting joint actions for the creation of training programmes at company level. The 'Investors in People' initiative (a label for human resource development) is playing a major role in these developments. In Ireland the state is playing an increasingly prominent role in the organisation and financing of continuing vocational training. The social partners are involved in this Irish process of increased public efforts through the national mutual consultation rounds on this and other issues.

Table 3.1

Continuing vocational training and industrial relations system: financing, participation

Country	Management of the vocational training system	Financing by social partners	Participation of workplace industrial relations
Nordic			
Denmark	Jointly-managed additional funds	Sector agreements for additional funding	Participation of company-level bodies (sector agreements)
Finland	State-led; consultation of social partners	Funding of individual educational leave	Right of information and consultation on training plan
Sweden	State-led; consultation at various levels	No obligatory contribution	Specified in some collective agreements
Core			
Austria	Involvement by Chambers	Indirect (Chambers)	No organised involvement
Belgium	Joint management	Obligatory by companies	No organised involvement
Germany	Demand-led	Minority of sector agreements about funding	The new law gives works councils the right actively to initiate training measures and thus requires employers at least to enter a consultation process with the works councils on this issue
Luxembourg	Demand-led	Co-financing by state	Annual information on training plan
Netherlands	Joint management	No obligation, agreement for funding in a lot of sectors	Right of information and consultation on training plan
Anglo-Saxon			
Ireland	State-led; tripartite co-operation in the management of programmes	No obligatory financial contribution	No organised involvement
United Kingdom	Demand-led; tripartite promotion	No obligatory contribution	No organised involvement
Mediterranean			
France	Joint management; governmental framework	Obligatory by companies	Right of information and consultation
Italy	Joint management and tripartite co-operation	Obligatory by companies	No organised involvement
Greece	State-led; consultation at various levels	No obligatory financial contribution	No organised involvement
Portugal	State-led; consultation at various levels	No obligatory financial contribution	No organised involvement
Spain	Joint management	Indirect obligatory contribution by companies	Right of information and consultation on training plan

The following table summarises this typology of industrial relations involvement in vocational training. The EU Member States are presented in terms of the prevailing industrial relations regime (see the first chapter). We complement this typology with figures on the degree of continuous vocational training in the EU. The Nordic countries, together with the UK, have the highest proportion of people involved in lifelong learning. As management systems of vocational training, they are opposites: the Scandinavians have a broad state-led system, the UK a system led by market demand.

Table 3.2

Typology of involvement of industrial relations system in vocational training management, EU countries sorted by industrial relations regime

Country	Typology of vocational training system	Innovation Scoreboard
Nordic		
Denmark	Broad state-led system	20.8
Finland	Broad state-led system	19.6
Sweden	Broad state-led system	21.6
Core		
Austria	Social partnership	7.8
Belgium	Social partnership	6.8
Germany	(Demand-led)	5.2
Luxembourg	Demand-led	4.9
Netherlands	Social partnership	15.6
Anglo-Saxon		
Ireland	Demand-led	5.2
UK	Demand-led	21.0
Mediterranean		
France	Social partnership	2.8
Italy	(recent Social partnership)	5.2
Greece	Limited state-led	1.1
Portugal	Limited state-led	3.3
Spain	Social partnership	4.9

Indicator Innovation Scoreboard: percentage of population aged 25-64 participating in education and training in previous 4 weeks, Labour Force Survey 2000.

2. Labour mobility and employment protection legislation

Mobility as a contrasting innovation theme: the effect of encouraging the transfer of technology and the dissemination of know-how or of lowering the commitment of employees to innovation?

Employment flexibility/security is a hotly debated theme within the industrial relations arena of the EU countries. There has been a widespread expansion of flexibility in every European country. Different kind of flexible arrangements are implemented: functional, working time and contractual (Bergstrom, 2001). The use of each of these forms varies across the Member States. Here we are concentrating on contractual flexibility.¹

2.1 Labour mobility, contractual flexibility and innovation

From the innovation perspective, two contrasting arguments can be developed on the question of flexible contracts (Storey et al., 2002; Matusik & Hill, 1998). The first line of reasoning defends employment security. The two main points of this argument are:

- **tacit knowledge**: a company has to nurture the key competencies and capabilities it has in order to stay innovative. These competencies are path-dependent: they emerge from prior experimentation and learning within the company;
- **commitment**: innovation requires a greater willingness from workers to adapt and be creative. Employees will only be prepared to carry the risks involved in innovation and to invest the necessary creativity if they have a sense of employment security.

Others have argued that looser employment relationships could be beneficial for innovation. Their argument is based on the following premisses:

- **inflow of new ideas**: employment flexibility makes it easier for companies to fill identified knowledge gaps or to keep attracting new ideas;
- **discipline equals commitment**: flexible employment polices counteract complacency and rigidity;
- **dissemination of knowledge**: labour mobility of workers with a lot of innovation capacities may have the effect of raising technology transfer and the dissemination of know-how;
- **cost-instrumental**: firms can drive down their cost structure and increase their ability to reduce or expand their workforce in order to match the changing business conditions and the staffing demands of internal projects as a consequence of innovations.

¹ Certain forms of direct participation can be defined as functional flexibility or task flexibility (job enrichment and job rotation). So, this form of flexibility is discussed in chapter 4, point 4.2. Because we haven't found any explicit literature dealing with the relationship between working time flexibility and innovation and we only could speculate about the content of this relationship, the topic of working time flexibility is not treated.

Probably the first research study to grapple with these contrasting opinions was conducted by Storey et al. (2002). This was an in-depth investigation into the relationship between flexible employment contracts and their implications for product and process innovation. Storey et al. surveyed 667 UK companies and compiled eight case studies on the subject. The main findings of this study are as follows:

- employees regarded as directly involved in activities related to innovation are extremely unlikely to be involved in any form of flexible employment practice;
- when companies introduced flexible employment practices, they did so not because of the possible impact on innovation performance, but because of cost-minimisation strategies;
- if staff groups regarded as directly responsible for innovation were themselves subjected to contingent contracts, the measured degree of innovativeness was lower;
- the use of flexible employment practices has sometimes been a consequence of an innovation strategy. Temporary staff was used to free up permanent staff for launching new projects, or flexible employment was used in pilot or prototype activities, at the start of innovation and until it proved to be economically viable.

Based on these findings, Storey et al. (2002, p. 13) concludes in their pioneering work: "... employers were rarely using flexible working as a strategic lever to achieve innovation. Rather, the short-term contracts were used to meet fluctuations in production, to reduce fixed labour costs or to access services, which were difficult at some particular time to secure through permanent employment contract. Rarely did employers report that flexible contracts were part of any coherent plan to promote innovation." Except for the cost-instrumental thesis, this UK research therefore supports the first line of argument (innovation commitment through security). The cost-instrumental thesis holds water in cases where companies combine the commitment strategy for certain employees (those directly involved in innovation practices) with a cost-minimisation strategy through flexible work for other employees (those indirectly involved).

2.2 Employment protection regulation as industrial relations involvement

Employment protection legislation is the set of provisions that govern the hiring and dismissal of workers in combination with different types of employment contracts. In a recent OECD working paper, Nicoletti, Scarpetta and Boylaud (2000) constructed a summarising index of this dimension of labour market regulation (see table 3.3). Of course regulation of this kind has an effect on the labour mobility and employment flexibility of workers.

Employment protection regulation is normally a component of labour law. Collective bargaining and the industrial relations system only deal with certain aspects of this kind of regulation:

- employment security clauses in sector or company agreements;
- as part of the general concertation on labour market policies (see point 6), consultation on changes to legislation;
- right of information and consultation at company level, when certain forms of flexible employment are introduced. The use of temporary agency work is a good example of this;

- in a number of EU member states employee representatives have the legal right to be involved in individual dismissal procedures;
- partly as a result of European directives, works councils or employee representatives must always be informed and consulted before a management decision on collective dismissal is announced to employees.

Table 3.3

Regulations of contractual flexibility

Country	Fixed-term contract regulation	Involvement of representatives in individual dismissals	% Fixed-term employment*	Employment protection indicator (Nicoletta et al.)**
Nordic				
Denmark	No specific regulation	Contest/bargaining	10.2	1.5
Finland	Labour law	Assistance	17.7	2.1
Sweden	Labour law	Consultation	14.7	2.4
Core				
Austria	Labour law	Opinion	7.9	2.4
Belgium	Labour law	General principles	9.0	2.1
Germany	Labour law	Information legality	12.1	2.8
Luxembourg	Labour law	Assistance	?	
Netherlands	Labour law	General principles	14.0	2.4
Anglo-Saxon				
Ireland	No specific regulation	No formal regulation	6.7	1.0
UK	No specific regulation	No formal regulation	4.6	0.5
Mediterranean				
France	Labour law	Assistance	15.0	3.1
Italy	Labour law	No formal regulation	10.1	3.3
Greece	Labour law	Information before	13.1	3.7
Portugal	Labour law	Opinion after defence	20.4	3.7
Spain	Labour law	Information	32.1	3.2

Source: *Eurostat, 2000; ** OECD Summary indicator employment protection legislation, 1998

Further analysis by Nicoletti, Scarpetta and Boylaud (2000) reveals that regulation requires either complex procedures prior to dismissal or long advance notice periods. Severance payments tend to be high in countries with tighter regulation and low in countries with looser regulation. Arrangements for the hiring and firing of temporary employees are largely focused on limiting the types of jobs that can be organised on a temporary basis, and most of the time they specify the maximum cumulative duration of temporary contracts. The Anglo-Saxon countries (UK and Ireland) are at the one end of the spectrum, with weak employment regulation, and the EU Mediterranean countries (Spain, Italy, Greece and Portugal) are at the other end, with very tight regulation. These countries, especially Spain and Portugal, have a

higher incidence of temporary working arrangements (fixed-term and no contract at all/casual work). The general trend in the EU is toward a weakening of the protection regulation relating to temporary workers and toward only modest changes in the regulation relating to permanent workers.

3. Macro-economic tripartite consultation on industrial policy

The innovation theme: informing and raising awareness of the importance of innovation and technology to politicians and public authorities.

The point has been reiterated that, along with companies and research institutes, public authorities play a major role in a system of innovation. Industrial policy and science and technology policy are the central instruments of governments in influencing the innovation structure and performance of their country.

3.1 Economic and social councils in EU countries and innovation policies

In most of the EU countries the social partners play a role in macro-economic management: the trade unions and the employers' organisations are consulted on the economic policy of the country. Most of the time this consultation is organised formally by a national institutionalised body, an Economic and Social Council. The southern European countries (Greece, Portugal) in particular have set up these consultation bodies as a result of integration into the European Union. The powers of the Greek Economic and Social Council (see box) can be seen as representative of the other national councils in the EU.

Box 3.1

Powers of the Greek Economic and Social Council

Competencies in the broad field of socio-economic policy

"The ESC's work is the expression of a reasoned Opinion on important issues, related to labour relations, social security, taxation measures, as well as to socio-economic policy in general, especially in topics of regional development, investment, export, consumer protection and competition."

Binding advisory role

"The ESC shall mandatorily express its Opinion on the above topics before the enactment of relevant official laws. The ESC may also, on its own initiative, express an Opinion on issues of socio-economic policy."

Based on consensus-building

"The objective of the ESC is not to blunt different ideas and political opinions, but to promote a common line through the discussion of various arguments and proposals on issues of common interest to the social partners involved. It also makes an effort, through its proposals and opinions, to maximise social benefit or minimise the possible negative side effects resulting from the implementation of government decisions."

Source: www.oke.gr

Table 3.4

Existing macro-economic consultation bodies

Country	Concertation body
Nordic	
Denmark	National Labour Council (advisory on employment policies)
Finland	Economic Council
Sweden	None
Core	
Austria	Joint Committee on salaries and prices and its topical committees
Belgium	National Economic Council; National Labour Council
Germany	Federal Labour Office
Luxembourg	National Tripartite Co-ordination Committee
Netherlands	Social and Economic Council
Anglo-Saxon	
Ireland	National Economic and Social Council
UK	None
Mediterranean	
France	Economic and Social Council
Italy	National Council for Economic and Labour Matters
Greece	Economic and Social Council
Portugal	Economic and Social Council; Board for social dialogue
Spain	Economic and Social Council

As such, they are involved in the general framework of determining the innovation policies of the country. No systematic study exists on the opinions that these councils formulated in recent years on innovation issues. Nonetheless, an initial trawl through the published documents of these councils reveals that the innovation issue is rarely dealt with explicitly. Competitiveness, the influence of technological change on work and employment, research policy and regional economic development are the keywords by which we find the relevant opinions of these councils on innovation-related issues. The Irish Economic and Social Council seems a notable exception in this regard (see its latest strategic document, "Opportunities, challenges and capacities for choice", published in 1999).

Competitive corporatism – Social partnership, Ireland

Annex 3, section 6 illustrates how the strong Irish partnership first created the competitive environment to attract innovative economic activity and then got strongly involved in the modernisation of the Irish innovation system (see page 155).

3.2 Particular national consultation: the example of the information society

Another approach involving social partners at the national level in innovation-related policies is the organisation of a specific consultation forum and procedure.

Table 3.5

Trade union participation in information society mutual consultation, EU countries

Country	Commission, board, forum	Trade union representation
Nordic		
Denmark	Digital Denmark (expert group)	0
Finland	Information society forum	X
Sweden	IT Commission	X
Core		
Austria	Information society working group	X
Belgium	National consultative committee	(X)*
Germany	Information society forum	X
Luxembourg	National committee	0
Netherlands	Task force Digital Delta	X
Anglo-Saxon		
Ireland	Information society commission	0
UK	Information Age Partnership	0
Mediterranean		
France	Strategic internet committee	0
Italy	Information society forum	X
Greece	National committee for the information society	?**
Portugal	No special commission	0
Spain	Information society forum	0

* Recommendation by National Economic Council and National Labour Council.

** Consultation of the Economic and Social Council on the Information Society.

Source: Chatrte and Wraight (2000)

The involvement of the social partners in the national strategies for dealing with the information society illustrates this second approach. Every EU country has in recent years put forward its vision of the information society. Countries have understood that the realisation of these visions is no simple matter. Co-ordinated by the governments, the various task forces, high-level expert groups, broad forums and advisory councils have put forward their opinions. Trade unions and other social partners have participated actively in consultation processes of this type. Examining how each country could profit from the IT revolution, preparing the

labour force for the related skills challenges, and expressing concerns about the possible social exclusion that could result from the digital economy turned out to be the central issues of these national debates (stimulated by the EU-level policy).

It is especially in the Anglo-Saxon and Mediterranean countries that we see no formally organised involvement of the social partners in policy preparations for Information Society strategies (the trade unions in particular being absent).

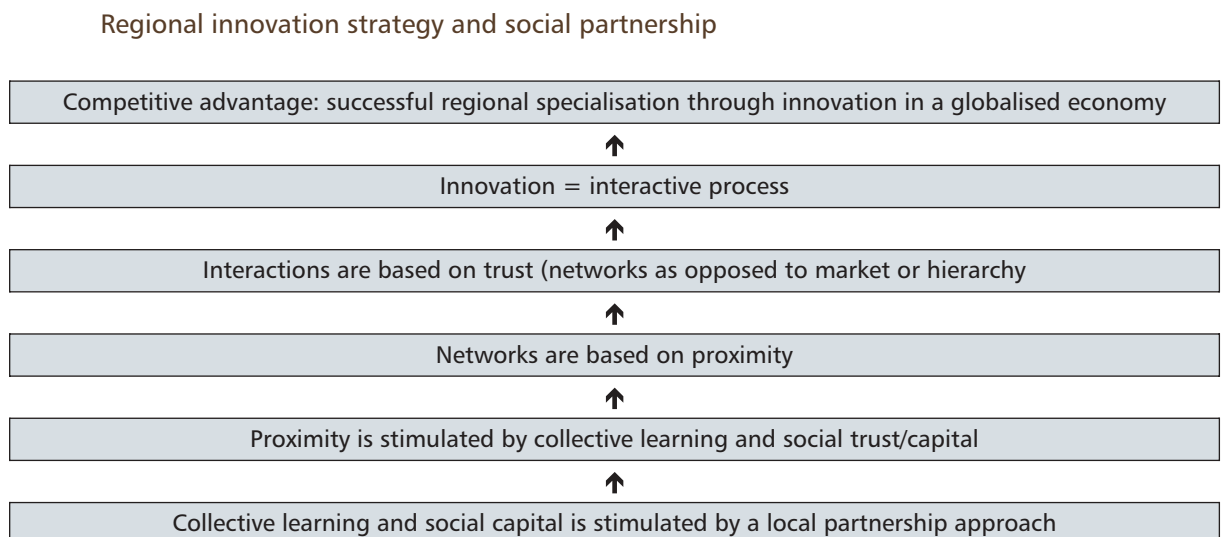
4. Regional innovation systems and economic development initiatives of the social partners

The innovation theme: Regions can sustain competitive advantage through institutional reflexivity in which the continual transfer of knowledge between firms, institutions and governments allows the ability to innovate, anticipate and adapt to change (Storper, 1997).

4.1 Definition of a regional innovation system

A regional innovation system is composed of a network of firms forming a local production cluster along with an institutional infrastructure to support this clustering and networking. Cooke and Morgan (1998) describe the importance of this kind of regional innovation system as follows: “We find that economic activity is increasingly based on notions of collective learning and that competition increasingly involves partnership and interactive innovation. This occurs between management and workforce, between firms in respect of

Figure 3.1



pre-competitive collaboration, and between firms, large and small, and their governance system at national and regional levels. We find, particularly, that local and regional milieus have risen in importance as mediators of economic co-ordination ...” (p. 5).

For Cooke and Morgan (1998), one key factor for a regional innovation system is the institutional and organisational means by which, as a system of collective social order, the region:

- generalises a learning culture;
- enhances trust or social capital (and thereby diminishes the need for bargaining and contracting);
- stimulates conflict-minimisation by encouraging a more democratic and inclusive involvement by the widest range of stakeholders and their associations.

The basis of this order is a policy network consisting of public and private individuals, groups, organisations and associations whose key discriminating factor is that they interact around the specific regional innovation strategy. The organisations can be research and educational organisations, technology transfer agencies, public and private governance organisations (interest groups, chambers of commerce), vocational training organisations, banks, large and small firms, etc. They show linkages through mutual consultation programmes, partnerships, value-adding information flows and policy action.

4.2 The link with industrial relations

Industrial relations play a peripheral role in this kind of regional innovation system. However, regional bargaining and mutual consultation can develop within this innovation perspective (see Rutherford, 2001). In recent years the European Commission encouraged the closing of territorial employment pacts (Spineux et al., 2000, p. 55-80). Although the main emphasis is on employment strategies, the creation of innovative clusters of companies is the other area of emphasis. This connection between a regional partnership in terms of employment and competitiveness builds on a tradition of co-operation in certain German Länder, Italian districts and Scandinavian regions. The role of the trade unions in this tradition is not that of a bargaining actor, but rather that of a player in a system of mutual consultation for the purpose of raising the levels of trust in and awareness of the regional economic strategy.

Throughout Europe, employers’ organisations and trade unions are getting involved in innovation-supporting activities at the local or regional level. In the following table we summarise typical examples of such activities (see also Pyke, 1998).

Table 3.6

Types of industrial relations participation within a strategy of regional innovation and competitiveness

Type	Example	Description
Campaigns to raise quality and productivity by organisational innovation	KISS, Siegerland-Wittgenstein, Germany	Consultancy, training employee representatives and management
Raising the public awareness of technological change	STV Flanders, Belgium SoTech, Germany	Public debate, social research on technology
Participation in councils, task forces on establishing a regional economic strategy	Styria Round Table, Austria Regional conferences NordRhein-Westfalen, Germany	Tripartite concertation
Governance and organisation of vocational training	Regional bodies, France	Joint management
Bargaining of regional pacts and agreements	Patti Territoriali, Italy Regional Agreements, Sweden	Regional collective agreement
Financial incentives to entrepreneurship	OneNorth East Company, North East England, United Kingdom Area Partnerships, Ireland	Joint management

Involvement in regional innovation strategies – Cases in annex 3

STV Innovation and work, Flanders, Belgium: regional research institute social partners (p. 144)
KISS, Siegerland-Wittgenstein, Germany: learning networks on organisational innovation set up by the social partners (p. 150).

5. Wage bargaining, competitiveness and innovation

Competition as an innovation theme: firms invest in innovation and in efficiency-enhancing technology if they can expect sufficient returns and if competition forces them to do so. Competition is also important for driving down the cost of technology.

In the first chapter we presented collective bargaining as the core activity of above-company levels of the industrial relations system. A typical example of this collective bargaining, existing to a greater or lesser extent in the EU Member States, are the negotiation rounds between trade unions and employers' associations about pay rises. These collective agreements on wages can be concluded at company, industry or national level.

5.1 Impact on innovation

There is a vast amount of literature analysing the impact of this wage bargaining on the economic performance of countries (Calmfors et al., 2001; Casey & Gold, 2000). The usual criteria for economic performance in these studies are economic growth, inflation and (un)employment rates. The mediating variables are wages and labour costs. The typical path dependency employed in these kinds of studies is that collective bargaining within the institutional framework of industrial relations determines labour costs, which in turn affect inflation, employment and growth.

Innovation is not an issue in studies of this type. Lack of a (national) performance indicator for this topic is probably one of the key explanations for this analytical gap. To our knowledge, there are no existing studies which systematically analyse the link between forms of wage bargaining (industry-level and national), labour costs and innovative capacity of companies in the EU Member States. We can only speculate about the possible effects (see also box).

Box 3.2

Dutch wage moderation policy and innovation: an economists' debate

The Dutch economy has in recent times been heralded throughout Europe as the successful economic champion of wage moderation policy. Tripartite concertation has led to long-term wage moderation since the beginning of the eighties. Recently the leading Dutch economist Kleinknecht (1998) has criticised this wage moderation policy from an innovation perspective. In Kleinknecht's view wage moderation is in the long run harmful for innovation performance and consequently for the economic growth of the country. His criticism is based on three elements:

- low wages encourage entrepreneurs to postpone new investments in productivity-enhancing technologies. As a consequence, the economy loses innovation momentum and in the long run reduces the knock-on effect of technological advancement;
- wage moderation protects non-innovative companies. In a competitive process with rising wages, innovative companies would survive more easily because they attract labour more easily (higher quality of jobs) and because their profits are higher. Wage moderation hampers the economic process of creative destruction (the term comes from Schumpeter).
- very often innovations are driven by market or consumer demand. Because wage moderation has a negative effect on aggregate demand, it diminishes the effect of demand-driven innovation.

Fase and Tieman (2000) deny these negative innovation effects of wage moderation policies as put forward by Kleinknecht. First they refute Kleinknecht's assertion that the Netherlands is lagging behind in innovation performance (R&D expenditures). Smaller economies always have lower R&D expenditures, because they rely more on the international knock-on effects of R&D investments. Secondly they oppose Kleinknecht's second argument by stating that innovative companies always compete better than non-innovative - low labour costs or not. Finally they explain that wage moderation also has important knock-on effects on demand. For a small open economy this policy enhances income because it enhances export, domestic output and jobs.

A point of departure for this speculation could be to look into the growing body of research on the relationship between the systems of wage bargaining and productivity.

A traditional view of trade union behaviour in collective bargaining was that trade unions aim to maximise a well-defined utility function of wages and employment. It was further a commonly held view that trade unions therefore present a great danger for efficiency. Trade unions with a strong bargaining position would lead to excessively high wages, which in turn would threaten the competitive position of companies because of diminishing productivity.

The growing body of literature on the subject of collective bargaining and competitiveness nuances this viewpoint (Calmfors et al., 2001; Casey & Gold, 2000; Traxler, Blaschke & Kittel, 2001):

- the standardisation of pay through collective bargaining leads to greater productivity efforts by the workers a) because they feel more secure and b) because the companies try to adopt new working methods to reduce labour costs in other ways;
- a lot of transaction costs are avoided (costs of individual bargaining);
- a common wage policy across firms tends to punish inefficient (non-innovating?) companies and accelerate their disappearance;
- the specific form (the degree of strong coordination) and the level (the degree of centralisation) of the collective bargaining system has a major impact on the consequences of the collective bargaining system (i.e. labour costs);
- the effect of collective bargaining on labour costs interacts with other factors (tax policy, monetary situation, ...).

These summarised results indicate something about the link between forms of wage bargaining and labour costs/productivity, namely that there is no clear-cut relationship between wage bargaining and higher wages. The missing link in these studies is however the relationship between these labour costs structures and the innovation performance of companies/industries/nations.

- Do high labour costs (compared with those of direct competitors) stimulate companies to look for productivity-enhancing technologies and other process innovations?
- Or do high labour costs create a financial start-up barrier to investment in new technologies and activities?
- Does the collectively agreed wage structure create insufficient incentives for qualified, high-performing workers to improve their human capital (which is necessary for innovation)?
- Or does the national or sector wage agreement prevent employees in successful, innovating companies from making excessive demands?
- ...

5.2 The trend towards 'lean corporatism'

Table 3.7

Collective bargaining in the 1990s, EU countries

Country	Main level	Coverage	State extension	Lean corporatism
Austria	Sector	98	Mandatory	X
Belgium	Nat./sector	90	Mandatory	(X) Statist tendency
Denmark	Sector	>80	Voluntary	X
Finland	National	95	Mandatory	(X) Neoliberal tendency
France	Sector/firm	82	Mandatory	Statist
Germany	Sector	90 (west)	Mandatory	X
Greece			Partly mandatory	
Ireland	Nat./firm	> 70	Voluntary	X
Italy	Sector	70	None	X
Luxembourg				
Netherlands	Sector	81	Mandatory	X
Portugal	Sector	79	Mandatory	(X)
Spain	Sector/firm	>70	Mandatory	(X)
Sweden	Sector	83	Voluntary	(X)
UK	Firm	47	None	Neoliberal

Source: Ebbinghaus and Visser (2000); Traxler, Blaschke and Kittel (2001)

Regardless of these possible effects, for most of the EU member states we can detect similar trends in wage bargaining policies. Creating competitive capacity and flexibility for companies has been the major driving force of these trends.

The wage bargaining pattern of the European countries has involved:

- organised decentralisation of bargaining (giving more bargaining power to a lower level within an established agreement or framework);
- supply-side wage moderation;
- subscription to a monetary system (the EMU) that will not accommodate a national wage formation.

This has caused the growth of a new form of 'lean corporatism' in (nearly) every EU country (see table 3.8). Only the United Kingdom has not changed the 'neoliberal' wage bargaining system of low co-ordination and low centralisation. In countries like Belgium and France, this 'leaner' trend has been intertwined with the enforcement of state influence in the bargaining system.

Faced by increasing international competition and a non-accommodating monetary policy, in most of the EU countries wage bargaining has largely focused on keeping a wage

moderation policy and enhancing wage flexibility. The predominant bargaining level has shifted to an organised centralisation with the sector level still prevailing.

Table 3.8

Lean corporatism

Dimension	
Dominant economic policy system	Monetarism (combating inflation)
Economic context	High unemployment Competitive capitalism (international competition)
Dominant governance mode	Network (as opposed to hierarchy or market)
Monetary system	Non-accommodating
Wage bargaining system	Supply-side wage moderation <ul style="list-style-type: none"> • lowering comparative labour costs; enhancing wage flexibility; anticipatory • income policy, setting inflation targets
Bargaining mode	Voluntary co-ordination by peak organisations or pattern setting
Predominant bargaining level	Organised decentralisation with sectoral level usually prevailing
Predominant interest	Employers: competitive and flexible wages
Predominant trade union strategy	Inclusive bargaining (trying to combat unemployment and exclusion by extending 'the pie' and not only focusing on distributing 'the pie')
Government composition	Indeterminate (left and/or right)
Macro-economic mutual consultation	High/medium participation of social partners in state regulation

Source: Traxler, Blaschke and Kittel, 2001

6. Agreements on intellectual property rights of workers

Intellectual property rights as an innovation theme: regulating the copying of inventions.

6.1 Definition of intellectual property rights

Intellectual property rights are an important regulating component of an innovation-friendly environment. Each EU country has rules to foster innovation by regulating the copying of inventions. Patent law defines intellectual property. Inventors are given exclusive rights to prevent others from making, using or selling a patented invention. By defining the ownership of an invention, the lawmaker stipulates who has to pay to adopt the innovation and who receives this payment. Particular kinds of intellectual property rights govern inventions by workers (i.e. within the employment relationship).

6.2 Limited involvement of the industrial relations system

In nearly all of the EU countries, the regulation of workers' inventions is governed by law and not by the collective bargaining system (EC DGV, 1999). This regulation is either part of the patent law or else a special law governs it. Only in Belgium and Luxembourg is the matter regulated by case law. Inventions made in the course of fulfilling standard job duties as described in the employment contract are as a general rule the property of the employer.

In only five countries does this general rule interfere with the inventor's principle, namely that the employee-inventor has explicit property rights. In Denmark, Germany and Finland these property rights are fully or partially transferred to the employer in two specific situations:

- when the invention is part of normal job duties, i.e. a so-called 'service invention';
- when the invention is not made in the course of normal duties, but has nevertheless been made within the supporting environment of the company (a so-called 'dependent invention').

Only in Austria and Sweden does the inventor's principle have a stronger connotation. It is also in these countries that the system of industrial relations can play an explicit role in determining the property rights for invention:

- in Austria the property rights relating to an invention belong basically to the employee. Employee and employer can agree in advance that the employer shall own any invention made by the employee. This arrangement can also be concluded by collective agreement;
- in Sweden the basic assumption is that a patented invention is registered under the name of the inventor (employee). The employer can in a number of cases specified by law be the owner of the invention, or may have priority rights to exploit the invention commercially. In Sweden there is a tradition that complements this law with specific collective agreements (especially in the field of copyright and design).

In these five countries the employer is also obliged to make financial compensation to the employee for a service invention. In Sweden a special arbitration board, composed of legal experts and representatives of the social partners, can issue an opinion on this financial compensation. Special collective agreements exist that regulate this compensation for a valuable suggestion. The purpose of such collective agreements on suggestion schemes is to encourage workers to collaborate and contribute to a favourable climate in the workplace. Under the terms of such an agreement, a worker who comes up with an invention which is of value to the company will be paid a special bonus.

Employee rights in the new economy – IBITS, Europe

The case illustrates how from an international perspective trade unions raise awareness and investigate the new challenges of employee rights in the new economy (e.g. on-line rights), see annex 2, section 2.2. (p. 137).

7. National research systems and social partners

The innovation theme: research properly organised and connected to business activity is the most important resource of innovation.

Public research is a major resource for the innovative capacity of an economy. This is certainly the case when the fruits of this research can viably be transformed into strong business innovations. The improvement and strengthening of research is consequently an important policy goal of any successful system of innovation. Within the confines of the present study there is no scope to investigate the industrial relations systems governing the academic or public sector of science and technology (universities and other research institutes). Our focus is the link between industrial relations and the innovative capacity of companies.

7.1 Trade unions and technology research

Nevertheless, even within the context of our study it is worth noting that in most of the European countries there is no strongly developed link between academic research (especially technology research) and the representatives of those who have to use this technology in their workplace. If co-operation or linkages exist, they will largely be between the trade unions and the social sciences. As Zammit (1996) puts it in discussing this matter, only the Scandinavian countries and Germany stand out as exceptions (see table).

Table 3.9

Technology research and trade unions: Sweden and Germany

Sweden	Projects sponsored by governmental research programmes	Swedish council for Working Life and Social Research; Man-Technology-Organisation programme organised by NUTEK
	Research circles; Interface between university and trade unions	Research circles (Lund, Karlstad, Uppsala): This is a way of dealing with research issues by means of co-operation between academics and trade unionists. The work methods used in research circles can be described as participatory action research. The task of the research circles is to provide adult education courses and training for trade union members, to disseminate information about relevant research and to involve employees in research
	Research by unions themselves	Trade union research departments Allied research consultants, works councils
Germany (example Nord-Rhein- Westfalen)	Projects sponsored by governmental research programmes	<i>Arbeit und Technik</i> R&D programme, Federal government <i>Mensch und Technik – Sozialverträgliche Technikgestaltung (SoTech)</i> , regional government
	<i>Kooperationsstellen</i> ; Interface between university and trade unions	Agreements between universities, higher institutes and trade unions (e.g. <i>Kooperationsstelle Wissenschaft/Arbeitswelt Dortmund</i>)
	<i>Technologieberatungsstelle</i>	Technology in consultation with employee representatives (e.g. BIT, Dortmund; ITB Bielefeld, BAIT Dortmund)
	Innovation management	Innovation management and consultancy constitute the core of a sustainable regional growth strategy (e.g. <i>Entwicklungszentrum Dortmund, ISO Consult, SIC – Siegerland Consult</i>)

Sources: Sandberg (1996); Steffen (1997); Oehlke (2001)

IT support in working life campaign – LO, Sweden

The Swedish trade union helps its membership and representatives to confront technological innovation in a positive way by developing a campaign of experimentation with new IT developments (see annex 2, point 2.1, p. 135).

7.2 Involvement of social partners in the strategic management of national research policy

The institutional involvement of social partners in research policy is rare. However, in some countries the social partners have seats on national research councils. To our knowledge this is the case in the Scandinavian countries, France and Belgium. Social partners are represented on the Finnish Science and Technology Policy Council and on the Belgian Federal Council for Science Policy. In Sweden the social partners participate in the Swedish Council for Working

Life and Social Research. This Council was established in 2001 through a merger of the Swedish Council for Social Research and the Swedish Council for Work Life Research. Again, this Swedish variant is a typical example of the engagement between trade unions and the social sciences which we find in other countries (Kester & Pinaud, 1996). More interesting still is the involvement of the trade unions and associated consultants in the Danish Board of Technology. The Danish Board of Technology aims to further the technology debate, to assess technological impacts and options, and advise the Danish Parliament and Government. Trade unions have a seat on this parliamentary body.

From our literature review it is not clear to what extent the social partners are involved in the growing utilisation of foresight methods within the European countries. A 'foresight programme' can be defined as a purposefully organised process that brings together the expectations of diverse actors relating to a given technology for the purpose of strategic forward planning, while taking broad social and economic developments into account (Formakin, 2001; see also Europta, 2000). Throughout Europe there are examples of trade union involvement in exercises of this kind at the national or regional levels (Digital Delta, Netherlands; Shannon, Ireland; Limburg, Belgium; Board of Technology, Denmark). Little is known so far about the concrete role played in these foresight activities by trade union representatives (or else consultants hired by the trade unions).

Integrated research programme – National Workplace Development Programme, Finland

The programme funds consulting and research projects within the triangle of innovation-organisation-work. The programme is administered by the government and the social partners. (annex 3, point 9, p. 165). See also (ref. above) the short description of the French High Council on Research and Technology.

8. Summary

The following table (see page 57) summarises the main findings of this chapter. Five elements are briefly reviewed corresponding to the industrial relations topics:

- the theme of the innovation system to which they are related;
- a definition of the industrial relations issue;
- the type or form of industrial relations involvement;
- special remarks in this regard about certain EU countries;
- review and assessment findings about the impact on innovation.

When we look at the external framework of industrial relations we can see a number of important issues having an impact on innovation:

- the organisation and funding of vocational training and the skills demands of an innovation strategy;
- employment protection legislation and the job mobility of (innovating) workers;

- agreements on workers' invention rights;
- the involvement of social partners in the build-up of the necessary social capital and learning networks for the implementation of a successful regional innovation system;
- consultative activities with state governments for improving research and technology policies. These activities can be part of the general macro-concertation efforts of a country or can be delegated to specific boards.

The second point established by this overview is that certain links between the external frameworks of industrial relations and innovation have not been the object of any extensive study until now. The following topics in particular should be mentioned:

- the relationship between labour flexibility and innovation;
- a broadening of econometric studies into the relationship between collective bargaining systems and economic performance with the innovation issue;
- the quality and the impact of social partners' involvement in the foresight programmes which have been set up in EU countries as preparation for R&D policies.

Thirdly, it can be observed that certain themes are picked up by policy makers and social partners, but that this is not done from an innovation perspective. The main impetus for these initiatives comes from more traditional targets of industrial relations, such as vocational training or labour flexibility, with employment goals in mind.

As well as the problem of limited, unilateral thinking on these issues, there is also the question of terrain yet to be explored by the industrial relations actors if they are to gear their practices more in line with the innovation issue. For instance, the innovation discourse is seldom explicitly used by the social partners in wage bargaining policies or macro-economic consultation.

Finally, the overview makes clear that important differences of degree exist between the EU Member States in terms of the links between the institutional frameworks of industrial relations and innovation. In the concluding chapter 5 these disparities are used to construct a typology of industrial relations and innovation styles.

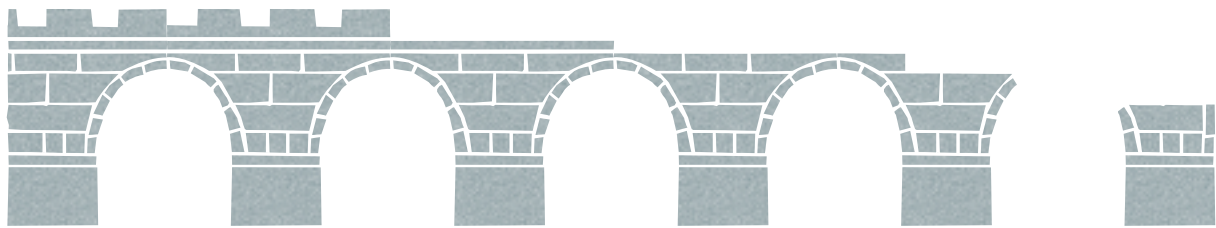
Table 3.10

Industrial relations at economy level – the innovation system: overview of main findings

Innovation theme	Industrial relations issue	Industrial relations practice	Special remarks on countries	Review and assessment remarks
Innovation depends on human skills and resources	Vocational training	Continuous vocational training regulated by social partnership	'Core' countries (France, Belgium, Netherlands, Austria) adopted this system early (other countries seem to follow)	Important topic in the industrial relations systems for the moment (from an employment policy perspective)
	Labour mobility; employment protection legislation	Concentration on law making; involvement in dismissal procedures	no concertation or involvement in Anglo-Saxon countries	Controversy about the role and the place of employment contract flexibility
Improving policy support for the innovation strategy	Macro-consultation	Economic and Social Councils Consultation on information society	Formal concertation especially in 'core' countries	The innovation issue is rarely tackled directly and explicitly
Promoting networking and clustering of companies	Regional innovation initiatives of the social partners	Regional or local social pacts; task forces; campaigns organisational innovation; raising awareness of technological changes; joint management of regional development agencies	growing industrial relations field in every EU country	
Increase the cost attractiveness of country as a location of innovation	Wage bargaining, competitiveness	Wage moderation, lean corporatism	Most of the EU countries	Lack of research on the relationship between wage bargaining, labour costs and innovation
Protection of intellectual property rights	Regulating intellectual property rights of workers	Collective agreements on property rights, suggestion schemes	Austria & Sweden, particular involvement	
Strategic vision of R&D	Industrial relations and research policy	Participation on national boards and councils Participation in foresight programmes Participation, promotion of government-funded programmes; research activities of trade unions	France, Belgium, Finland, Denmark, (Sweden) Sweden and Germany most notable examples	No clear view on role social partners play in these boards No European study exist on involvement of social partners in foresight programmes

Chapter 4

The impact at company level – The innovative organisation



Workplace industrial relations are of course central in any discussion about innovating firms and the intermediary effects of industrial relations. It is necessary to secure the commitment and involvement of employees at shop-floor level for the development and diffusion of new product and process innovations. This internal regulation of the employment relationship at company level is to some extent an interpretation and application of external rules derived from collective agreements or legislation. Workplace industrial relations or employee participation in the organisational decision-making of a company can be differentiated in indirect and direct forms (see chapter 2, point 1).

1. Indirect participation

Indirect forms of employee representation have been legally established and formally installed in most of the EU countries. The paragraph about this indirect participation is organised in three sections. First the available structures for indirect participation in the EU member states are explained. In a second section we present European comparative insights about the process influence of indirect participation on innovation. A final section summarises studies on the possible effects of indirect participation in the innovation performance of companies.

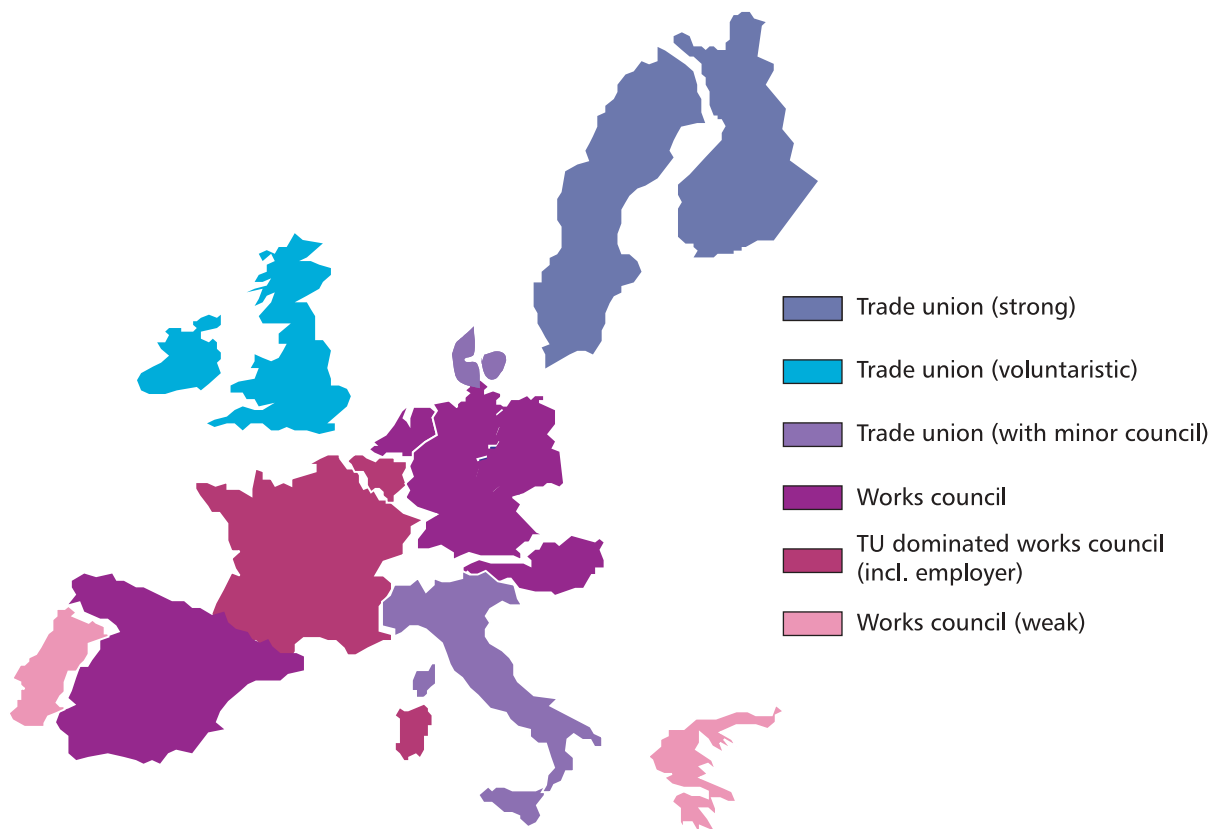
1.1 Available structures: legal provisions and types

The table in annex 4 summarises the legal prescriptions on these forms of ‘industrial democracy’. The table primarily considers the existing institutionalised procedures in EU countries on information and consultation of these employee representatives regarding technological and organisational change.

Indirect participation or employee representation is traditionally associated with trade unions. However, the involvement of union representatives is not the only time of indirect participation. Other forms of indirect participation exist in a number of European countries, notably works councils. Rogers and Streeck (1994, p. 98) define works councils as “representative bodies elected by all workers at a particular workplace, regardless of union membership and inclusive of white-collar and many supervisory employees”. Works councils are usually composed of employee representatives, but they may also include the employers’ side.

Figure 4.1

Dominant type of indirect participation in EU member states



Single-channel worker representation by trade union organisations is the dominant formalised type of indirect participation in Sweden, Ireland, and the UK. In this situation, the

manner in which trade union representatives are elected or appointed depends upon each individual trade union. The works council can also be the primary body of worker representation at company level (as in Germany, Austria, the Netherlands, and Luxembourg). The extent of trade union representation on these bodies will depend on the ability of the unions to present candidates for election. In large German companies, for example, the works council tends to be dominated by trade union representatives.

Workers' interests can furthermore be taken into account by a two-channel system, where there is a works council operating alongside the trade union representatives:

- the works council may simply represent all the different trade union organisations present in the company. In this case the existence of a works council does not release the employer from the obligation to deal and negotiate with the union organisations (Finland and Denmark);
- the works council may exist alongside the trade union representations and have its own functions and powers. In France, for example, the recognised trade union organisations have a monopoly on the presentation of candidates in the first round of works council elections. Lists of independent candidates can be submitted at the second round stage, though only if the trade union lists have failed to win 50% of the vote. In Belgium and Spain, the works councils can be considered as bodies that complement the work of the company's trade union organisations.

Works councils are a joint body of management and employee representatives in Denmark, Luxembourg, Belgium and France. In the two latter countries the employer chairs the works council.

Table 4.1

Percentage of workplaces (>25 or >50 employees) with employee representation, 1996

Country	Any form of employee representation	Works council	Trade union representation
Denmark	66	20	38
Sweden	92	10	85
Germany*	66	58	6
Netherlands	55	33	4
Ireland	58	9	43
UK*	61	13	32
France*	80	25	39
Italy*	80	46	34
Portugal	33	4	10
Spain*	83	59	24

* >50 employees

Source: EPOC Survey

Great differences exist however in relation to the threshold of necessary employment before a company has any obligation to apply legal provisions. As a consequence there are marked disparities in the presence of employee representation within the EU countries (see fragmentary data in table 4.1, previous page). Lahovary (2000) remarks further that in Germany, the Netherlands and Austria works councils have a strong legal basis while in France and Spain they are significantly weaker. In countries like Greece and Portugal these bodies are still to become firmly established. In the UK and Ireland they only exist on a voluntaristic basis (see also Knudsen, 1995).

Box 4.1

Small and medium-sized enterprises: specific institutional frameworks of workplace industrial relations

Small and Medium-sized enterprises (SMES) are increasingly a target group in the innovation policy area. Within the SMEs segment innovative and high-tech companies can be found, while at the same time companies with a low innovation performance dominate the SMEs sector. SMEs are characterised by special frameworks of industrial relations (EIRO, Comparative study May 1999). Employees of SMEs do not all have a regulated right to collective representation of their interests in the companies where they work (essentially, in Ireland and the UK there are no workers with this right). The applicable regulations exclude workers in SMEs below a certain size in Austria, Belgium, Denmark, France, Germany, Greece, Italy, Luxembourg, and Portugal. The Netherlands and Spain leave the right to collective representation in very small companies at the employer's discretion. In small companies, workers who actually exercise the provisioned right to collective representation are a minority. Where bargaining is decentralised to the company level, SMEs are very often excluded. It is especially in the northern parts of the EU that the SMEs are more integrated in the regular systems of industrial relations (trade union membership, collective bargaining and employee representation). These countries, and especially the Scandinavian countries, also have a lower percentage of employment in SMEs.

1.2 Process influence: information and consultation on technological or organisational change

In the majority of the EU countries there is a legal obligation to inform and consult with these institutionalised bodies on technological and organisational changes. Only in the UK and Ireland does this kind of employee participation exist solely on a voluntary basis. However, these provisions do not always guarantee the influence of employee representatives on change processes.

Based on the findings of two major European comparative studies, conducted at the end of the 80s, Huiskamp (1995b) draws the following conclusions on the actual influence involved:

- legal provisions and formal arrangements do strengthen the influence exercised by employee representatives, but other factors, such as the distribution of authority and the kind of hierarchy, are more important;

- the existence of a participatory paradox: participation is limited at the planning stage, when potential impact is greatest, increasing only at the implementation stage, when this potential is much reduced;
- the influence increases when issues are more closely related to the employment relationship;
- long-term or strategic decisions are more significant, but less likely to be organised with indirect participation;
- the differences between trade union representatives and works councils as a structure of indirect participation are not very significant when determining the degree of influence.

The two large-scale studies were the Comparative Industrial Democracy study (IDE, 1993) and a study by the European Foundation of Living and Working Conditions on participation in technological changes (Cressey & Williams, 1990).

Based on a literature review of participation and technological change, Carnoy et al. (1993) construct the following two contrasting-influence models of indirect participation and technological innovation (see table).

Table 4.2

Two models of indirect participation and technological change

	Reductionist model	Strategic model
Goal	Overcome threats of change	Induce worker contributions to change
Context		
Industrial relations climate	Adversarial	Co-operative
Innovation process	Technology-driven	User-based
Composition of workforce	Blue-collar, low-skilled	White-collar, high-skilled
Process quality	Low intensity: informing workers	High-intensity: joint decision-making
	Input late in the process	Input early in the process

Source: Adapted from Carnoy et al. (1993)

The two opposing models are constructed by using the following subdivisions:

- a pro-active or reactive strategy by management and employee representation;
- a co-operative or adversarial industrial relations climate;
- the presence or absence of an active, strongly organised employee representation.

Of course no comparative European information exists on the extent of these models; even national survey information is rare. Interesting case study research, especially from German experiences, is however available (see for example Bosch, 1997; Haipeter, 2000).

Box 4.2

Board-level employee representation

For the most part, board-level employee representation is not a reality in Europe. Only in the Nordic countries is it present as a system. The larger companies in Germany have an employee representative on the company board as part of the co-determination system (Carley, 1998; EIRO, 1998b). The direct link between employee involvement in corporate governance (board-level membership) and innovation has to our knowledge been investigated only in relation to the German case. Summarising the empirical studies on German co-determination Ehrentreich and Schmidt (1999) conclude: "Though applying different data and methods, their unanimous finding is that there is little if any effect of the introduction of co-determination in German firms on their market value. If we assume that innovation affects firm values due to future flows of income, these results can be interpreted in a way that markets do not anticipate any negative (or positive) effect of co-determination on the innovation process. Hence, one could conjecture, that the market considers the problem of co-determination as a minor one."

1.3 Effect of indirect participation on innovation: inconclusive findings

The impact on the business performance, in particular the innovation performance, of indirect participation is an underdeveloped field of study.

1.3.1 Theoretical arguments

Dilger (2002) summarises the theoretical considerations on the link between the indirect participation of employees and innovation (see table 4.3, next page).

Based on this table of theoretical relationships, one can draw the following general conclusions. When the employee representation is convinced that innovations have a positive employment or wage effect, the employee representation will support the innovative climate of a company by stimulating management to innovate, by playing a communicative role in setting up the innovation, and by securing the workers' involvement in the innovation process. The employee representation would at that point be considered to adopt the strategic model of involvement (see the Carnoy models in table 4.2).

Table 4.3

Theoretical links between indirect participation and innovation

	Description
Positive link	
Employment security link	Because innovation and especially product innovation creates or secures employment, employee representatives push management to innovate
Productivity bonus	Innovation leads to higher profits and wage benefits. Employee representatives therefore push management to innovate
Voice	Employee representatives are an interesting channel for bottom-up communication, useful for successful implementation of innovations
Listening ear	Employee representation can play the role of a 'listening ear' in the period of turbulence and changes that accompanies innovation processes. As such they reduce resistance
Negative link	
Bureaucracy	Formal regulation processes between management and employee representatives can have a negative effect on the speed of innovation
Downsizing fear	Because employee representatives fear that innovation will have a downsizing impact on the employment level of the company, they can be against innovations
Labour cost	Employee representation at company level pushes wages up. These higher labour costs can have a negative effect on the available investment money for innovation

1.3.2 Empirical findings

It are mainly labour economists who have conducted empirical research on the impact of indirect participation on innovation. The following table summarises the results of these studies. The studies are for the most part based on US or German evidence. Authors who recently summarised these studies have concluded that the evidence of possible effects is sketchy, contradictory, often based on small data samples and analysed with oversimplistic causal models (see Lahovary, 2000; Addison, Wagner & Schnabel, 1997). For example, the theoretical considerations referred to tend not to be operationalised in the analytical models. Until now, only simple, straightforward links have been investigated.

Table 4.4

Studies on the effects of unions or employee representation on innovation performance

Authors	Sample / data	Indicator of performance innovation	Effects of union / employee representation
FitzRoy and Kraft (1990)	57 firms, 1979	Proportion of sales consisting of new products introduced in the last five years	Organised labour (works council and union density) significantly reduces innovative activity
Connolly, Hirsch and Hirschey (1986)	367 US Fortune 500 firms, 1977	R&D intensity (R&D expenditure/ sales)	R&D adds less to the market value of firms in more unionised industries; unionism decreases R&D intensity
Hirsch and Link (1987)	315 manufacturing firms in New York state, 1985	Likert-scale response data on technological and product innovation	Product innovative activity is significantly less important among union (union-coverage > 50%) than among non-union firms
Acs and Audretsch (1987, 1988)	247 US manufacturing industries, 1977	Number of innovations	Unionisation (density) significantly reduces innovative activity in large and small firms
Audretsch and Schulenburg (1990)	246 US manufacturing industries, 1977	Number of innovations per employee	Unionisation (density) significantly reduces innovative activity
Machin and Wadhvani (1991)	630 workplaces in Britain, 1984	Introduction of new technology	Unionism (recognition, consultative committee) has no significant effect on the introduction of new technology
Betcherman (1991)	Almost 1000 establishments in Canada, 1980-85	Introduction of computer-based technological change	Union presence does not significantly affect technological change
Hirsch (1991)	452 US firms, 4327 observations, 1968-80	Firm-specific R&D, R&D/sales	Collective bargaining coverage consistently negative in all specifications
Hirsch (1992)	706 firms, 5841 observations, 1972-80	As above	Always a negative affect
Schnabel and Wagner (1992a)	29 German industries 1983-84	R&D expenditures/sales Percentage of employees working in R&D	Unionisation (estimated) does not significantly affect innovative activity
Schnabel and Wagner (1992b)	78 firms in German manufacturing industry in 1990-91	Innovation dummy (new product in 1989 = 1, otherwise 0)	Works council presence and average wage drift positive but insignificant effect
Addison and Wagner (1994)	38 British industries 1989, 18 matched UK-German industries	R&D	Positive association between unions and R&D in 'low tech' industries
Schnabel and Wagner (1994)	26 German industries in manufacturing sector in 1983 and 1984 101 firms in manufacturing industry in 1990-91	R&D intensity	Industry level: no significant effect of union density on R&D intensity Establishment level: 'some' unionism (and a works council) promotes innovative activity, 'too much' unionism hinders

Addison, Schnabel and Wagner (1996)	1025 German firms in manufacturing industry in 1994	Profitability (self-reported categorical measure) Innovation measures: (i) new product (ii) new production process	Negative association between works council and firm profitability Positive association between works council and product innovation; no indication of any effect on process innovation
Menezes-Filho, Ulph and Van Reenen (1998)	UK firms from EXSTAT database, 1982-90; establishment level data from WIRS, with R&D data from EMSPS survey	R&D expenditure/sales	Positive insignificant association of union power on R&D Effects of union power are only negative when union density is very high or when the union bargains only over wages
Dilger (2002)	Representative panel of companies (1075), German machine tool industry, 1996-1998	Product innovation in the recent year	No relationship with presence of a works council; Positive association with works council strongly involved in the managerial decision-making on technological and organisational changes

Source: Adapted from Schnabel and Wagner (1994); Addison, Schnabel and Wagner (1996); Menezes-Filho, Ulph and Van Reenen (1998); Dilger (2002); Frege (2002)

The studies find negative associations as well as mixed positive and negative associations and insignificant results. Others (Menezes-Filho, Ulph & Van Reenen, 1998) find the effects of union power on innovation to be negative only when union density is very high or when the union bargains only over wages. Finally, Addison, Schnabel and Wagner (1996) find positive effects produced by works councils on product innovation, although not on process innovation. Closer examination of the studies presented in table 4.4 points to the relative over-representation of negative union innovation relationships in the US, as opposed to the more positive relationships found in German studies. In trying to explain this difference, Schnabel and Wagner point to the difference in style. More co-operative labour relations in Germany may well facilitate innovation. Recent research by Bidger (2002) on works councils in the German machine tool industry confirms this proposition. He finds in the first place no statistically significant relationship between the presence of a works council and innovation performance. However, he concludes that a specific type of works council, namely one which is frequently asked by management to play a strong co-operative role in organisational or technological changes, has a positive effect on the (product) innovation performance.

This last view is also strongly advanced by a recent special commission of German experts (Kommission Mitbestimmung, 1998), which made an assessment of the German system of indirect participation (co-determination), and in its conclusions made a strong plea for the reinforcement of the system. In making this plea, the committee stated that within the co-operative modernisation of a company indirect participation could make the following positive contributions to innovation and change (see also Friedrich-Ebert Stiftung, 1998):

- as a communication infrastructure it simplifies and structures communication between management and personnel;
- co-determination leads to a higher quality of decision-making by management, because management has to justify its actions more systematically;
- once convinced, the employee representation can help to overcome employee resistance and to build trust (even in the case of job losses).

Indirect participation and technological/organisational innovation – Support initiatives – Cases in annexes 2 and 3

TRADE UNION CASES (annex 2)

Developing a workplace tool kit, LO, Denmark: a tool box for promoting trade union representation within organisational innovation in the workplace (p. 126).

Strategy for employee participation at company level, IG Metall, Germany: programme to involve works councils on a project base in the organisational modernisation of workplaces (p. 129).

TUC Partnership Institute, TUC, UK: helps organisations to improve industrial relations and develop win-win situations at the company level (p. 132).

Technology Help Desk, DGB, Germany: technology advisory offices for works councils (and other bodies) (p. 134).

GOVERNMENTAL INITIATIVES (annex 3)

ANACT, France: the technological innovation department provides research, expertise and consultation on the introduction of technological innovations (p. 146).

Partnership Fund, UK: funding of partnership initiatives (p. 161).

REGULATORY CASES (annex 3)

Works Councils Act, Netherlands: provides the legal framework for involvement through indirect participation (p. 159).

Development Agreement, Sweden: the aim of the agreement is to encourage employers and local trade unions to co-operate in modernising companies (p. 159).

2. Direct participation

In accordance with the EPOC-study, we define direct participation as: “opportunities which management provide, or initiatives to which they lend their support, at the workplace level, for consultation with and/or delegation of responsibilities and authority for decision making to their subordinates, either as individuals or as groups of employees, relating to the immediate work tasks, work organisation and/or working conditions”. Legal regulations or collective agreements on forms of direct participation are practically non-existent in Europe.

2.1 Forms of direct participation

The key distinguishing features of direct participation are consultation and delegation. This leads to the following distinction in forms of direct participation:

- **consultative participation:** management encourages employees to make their views known on work-related matters, but retains the right either to take action or not to take action;
- **delegated participation:** management gives employees increased discretion and responsibility to organise and do their jobs without reference back to their superiors.

Each of the two forms has an individual and a group version. This leads to four distinct forms of direct participation.

Box 4.3

The main forms of direct participation (Sisson, 2000)

Individual consultation

Face-to-face: arrangements involving discussions between individual employee and immediate superior, such as regular performance reviews, regular training and development reviews and '360 degree' appraisal.

Arm's-length: arrangements which allow individual employees to express their views through a 'third party', such as a 'speak-up' scheme with 'counsellor' or 'ombudsman', or through attitude surveys and suggestion schemes.

Group consultation

'Temporary' groups: groups of employees who come together for a specific purpose and for a limited period of time, e.g. 'project groups' or 'task forces'.

'Permanent' groups: groups that discuss various work-related topics on an ongoing basis, such as quality circles.

Individual delegation

Individual employees are granted extended rights and responsibilities to carry out their work without constant reference back to their superiors – sometimes known as 'job enrichment'.

Group delegation

Rights and responsibilities are granted to groups of employees to carry out their common tasks without constant reference back to their managers – most often known as 'group work'.

2.2 Incidence of direct participation in the EU Member States

Table 4.5

Incidence of direct participation by EU country (sorted by industrial relations regime), composite indicator of employee participation

	EPOC Survey: incidence of direct participation forms, % of all establishments												Indicator employee involvement % employees
	Consultation								Delegation				
	Ind. face-to-face		Ind. arm's-length		Temporary group		Permanent group		Individual		Group		
	1*	2**	1	2	1	2	1	2	1	2	1	2	
10-country average	35	6	40	6	31	6	30	8	55	12	36	6	
Nordic													
Denmark	27	4	45	7	31	8	30	7	55	12	36	7	69
Finland													66
Sweden	29	8	45	10	34	10	29	11	69	15	56	15	66
Core													
Austria													51
Belgium													50
Germany	20	4	38	4	26	5	31	8	64	17	31	6	49
Luxembourg													51
Netherlands	38	10	73	15	26	9	35	11	59	12	48	8	69
Anglo-Saxon													
Ireland	39	8	22	4	36	7	28	9	62	20	42	3	52
UK	52	6	40	5	33	6	41	9	53	13	57	5	54
Mediterranean													
France	52	8	33	5	40	9	34	12	54	11	40	4	54
Italy	32	2	42	2	42	2	21	2	44	3	28	3	49
Greece													51
Portugal	25	2	18	0	20	5	25	7	26	3	26	5	43
Spain	30	6	20	4	23	3	23	4	40	5	10	0	47

* 1: % of companies, incidence of the form at the workplace; ** 2: % of companies, 50% of the largest occupation group is involved in the form at the workplace.

Sources: EPOC-data in Sisson & Fröhlich, 1998; Composite indicator based on Eurobarometer and European Survey on Working Conditions, see annex 5

The EPOC-study in question was set up as a European comparative survey into the presence of direct participation. Table 4.5 summarises the result of this survey. Because this survey was only limited to ten EU countries, the EPOC material is complemented with data from

European employee surveys on work and working conditions. These surveys contain information about the subjective perception of employee involvement (the outcome of direct participation). Using this survey material (see annex 5 for a clarification of the composite indicator), we constructed a composite country indicator of employee involvement.

At first sight, the table results (indicator 1 of the EPOC figures) suggest that forms of direct participation are fairly widespread. Between 30 and 50 percent of the companies practice each of the forms. Individual delegation has the highest scores. However, when one looks to the scope of the direct participation in the workplace and takes the involvement of the core group of workers as a benchmark (indicator 2), the application of direct participation diminishes quite sharply and proves to be limited. In turn, this result contradicts the higher scores on the indicator about employee involvement. As is shown in annex 2, this 'combined' indicator is based on broad employee perceptions of involvement in decision-making at workplace level. The results on the two last indicators are perhaps not all that contradictory. The rankings of the countries or the differences between the country scores are very similar for both the indicators. If one supposes furthermore that the subjective perception of involvement (cultural) is only partly dependent on objective direct participation possibilities (structural), then the two sorts of figures seem more compatible.

There are certainly some geographical patterns which can be suggested. The Nordic countries, together with the Netherlands, seem to be the strongholds of direct participation. Based on this data, it is safe to say that there is a definite gap between these countries and the rest. The Southern countries are lagging behind, though only slightly. Portugal has the lowest scores in most instances.

2.3 Relationship with the innovation strategy

2.3.1 Direct participation as 'high-involvement' work practices

A growing body of research stresses the importance of harnessing human resources as a means of achieving competitive advantages (Arnal, Ok & Torres, 2001). In response to the competitive challenge, companies need to combine strategies like increased innovation, flexibility and cost cutting. These business strategies have an impact on the role and function of human resources. A core element of these business philosophies is therefore to rely more on the knowledge, skills and abilities of employees in order to meet stated strategic goals. The adoption of 'high-involvement work systems', flanked by new HRM techniques, is the necessary consequence of this turn in business strategy. Forms of direct participation are seen as a necessary step to building a high-performance, 'high-involvement' work system.

Box 4.4

High-performance work practices = High-involvement work practices

The term “high-performance work system” or “HPWS” is used to refer to a very wide range of organisational changes, suggesting that this concept can assume a variety of forms none of which would be suitable in every single case. Alternatively, these are referred to as “high involvement”, “high skill”, “high commitment” or “high trust” organisational models (Appelbaum et al., 2000; Ichniowski et al. (eds.), 2000; HRCD, 1999).

In general a HPWS is characterised by a work organisation that allows for extensive employee involvement in operational decision-making as a means of harnessing people’s potential more effectively and improving the performance of the organisation. Workers in a HPWS experience greater autonomy over their job tasks and methods of work and have higher levels of communication about work with other workers, functional specialists, managers and, in some instances, with vendors or customers.

In addition, human resources practices are also important. Workers in a HPWS require more skills to do their jobs successfully and many of these are firm-specific. Incentives must be provided for workers in order to invest in obtaining additional skills and to engage in activities, such as problem-solving, where the input is harder for managers to quantify. Job security provides workers with a long-term stake in the company and a reason to invest in its future, while payment of incentives for contributions in quality terms allows them to share in the fruits of improved performance. Job security and incentive pay motivate workers to make an extra effort in developing skills and participating in decisions. Therefore, work organisation practices such as broader job definitions, team production and total quality management, linked to a human resources system that provides increased training, job security and pay incentives, should lead to better performance within the organisation.

Although the business theory of ‘high-involvement work practices’ is mostly used in a context of increasing labour productivity, links with the innovation strategy are also constituted. With regard to innovation, high levels of direct employee participation can be seen as stimulating in four different ways:

- forms of direct participation increase the level of decentralisation, which creates a better and more spacious environment for the discovery and utilisation of local, practical knowledge in the organisation;
- team work and/or job rotation give workers better insights into the tasks and problems of other workers, which can lead to a better co-ordination of innovative activities;
- group forms of direct participation bring together knowledge and skills which until then existed separately within the company;
- direct participation and its possible effect on the quality of working life might encourage greater effort and commitment on the part of the workers to perform in ways over and above what is formally and normally expected.

2.3.2 More and more convincing survey evidence

Most of the time the empirical evidence of the performance effect of these ‘high-involvement’ practices is geared to the productivity question (see for an overview Voos & Kim, 2001; Bélanger, 2000; Business Decisions, 1999). Nonetheless, some of the available survey material has been explicitly linked to the issue of innovation (performance).

Table 4.6

Recent studies on the effect of direct participation on innovation performance

Authors	Material	Innovation variable	Independent variables direct participation
Wickham, 1998	EPOC survey, 10 EU countries	Subjective perception of management	Individual delegation had no effect
Lay, 1997	ISI, investment goods sector, Germany	Introduction of innovative products	TQM, team work, networking customers reduced development times 15 to 40%
Government of Finland, 1996*	Nordflex, Finland	New innovative products last three year	37% of 'flexible' organisations as opposed to 3% of traditional organisations
Greenan & Guellec, 1996*	COI, Manufacturing, France	R&D use, (?)	More likely to innovate
Laursen, 2001; Laursen & Foss, 2000	Disko survey, Denmark	Product or service innovation, last 3 years, importance	Bundle of HPWS practices positive effect
Kivimaki et al., 2000	32 SME's industry, Finland	Perceived innovation effectiveness, patent statistics	Intra-organisational aspects of communication, participatory climate positive interdependent effect
Michie & Sheehan, 1999	WIRS3, UK, 1990	R&D expenditure, recent advanced technical change	Employee involvement variables have a definite effect (significance <0.5 or <0.10)
Dhondt, Vaas et al., 1996	10 in-depth case studies, Netherlands	Multi-dimensional	Positive effect of socio-technical design and accompanied personnel policies
Grover & Goslar, 1993	US, 154 companies	Initiation, adoption and implementation of telecommunications innovations	Decentralisation of decision-making has positive effect
Guthrie, Spell & Nyamori, 2002	New Zealand, 165 firms	Cluster of 'differentiator' companies as opposed to 'cost leader' companies	'Differentiator' companies apply more high-involvement work practices

* Cited by Savage (2001)

Most of the studies, from different countries and with different methodologies, report positive effects between forms of direct participation and innovation performance. The evidence is becoming more and more convincing in this regard.

Some surveys, however, do show that high-involvement work practices only function well under certain conditions, and stress the necessity of a 'vertical fit' between the work system and business strategy (Cappelli, 1999). On the basis of the DISKO survey, Kristensen (1997) concludes, "Flexible organisations perform best in some parts of the economy, characterised by innovation turbulence, not in stable markets" (see also Lundvall & Christensen, 1999). Based on the same Danish DISKO data Laursen (2001) emphasis that (a) high-involvement

practices are more effective in influencing innovation performance when applied together and (b) these practices are more effective in knowledge-intensive sectors.

3. Direct and indirect participation

The presence of works councils and trade unions can foster or impede the likelihood of initiatives being taken towards high-involvement work practices. For some employees, a works council may be viewed as a substitute for increased direct participation. In addition, in an atmosphere where workers are highly suspicious of the motives of managers, unions may view direct participation as a threat mechanism that encourages communication between managers and employees while bypassing unions. In a climate of trust between labour and management, however, trade unions may help rally workers to co-operate with management's efforts to improve the performance of the organisation (Beisheim, von Eckardstein & Müller, 1993).

3.1 Indirect can help direct

On the basis of British WERS data, Sisson finds that, whatever else, individual new work practices do occur more frequently in organisations with a union presence (Sisson, 1993, p. 206). Moreover, on the basis of the EPOC survey, the OECD reports that organisations with works council representation are more likely to have flattened management structures and enhanced involvement of lower-level employees and will probably have introduced or extended job rotation. The presence of a collective bargaining agreement also has a positive connection with such initiatives (OECD, 1999, p. 194). Reviewing survey results in different countries, the OECD concludes that one of the main factors being linked to a greater application of high-involvement working practices within countries is an industrial relations system which facilitates negotiations and co-operation between managers and employees (OECD, 1999, p. 178). Black and Lynch (2000) report, on the basis of US survey evidence, that employee voice and involvement has a larger positive effect on productivity when it is done in the context of unionised establishments.

3.2 Direct doesn't disturb indirect

A recent Dutch survey on the activity of works councils found no signs of any wide-spread marginalisation of the works councils whenever forms of direct participation were introduced (Drucker & Looise, 2000). A survey in five European regions (Catalonia, Rhône-Alpes, Lombardy, Saarland and West Midlands) draws similar conclusions: "across all five regions, direct consultation is no more likely to be practised in workplaces without employee representation than those with representation. It appears, therefore, that direct consultation is

neither filling the space created by the participation gap nor that left by the representation gap” (McIlroy, Marginson & Regalia, 2000, p. 19).

4. Lasting ‘dissemination’ problem

The literature suggests increasingly that positive relationships exist between the use of direct participation and innovation performance, whether or not this is fuelled by a specific kind of indirect participation. However, there is also a conventional view within this literature that although individual or partial implementation of direct participation does occur quite frequently, only a small proportion of workplaces are ‘transformed’ in the sense of having adopted a comprehensive set of mutually-reinforcing practices for a majority of the employees (OECD, 1999; Voos & Kim, 2001). In a final synthesis of the EPOC survey Sisson states: “The rhetoric suggests that new forms of work organisation are widespread and inevitable. The reality is that some of even the most basic practices associated with these forms are absent in the majority of the EU workplaces” (Sisson, 2000). In a review of 30 organisational surveys, Business Decisions Limited (1999, p. 26) arrives at a cautious estimate of certainly no more than 10% of all organisations in Europe.

4.1 Possible obstacles to diffusion

The following assumptions have been made about possible hindering factors (Pekruhl, 2001, p. 168-170):

- management’s core business beliefs and values are still inimical to the idea of direct participation;
- certain occupational categories (middle-management, supervisors) are opposed to it because of the loss of power;
- only the simultaneous implementation of a bundle of new practices achieves the most positive results, but this is more difficult to accomplish;
- in a first phase, the introduction requires a substantial investment which will only pay off in the long term. This makes initial capital an important factor (something which large companies will have less trouble finding);
- implementing high-quality forms of direct participation is a difficult process of change mediated by a range of work-related factors (see Sagie & Koslowsky, 2000; Heller et al., 1998).

Box 4.5

Innovating ICT companies as front-runners in the dissemination process?

The information and communications technology sector is a young and growing sector and in the knowledge-based economy it is defined as the most important innovation sector of the economy. Trade union membership figures for this sector in most EU countries are considerably lower than the national average. A comparative EIRO report (2001) relates this low membership rate to factors such as small company size, recent origins, the young age of employees, “atypical” employment relationships, the high proportion of relatively high-paid professionals. The EIRO report concludes with the remark that the economic shocks after the boom of the 90s had a ‘normalising’ effect on industrial relations in the sector. The conclusions of a recent German research study on industrial relations in the sector can back up this statement. Boes and Baukrowitz (2002) detect three types of industrial relations in the IT-industry. One type is strongly comparable with the traditional type of industrial relations (indirect participation) and is situated in the large, older ICT-companies. The family-style, non-formalised type of small company is the second type. A third and perhaps the most particular type is called the ‘lack-turnshuh’ company. This is the growing ICT-company with highly-skilled employees, a culture of individual autonomy and non-hierarchical leadership style, hand-in-hand with professionalisation of management, and developing forms of direct and indirect participation at company level. Moreover, the German authors noticed a higher incidence of direct participation as a general trend (see also Bertelsmann Stiftung & Hans-Böckler Stiftung, 2002). The OECD paper of Arnal, Ok & Torres (2001) concludes in the same way that employee involvement schemes are strongly associated with ICT-use in the workplace (see also Scharpe, 1999).

4.2 Public policies to overcome obstacles

Observing the ‘dissemination’ problem, a growing number of writers demand that greater efforts be made by governments and social partners to set up initiatives and programmes that will raise the implementation rate of direct participation (see box 4.5). There has to be support to cushion the risks arising from the adoption of these new forms of work organisation and to dilute ‘internal’ doubts in workplaces (see for instance Lundvall & Borrás, 1997; Sisson, 2000; Brodner et al., 1999; Savage, 2001; Gill & Krieger, 2000; Business Decisions, 2000; Totterdill, 2001). Besides the mediating role indirect participation and trade unions at the workplace can play, the following measures are proposed (see table).

Table 4.7

Policy measures to overcome obstacles of implementing high-involvement work practices

Policy measure	Example*	Annex 3
Funding research into high-involvement work practices in order to improve understanding of cost and benefits and create databases of case studies	Innovative Work Organisation (Germany)	p. 150
Building new bridges between research institutes and practitioners to ensure both a strong knowledge base for organisational change and the incorporation of concrete experience within research programmes	Workplace Development Programme (Finland)	p. 165
Supporting the development of benchmarking services to enable companies to highlight weaknesses and strengths		
Financing educational projects to provide information to companies and trade unions	STV Innovation and Work (Belgium)	p. 145
Supporting demonstration projects to help companies and trade unions to gain access to the experience of 'practitioners'	IDICT (Portugal)	p. 149
Strengthening the financial and expert resources available to companies, particularly SMEs, through grants and provision of consultancy support	Made-to-measure working hours (AU)	p. 146
Promoting the development of inter-firm or inter-union networks to pass on best practice and to stimulate collective learning and experimentation	PRYO (Sweden)	p. 153
Clear legal information, consultation and participation rights of employees	Works Council Law (Netherlands)	p. 159
Support of enlightened agreements between the social partners by financial and economic incentives	Partnership Fund (UK)	p. 161
Mainstreaming work organisation within the activities of business support centres and technology transfer agencies		
Changes in corporate governance arrangements and taxation policy to encourage the adoption of (long-term) business innovation strategies based on high-involvement work practices		

* Most of the examples are also relevant to other measures mentioned in the table.

Source: Business Decisions (2000); OECD (1998)

5. Summary

Indirect participation has legal backing in most of the EU Member States and for this reason is firmly established in the bigger companies. Forms of direct participation increasingly complement this traditional core of the European model of workplace industrial relations. However, the spread of these 'other' forms of workplace industrial relations should not be exaggerated. Summarising the chapter, we can see furthermore that discrepancies exist between the EU Member States regarding types and levels of employee participation. These differences will be used in the final chapter to draw up a typology of the EU countries on industrial relations and involvement in innovation-related matters.

In connecting practices of workplace industrial relations to the innovation issue, we recorded the following general observations in this fourth chapter.

Although information and consultation of employee representation is often compulsory with respect to technological and organisational change, these provisions don't guarantee any real process influence. Other factors are equally important (the linking of this issue with the employment relationship or the distribution of authority). Influence is further complicated by a participatory paradox. Management strategy, the general industrial relations climate and the active strength of employee representation determine the way the employee representatives are involved in the innovation process. This may be in either a reductionist-adversarial or a strategic co-operative way. The limited studies into the impact evaluation of indirect participation on innovation performance show inconclusive findings. Based mainly on German evidence, the tentative proposition could be made that an active, co-operative strategy of indirect participation has a positive impact on innovation processes within the company. This evidence can be linked to a (theoretical) model of indirect participation that plays supportive, communicative and trust-building roles in innovation processes, when these innovations deliver the necessary positive effects on employment and wages.

In a growing body of research literature, forms of direct participation are presented as the 'core' of high-involvement work practices, which are claimed to have a significant effect on the productivity performance of a firm. Within this perspective, links are also made between these high-involvement practices and innovation. An increasing amount of survey material presents the first empirical evidence of such a positive relationship. Direct participation intensifies and enlarges the knowledge flows, which will have a positive impact on innovation. This structural involvement of employees in decision-making also has a 'psychological' effect, which leads to a higher job commitment of employees. This commitment will in turn have a positive impact on innovation performance. It is still not clear, however, that these forms of direct participation are applicable in every context as a useful organisational design for innovation or have only added value in specific market environments (turbulent) and specific work processes (knowledge-intensive).

Company cases in annex 1 (p. 104-118)

SMA, Germany

Innovative company where employees are delegated decision-making powers and autonomy in order to be creative. The works council plays an appreciated role in this non-hierarchical organisation.

BMW, Austria

The manufacturer stimulates process innovations by the implementation of high-involvement work practices in the production unit. These organisational changes were carried through in collaboration with the works council. This partnership has paid off on other issues.

Basell, Italy

Mainstream activities of a trade union representation, which have a functionality in a knowledge-intensive company.

Aughinish, Ireland

High-performance work systems set up in partnership with the existing trade unions.

Kelsen, Denmark

The trade union stimulated major changes in work organisation, raising productivity and quality.

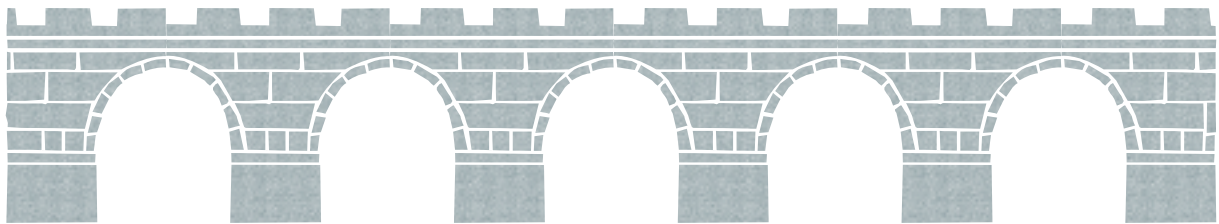
In conclusion, in this chapter we have compiled the first indications that (a) a pro-active, mutually-supportive relationship between management and (statutory) employee representation and (b) high-involvement forms of direct participation both have a positive impact on the innovation performance of a company.

In annex 1 company cases are presented which developed this 'innovative' organisation of direct participation along with a supporting role of indirect participation. The cases in annex 1 show however that these 'high involvement' practices are not only based on structures of direct participation, but are a bundle of practices with specific types of organisational culture and HRM policies. The cases are dominated by an organisational culture based on openness and trust. The decentralised organisational design is furthermore combined with sound HRM policies (on training, career development, rewards, working time).

The last point made in this chapter was that both forms of workplace industrial relations are probably not widespread throughout Europe. They face a dissemination problem. A growing number of authors therefore make a plea for public policy support. Research projects, demonstration programmes, training efforts and networks of experience exchange are seen as the main, sensitising, policy instruments, although some authors also speak about financial incentives (project funding) and legal initiatives (stronger participatory rights). In annex 2 (trade union initiatives) and annex 3 (public authorities and/or social partners) a range of these supporting instruments will be exemplified.

Chapter 5

Conclusions



The systems approach to innovation recognises that innovation and knowledge generation takes place as a result of a variety of activities. On the basis of the innovation themes formulated in the European First Action Plan for Innovation (EC, 1996), this report surveyed the influences and incentives that industrial relations practices (can) have on the application of an innovation strategy. This analysis has been conducted on the basis of a literature review. In the annexes these influences are illustrated by case study research.

1. The major components of innovation-friendly industrial relations

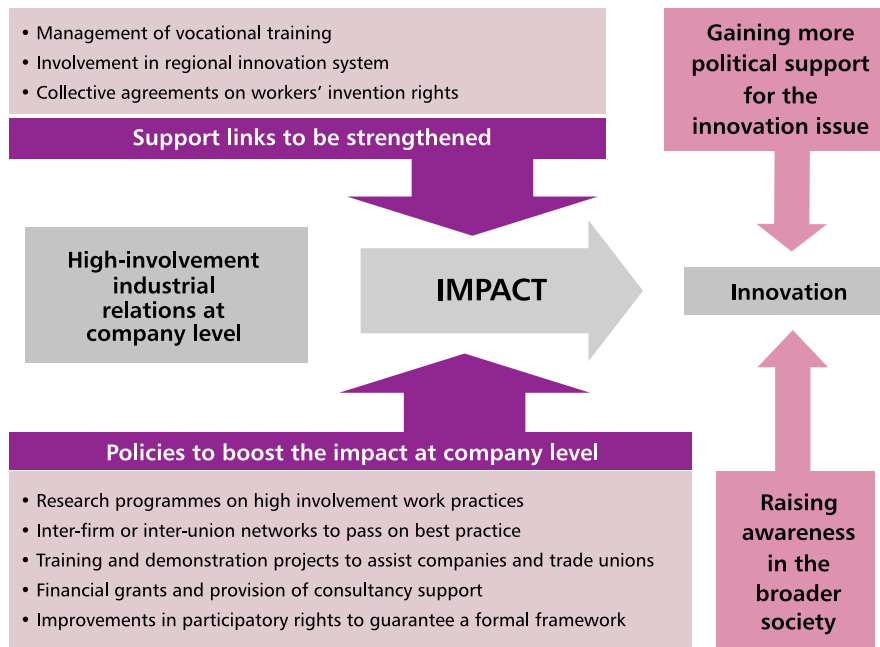
Based on this step-by-step analysis, we can construct a generic model of innovation-friendly industrial relations (see figure).

Specific kinds of workplace industrial relations form the core of the model.

- A growing body of research finds empirical evidence of a positive link between high-involvement forms of direct participation and innovation. When a company is considered as a bundle of knowledge flows and resources, then innovation as a business strategy is about exploiting these inner capabilities. Particular sets of human resource policies and work organisation enhance the involvement of employees in these knowledge-based

Figure 5.1

Model of innovation-friendly industrial relations



processes of innovation. Forms of direct participation are a central element of this 'innovative' organisation. Direct participation intensifies and enlarges knowledge flows because of better vertical decentralisation, horizontal co-ordination and organisational commitment.

The evidence on this main link between industrial relations and innovation is undoubtedly growing, but question marks remain about the necessity of these work practices in every business innovation context (depending on the market environment and work processes).

- Although the evidence is still to some extent inconclusive, a mutual and co-operative relationship between management and employee representation seems also to have a positive impact on the innovation culture and performance of a company. Based on such a partnership, the employee representation will support the innovation climate of a company by pushing management to innovate, by interfacing communication and removing employee resistance.

However, because of the lack of formal implantation of indirect participation in SMEs, there is a question whether this partnership model has any relevance for small enterprises.

Nevertheless, the two mutually-enforcing types of workplace industrial relations can be seen as the major link between the industrial relations system and innovation.

Table 5.1

Effects of employee participation on innovation processes

Direct participation	Indirect participation
Insight and commitment to business goals	Guidance for employees during processes of change
Autonomy to make suggestions and improvements	Conflict arbitration
Enhancement of knowledge flows	Feedback opportunity for management
Enrichment of management decisions	Driver and defender of innovations (if positive effects on the goals of the employee representation)
Culture of commitment and support	

However, these types of employee participation face a dissemination problem. A lot of potential obstacles to implementing these participatory systems can be mentioned. The following industrial relations activities outside the company can be seen as instrumental to overcoming these barriers:

- research programmes to build a strong knowledge base of concrete experiences;
- training, learning networks and demonstration projects to help companies and trade unions to gain access to the experience;
- consultancy support to transfer the experience;
- benchmarking and networking services to enable companies to highlight strengths and overcome weaknesses;
- financial incentives to stimulate experiments;
- improvements in participatory rights of employees.

Besides these initiatives, other support initiatives of the industrial relations system to innovation can be listed:

- management of vocational training to tackle the issue of skills;
- involvement in the regional innovation system (building of social capital and learning networks);
- agreements on workers' invention rights.

Within a broader system perspective on innovation, the social partners can play a role in gaining more political support for the innovation issue and raising the awareness of the wider society about innovation. The first role can be highlighted in the action field of macro-consultation, the second role can be developed within the integration of the social partners in the science and research systems of individual countries.

Other potential links between industrial relations and innovation still leave us with substantial questions at the end of this literature review. What kind of wage bargains or flexibility regulations are needed for there to be a positive impact on innovation? These questions arise from the knowledge gaps which persist on the relationship between industrial relations and innovation, and which our literature review could detect, but was unable to solve. These knowledge gaps are exacerbated by the fact that innovation terms and concepts rarely appear in the field of industrial relations. Given the difficulties which we have encountered in

our review of the topic, it seems safe to say that there is still a long way to go in setting up strong and positive connections between the industrial relations system and innovation.

2. Types of industrial relations impact

Such knowledge gaps and policy unfamiliarity in the field of industrial relations also make it extremely difficult to assess how the industrial relations systems of the EU countries differ in their impact on innovation. Nevertheless, in this concluding chapter we will attempt to construct a classification of the EU countries in terms of the impact of industrial relations on innovation. This typology will not refer in the first instance to the nature of this impact (whether positive or negative), but to the major governing principle of the relationship, and as a consequence the extent of the relationship. Nevertheless, it seems important to attempt this kind of classification. The clustering of countries will to a large extent clarify the starting point of the bridge-building policy process at different industrial relations levels, and the report contributes to this by making the connections between industrial relations and innovation more transparent.

The typology is constructed in three steps:

- the main indicators developed throughout the study are summarised;
- the differences on these indicators are related to divergent approaches or 'styles' to industrial relations;
- the EU countries are clustered on the basis of these different approaches.

2.1 Summary of main indicators

The second chapter of the report presented four types of industrial relations regimes and matched each of the EU Member States with one of these. Based on this categorisation, the following table summarises the main indicators that we developed throughout the first part of the study (see next page).

The table clarifies again how the industrial relations systems of the EU countries can be significantly different. These differences are caused by:

- the power and the role of the industrial relations actors in the structuring and coordination of a topic;
- the division of responsibilities between the levels of an industrial relations system.

Table 5.2

Summary indicators industrial relations systems and innovation EU countries

	Indirect participation % workpl.	Direct participation % workpl.	Involvement in vocational training	Employment protection	Traxler Classification wage bargaining	Infor. Society consultation	Innovation Scoreboard
Nordic							
Denmark	66	60	State-led; joint management	1,5	Lean corporat.	No	3,5
Finland		66	State-led, social partners	2,1	Other corporat.	Yes	4,7
Sweden	92	66	State-led, social partners	2,4	Other corporat.	Yes	6,5
Core							
Austria		51	Joint management	2,4	Lean corporat.	Yes	-2,5
Belgium		50	Joint management	2,1	Corpor./Statism	(Yes)	-2,5
Germany	66	49	Joint management; demand-led	2,8	Lean corporat.	Yes	0,6
Luxembourg		51	Demand-led			No	-4,4
Netherlands	55	69	Joint management	2,4	Lean corporat.	Yes	2,9
Anglo-Saxon							
Ireland	58	52	State-led, joint management	1,0	Lean corporat.	Yes	1,2
United Kingdom	61	54	Demand-led; partnership trend	0,5	Neoliberal	No	4,4
Mediterranean							
France	80	54	Joint management	3,1	Statism	No	-0,6
Italy	80	49	Joint management	3,3	Lean corporat.	Yes	-5,9
Greece		51	State-led; consultation	3,7	Statism/other corporat	(Yes)	-7,9
Portugal	33	43	State-led; consultation	3,7	Statism/other corporat	No	-8,7
Spain	83	47	Joint management	3,2	Other corp..	No	-5,9

Innovation scoreboard indicator: a tentative summary indicator deduced from the ranking of countries on each of the Scoreboard indicators.

2.2 Industrial relations 'styles' and impact on innovation

The general form of regulation within the industrial relations system determines the development of the linkages and the dominant level of involvement (none-company-sector/region-nation). The following dominant exchange principles or 'styles' of industrial relations systems

can be distinguished. Each entails different consequences for the strength of the relationship between industrial relations and the innovation strategy:

- **market:** a system with a predominance of values exalting individual freedom and contract. Industrial relations are developed on a voluntaristic basis. Corporatist arrangements of co-ordination and co-operation between social partners are practically non-existent. Legal forms of employee participation at company level are poorly developed. As a consequence, there is no strong involvement of industrial relations in the innovation strategy;
- **conflict:** an antagonistic conflict of interest between the industrial relations parties, reduced likelihood of mutual co-operation given the zero-sum situations, deficits in organisational capacities and lack of mutual recognition. Low involvement in innovation strategies and policies;
- **state:** co-ordination and regulation depends on legal embeddedness and public governance, the influential role of the state and the political system in the socio-economic system. Industrial relations play only a secondary or additional role in the innovation strategy;
- **co-ordination:** social partners largely discuss non-market mechanisms and arrangements in order to set up wage agreements, labour conditions, training and other standards. Defending individual interests while maintaining mutual respect leads to complex rules and procedures governing the stronger linkages between industrial relations settings and innovation issues;
- **co-operation:** long-term 'positive sum' conceptions of the common interest between all organised actors. Institutionalised political support and open, co-operative exchange with the state. Co-ordination that is trusting, though not always formerly articulated. Strong involvement of the industrial relations system with or without government action in the field of innovation. The Nordic countries have these co-operative relations to a high degree.

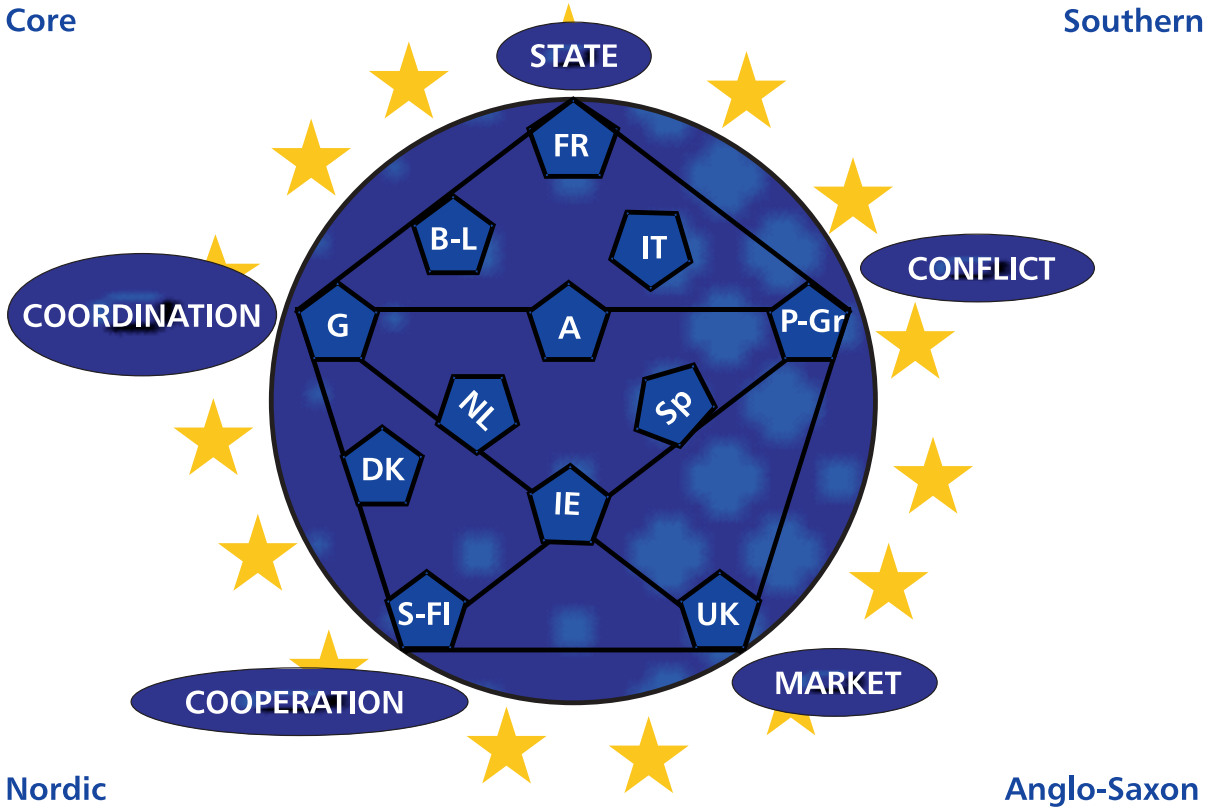
In the industrial relations systems governed by the principles of co-operation and co-ordination, we find the strongest involvement in innovation matters. The market model of voluntaristic industrial relations stand in the way of strong involvement by the industrial relations system in innovation strategy and policy. Adversarial industrial relations likewise hamper any collaborative environment for innovation.

2.3 Industrial relations and innovation clusters in the EU

Empirically, it is not easy to define the industrial relations system of a country solely on the basis of one of the above exchange principles. Most European countries are hybrid cases. Moreover, regions or sectors may diverge considerably from the dominant national mode. Drawing up typologies along these lines clearly involves some loss of subtle distinctions. Nevertheless, we conclude this synoptic presentation on the frameworks of industrial relations and innovation by constructing an overall picture based on these types of exchange regimes within an industrial relations system (see figure). The straightforward classification by Ebbinghaus of the EU Member States into four distinctive industrial relations types (see Ch.2 point 2.2.) is thereby abandoned and replaced by a more 'open' classification based on the listed principles.

Figure 5.2

Industrial relations and innovation clusters, the EU countries sorted



- | | | | | |
|--------------|--------------|--------------|------------------|---------------------|
| A = Austria | FI = Finland | GR = Greece | L = Luxembourg | S = Sweden |
| B = Belgium | FR = France | IE = Ireland | NL = Netherlands | SP = Spain |
| DK = Denmark | G = Germany | IT = Italy | P = Portugal | UK = United Kingdom |

The diagram presents the EU member states. They are structured in a conceptual space composed of the principles of exchange and relationship and geographical position. There are countries, which are strong representatives of a specific industrial relations regime. Others are definitely mixed cases.

We can note representative countries for each type:

- Nordic: Sweden and Finland;
- Southern: Portugal and Greece;
- Anglo-Saxon: United Kingdom;
- Core: Germany.

However, there remains the difficulty of placing every single country in one of the types. From country to country there is a great diversity of relationships between industrial relations and innovation.

- *Anglo-Saxon*

First of all there is the Anglo-Saxon industrial relations style, dominated by a market logic. The United Kingdom is the typical representative of this industrial relations system and its relationship to innovation. Regulation, co-ordination and concertation are not well-developed aspects. Collective bargaining is weak. The vocational training system is demand-led. Workplace information and consultation have no strong legal backing. Employment protection regulation is low. Individual entrepreneurship, managerialism and 'laissez-faire' dominate the system. Innovation as part of the business system has no jurisdiction within the system of industrial relations. The recent government-led campaigns for enhancing social partnership are a major revolution in this regard. For historical reasons, to a large extent Ireland and the UK have the same structure of employee participation at company level. Indirect and direct participation are organised on a voluntaristic basis.

- *Southern*

Portugal, Greece and to a lesser extent Spain are characterised by adversarial industrial relations. Co-ordination is slowly developing, but is not yet strong and is often dominated by state initiatives. The negotiation and implementation of common strategies for innovation are yet to be successful. These innovation strategies are often regionally based and sponsored by EU programmes or requirements. Portugal, Greece and Spain are characterised by the weakest presence of employee participation. In Spain the strongest aspect of participation is indirect, while in Greece the tendency is towards direct participation. Portugal has the weakest pattern of employee participation.

- *Core*

Germany is traditionally the typical representative of co-ordinated capitalism. Social partners are involved in co-ordinating economic activity at all policy levels. Complex procedures and agreements are a major characteristic of this regime (see for example the apprenticeship system or the co-determination acts). Trade unions show a clear interest in research and technology (transfer and implementation). Assessment of the social consequences is the major line of approach. Austria is very comparable with Germany but, as a country with a strong rural tradition, it still has some catching-up to do in the global economic system. In Germany and Austria indirect participation has culminated in regulated forms of co-determination and board-level representation.

France is characterised by the importance of the government's role and by public governance in industrial relations. Trade unions are often tied to political influence and legislative change. Social partners have difficulty in determining and expanding their powers within the economic system. Industrial relations are often conflictual.

Belgium has a mixed model of corporatism instigated by state-led governance and with conflictual tendencies.

The Netherlands hovers between co-ordination (wage restraint as collective bargaining strategy), co-operation (workplace level) and the market (labour-market flexibility). At the same

time, the Netherlands is probably the most 'Scandinavian' of the non-Scandinavian countries. Direct participation in particular is strongly developed there, but employee representation does not have a strong trade union dimension in the Netherlands.

France and Belgium have a complex system of employee participation, with the trade unions playing an important role, a bipartite form of works councils and a lot of legal backing of the system. The 'core' countries, Austria, Belgium, Germany and Luxembourg, have a medium pattern of direct participation. Indirect participation has a strong legal basis.

- *Nordic*

The Nordic countries have a very co-operative model of industrial relations. Tripartite trust and co-ordination has created a framework for less formal developmental approaches. Combining strategies and tactics at decentralised levels is the outcome of social partnership. The Scandinavian countries have a distinct pattern of participation. Forms of indirect and direct participation are strongly implemented. Indirect participation is trade-union based. Denmark can be situated somewhere in the middle of the co-ordination and co-operation model.

- *Mixed cases*

Within the EU core, the smaller countries in particular are hard to place in this typology. They are often mixed cases. Accommodating to keep their competitiveness is a major characteristic of their co-ordination and co-operation model of industrial relations. Ireland and Italy are also hard to place in the typology. Although Ireland adhered to the typical Anglo-Saxon industrial relations regime and still does so, in its catching-up strategy this Celtic Tiger nonetheless developed a strong 'lean' corporatism. Italy is the most Nordic of the Southern countries with regard to the industrial relations system. Nevertheless, hierarchical and conflictual tendencies have traditionally played an important role in Italian economic governance. Recently, stronger forms of social partnership have been developed. Compared to the other Mediterranean countries, Italy is especially characterised by a well-developed system of indirect participation, dominated by trade union representatives.

- *Impact on innovation performance?*

With regard to innovation performance, based on the innovation scoreboard published by the European Commission, we see the Nordic countries (Sweden, Finland, and Denmark) and the countries with an influential market logic in their industrial relations (especially the UK) as strong innovation players. From an industrial relations perspective, these countries run counter to involvement in innovation matters. The Nordic countries are characterised by co-operative industrial relations, which score high on the components of the developed innovation-friendly model of industrial relations. On the contrary, the UK is characterised by a voluntaristic industrial relations system with low involvement in innovation-related matters.

On the basis of this puzzling result, once more we have to conclude that greater insight are needed before any further conclusions can be drawn from different systems of industrial relations and their positive or negative impact on innovation. Our literature review was only a first exploration of this impact.

3. A bridge under construction

Nevertheless, the review has discerned a distinctive set of industrial relations practices as positively affecting business ability to innovate. Together, these themes can be seen as an 'emerging' policy model of connecting industrial relations to innovation.

In this respect, a bridge can be constructed between the two policy areas of the Lisbon strategy. In the introduction of the report we formulated the hope that modernisation thinking within the policy area of industrial relations could be defined as an important frame of reference for policy makers in the innovation area. The European Commission urges the social partners to modernise and renew the European social model. Within these calls for modernisation, a workplace model has already been plotted: improving employment and competitiveness through a better organisation of work based on high skill, high trust and high quality, whereby the social partners are invited to take a leading role. The report demonstrates that the same concepts and ideas can be used to shape a policy agenda connecting industrial relations to an innovation strategy. In other words, the central link of high involvement work practices hand-in-hand with those initiatives outside the company which have been referred to, undeniably presents us with that interesting policy bridge between economic and social components which is a vital part of Europe's 'Lisbon' strategy.

This kind of involvement of the social partners in innovation matters will furthermore have other positive trade-off effects:

- a major feature of the innovation challenge is that it involves several policy domains and cuts across administrative boundaries. Boundary-crossing efforts are needed. Social partners can be important actors in this cross-boundary co-ordination, because they are interested in and involved in many policy domains;
- in most of the EU member states, social partners play an important role in macro-economic governance. In these terms, they can be seen as crucial lobbyists for political support on the innovation issue;
- the involvement of the social partners in the planning of innovation and other industrial policies can be seen as a 'balancing' act, making the industrial relations actors more sensitive to the national competitive position (see the Irish social partnership experience).

Policy crossovers have to be seen in the context of the divergences which exist between the Member States in relation to industrial relations' involvement in innovation issues. It would, however, be a mistake to see these differences in style and connection as an impassable barrier. Alongside this diversity, the review also shows that in each of the clusters there is scope for industrial relations initiatives geared to innovation. The geographical diversity of the cases (presented in the appendices) is a further proof of this potential for action. Following these examples, comparable initiatives can be deployed elsewhere in Europe and within other industrial relations systems. It only has to be borne in mind that EU countries have different industrial relations structures and styles as an institutional starting point.

However, there are even more challenges ahead in developing the bridging field of policy. The following obstacles have to be overcome more firmly:

- *lack of awareness*: Industrial relations actors take up a variety of relevant themes. Yet this rarely happens from an innovation perspective. It is other, more traditional targets of

- industrial relations that impel these initiatives: the productivity, employability and adaptability of workers or the quality of working life. The innovation discourse is rarely used, for instance, in collective bargaining or in macro-economic concertation;
- *struggles over implementation*: the proposed high-involvement work practices and the co-operative industrial relations climate face a dissemination problem. The capacities of companies, workers and their representatives to implement this organisational model have to be improved;
 - *unexplored terrain*: Wages and flexibility are two main themes dealt with in the industrial relations system. The linking of these favourite industrial relations subjects with innovation remains to a large extent a 'black box'.

4. Ways ahead

Our review leads us to conclude that, in order to achieve the full potential of innovation-friendly industrial relations throughout Europe, new and greater policy efforts are needed. In the following points we therefore summarise ways ahead for the firm adoption and diffusion of the proposed model through the combined efforts of the multiple industrial relations levels.

In order to break down the barriers we have identified, policy efforts will have to focus on:

- raising the awareness of industrial relations actors and innovation policy makers;
- enhancing the capacities of companies and workers to adopt high-involvement work practices;

Table 5.3

Tasks of industrial relations actors in strengthening the policy efforts

Theme	Social partners	Trade unions	(Innovation) Policy makers
Raising awareness	<ul style="list-style-type: none"> • Campaigns to raise awareness of industrial relations actors at company level • Programmes for employees within business innovation networks 	<ul style="list-style-type: none"> • Campaigns to stimulate workers' awareness and acceptance of innovations 	<ul style="list-style-type: none"> • Involving social partners in planning innovation policies • Mainstreaming initiatives taken by social partners
Dissemination high-involvement practices	<ul style="list-style-type: none"> • Set up research, training, networks, consulting, funding 	<ul style="list-style-type: none"> • Explore the win-win situations of partnership 	<ul style="list-style-type: none"> • Support programmes social partners
Investigating and evaluation of existing structural links	<ul style="list-style-type: none"> • Assess the current legal procedures on information and consultation of employees on their contribution to innovation processes at company level • Enhance the management efforts of vocational training • Strengthen the involvement in regional innovation strategies • Make appraisals of collective bargaining outcomes more sensitive to innovation 		

- investigating and evaluating existing structural links between the industrial relations system and innovation issues/policies for each policy level (especially at the national level).

Initiatives will need to be taken by the industrial relations actors themselves and by governments at national or lower levels. The instigation of these efforts can be seen as a collective responsibility of the industrial relations actors (employers and their organisations, trade unions and public authorities). Nevertheless, some specific tasks can be assigned to each of these actors (these will be stressed throughout the section).

4.1 Raising awareness

Governments can demonstrate leadership and guidance in raising the interest of industrial relations actors in the innovation theme. The following procedures can be seen as useful in this regard:

- consulting the social partners, when setting up important innovation policy programmes. Existing bodies for macro-economic governance could be used to this end;
- assessing the quality and the impact of the social partners' involvement in foresight programmes and national advisory boards which lay the groundwork for science and technology policies. In cases where none exist, consultation should begin in order to investigate the pros and cons of setting up such initiatives;
- mainstreaming initiatives to be taken by the social partners on training or work organisation within the framework of innovation policy (for instance in business innovation centres).

The goal of these awareness-raising activities has to be that the innovation discourse should exert a bigger influence within the field of industrial relations.

Employers' organisations and trade unions should develop initiatives to raise the interest of their members in the innovation topic. Innovation can develop and spread only if it is widely accepted:

- employers' organisations should create awareness among their members on how direct and indirect forms of participation can drive and facilitate innovation;
- trade unions should run campaigns to stimulate the workers' awareness and acceptance of technological changes and organisational innovations (see Swedisch LO IT-campaign);
- when business innovation networks are set up, it is worth considering the value of a specific programme for employees (see the PRYO-project).

4.2 Increased implementation of high involvement work practices

Employers' organisations, trade unions and authorities could be helpful in implementing the innovation-friendly model of workplace industrial relations. In order to disseminate the implementation of participatory systems a number of tried and tested policy initiatives can be deployed or reinforced:

- research programmes that will build a strong knowledge-base of concrete experiences (such as the Workplace Development Programme in Finland or the Innovative Work Organisation programme in Germany);
- training and demonstration projects to give companies and trade unions insight into untried possibilities (such as ANACT in France);
- consultancy support in order to apply these experiences in new contexts, particularly for SMEs (such as Custom-made working time, Austria);
- benchmarking and networking services to enable companies to highlight strength and overcome weaknesses (such as the KISS project in Germany);
- financial incentives to stimulate experiment (such as the Partnership Fund in the UK or the Workplace Development Programme in Finland).

Trade unions can be important players in this regard:

- trade union responses to new forms of work organisation and the IT revolution have to be accordingly more focused on the innovation issue;
- win-win situations have to be clearly defined;
- the trade union benefits of a non-adversarial, pro-active attitude have to be more clearly envisaged (see Danish LO initiative).

4.3 Investigation and evaluation of existing structural links

Lastly, it is certainly important to investigate and evaluate those existing institutional frameworks and structures of the 'wider' industrial relations system which determine the impact of the system on innovation matters. This assessment has to be conducted by industrial relations players at the appropriate level:

- industrial relations actors need to assess how the current legal procedures on information and consultation of employees contribute to employee participation in innovation processes at company level. The question has to be raised whether greater support is needed for employees' participatory rights (see Works Council Law in the Netherlands);
- human capital investment is crucial for the contribution of employees to an innovation strategy. Maintaining the employability of employees through vocational training will prepare them for changing job tasks, acquiring new skills and adapting to new process technologies. The interest of the social partners in the issue of vocational training has risen sharply in recent years. There has to be exploration of how these management efforts could be strengthened;
- the role social partners can play in the development of regional (or sector) innovation systems has to be determined. Possible functions are:
 - broad-based support for the regional innovation strategy by participation at the planning stage;
 - support by signing a local pact or public mission statement on the strategy;
 - managing a regional development agency as part of the implementation;
 - introducing the necessary labour market policies to strengthen the strategy (for instance by screening and monitoring skill needs);

- the innovation issue could be given more prominence in the collective bargaining system. Appraisals of the bargaining outcomes have to be more sensitive to the innovation issue. Agreements on wages, job classifications, flexibility regulations have to be evaluated in terms of their effect on the innovation contribution of the workers.

5. Speeding-up the process: the European policy perspective

The European Commission has been an important driver for both policies at stake: innovation and industrial relations. In both areas it co-ordinates and benchmarks national policies and encourages the exchange of experience between member states. The goal is to intensify and improve the actions taking place at the national or regional level.

The European Commission could play this recognised role of catalyst in the proposed bridge building process between industrial relations and innovation. Four tasks can be distinguished as part of such a role: mediating in building the shared vision of the social partners, stimulating initiatives at lower policy levels, monitoring progress and carry out studies to fill knowledge gaps.

5.1 Mediating in building the shared vision of the social partners

Expectations could be raised that the social partners at the European level might establish a shared vision that could give support to the emerging activities of the national or workplace levels. At the different industrial relations levels awareness has to be raised, policy terrain explored. The European level of industrial relations can be seen as an important forum for stimulating these efforts. It is at this policy level, where the innovation strategy and the renewal of the industrial relations model are defined as the important pillars of an ambitious political project, and where the social partners have repeatedly been invited to engage in this project. It is also at this level that the experiences and traditions of the different industrial relations system of the EU Member States can come face to face.

The Commission could play a mediating role in the development of this shared European vision. On the basis of a consultation document, it could invite the European social partners to give their views on the possible future of connecting industrial relations to the innovation strategy. Which principles should be followed and which prior mechanism should be promoted in order to connect industrial relations activities more firmly with the innovation strategy?

In their Laeken declaration of 2001, the European social partners suggested a rationalisation and simplification of the consultation and concertation process by means of concentrating it

in a new committee at the highest political level close to the European Council. In their final report, the High Level Group on Industrial relations and Change (2002) considered this kind of concertation body as central in giving the social partners the opportunity to discuss the interdependent policies of the Lisbon strategy. Adding the innovation issue explicitly to the concertation powers of this new committee could be an important step for connecting industrial relations more firmly to the innovation strategy in Europe. It would be an important sign for the national councils of social partners, which exist in most of the EU countries and are involved in macro-economic concertation, to take an increased interest in innovation matters.

5.2 Stimulating the bridge's construction

A second task would be to stimulate implementation of good practices at the national or lower levels of industrial relations practices.

- *Support for the information and consultation Directive*

The European Union recently adopted an Information and Consultation Directive. The purpose of the Directive is to establish a general framework setting out minimum requirements for employees' right to information and consultation at company level. Information and consultation are defined as taking place between the employer and employee representatives, although other arrangements are possible by agreement between management and labour. In the stated model of connecting industrial relations to the innovation strategy an important role has been assigned to forms of direct participation in combination with a partnership role of employee representation. Once this policy argument is taken seriously and the dissemination problem of employee participation is confronted, a case can be developed, based on the business innovation strategy, for supporting the implementation of the Directive by the Member States.

- *Facilitating catch-up processes*

Uneven adoption of direct forms of participation, the historically biased traditions of industrial relations exchange principles and the different degree of policy possibilities imply that initiatives will be relevantly applicable in different country-specific contexts. The typology we have constructed for dominant governance principles in the domain of industrial relations and innovation could be useful in this respect. It is probably no coincidence that the exemplary model of innovation-friendly industrial relations is the least developed in countries which have a tradition of adversarial industrial relations. Specific attention will have to be paid to industrial relations cultures, where conflictual relationships of this kind dominate the scene. Here, the European Commission could play its recognised role of interface.

- *Funding demonstration projects*

Funding of decentralised experimentation seems an obvious measure in this direction. The report illustrates possible contents of such funding (see the presentation of the UK Partnership Fund and the Finnish Workplace Development Programme).

The positive impact of linking innovation strategy and policy more firmly to European employment and social policies would become a clear component of this task. This linkage would certainly enhance the funding possibilities for decentralised experimentation. New initiatives of social partners or industrial relations actors geared to the innovation strategy could be funded from a variety of programmes:

- vocational training: Leonardo;
- regional innovation strategies: Regional funds;
- programmes within the Social Funds, such as Equal;
- peer review programmes of the European Employment Strategy.

5.3 Monitoring the bridge building

Monitoring and surveying national policies is part of the mission of the European Commission. In the area of innovation policy this is tackled by the Trend Chart on Innovation, the Innovation Scoreboard and the Community Innovation Survey. In the area of industrial relations monitoring takes place through the European Industrial Relations Observatory and the newly created European Monitoring Centre on Change, which are both run by the European Foundation for the Improvement of Living and Working Conditions. CEDEFOP plays this monitoring role in the field of vocational training.

The present study has made a first step towards monitoring industrial relations policies and innovation policies within a common conceptual framework. Establishing an integrated monitoring system, based on such a common framework, at the European level would be an important step forward. The overall goal of this integrated monitoring would be to keep track of progress and stimulate the sharing of successful experiences, comparing initiatives and results of innovation-friendly industrial relations. In this regard, intensified exchange of information and other forms of collaboration between the mentioned European agencies of the two policy areas can be defined as the first tasks ahead.

5.4 Bridging the knowledge gaps

A fourth and final part of this catalytic role could be the further development of knowledge on the topic of industrial relations and innovation in European comparative terms. The following important topics of research can be identified.

- For which kind of innovation strategy, and in which kind of business environment, do 'high-involvement' forms of work organisation bring the highest added value to innovation performance?
- What is the innovation impact of stable vs. flexible employment relationships?
- Trade union involvement in national technology and research policies varies a great deal between the EU member states. There are few comparative insights into the function of the social partners in activities such as foresight programmes, national councils on research policy, or technology assessment procedures.

- In the field of labour economics, there is a particular need to examine the interaction between innovation, competition and wage bargaining. A growing body of research is looking into the relationship between wage bargaining/co-ordination and economic performance (at macro and micro-level). Until now, innovation has by no means been a recurrent performance indicator in these comparative studies.
- Regional and sector innovation systems receive more and more attention in innovation policy. There is some recognition of the role of trade unions in these systems. So far, however, there has been little systematic effort to understand why unions play, or could play, a significant role in the development of regionally or sector-based innovations.

6. Guiding principles

In this report, extending and deepening the impact and involvement of the EU industrial relations systems on innovation has been defined as an important task. The means of completing have been explored. The role the European policy level can play in this regard has been determined. Throughout the exploration, it became clear that three principles are of cardinal importance for the successful completion of the task(s) ahead:

- **partnership**: a process which involves a combination of consultation, negotiation and bargaining, and is heavily dependent on shared understanding, along with a problem-solving approach in which interest groups address joint problems. This core value of the traditional European industrial relations model seems to have remained pertinent in tackling the issue of innovation in the field of industrial relations;
- **transnational mutual learning**: gearing industrial relations more firmly to the innovation issue is a goal still hampered by many knowledge problems. The development, transfer and diffusion of expertise are still needed for many of the links to be established. This is certainly the case if we take into account the different industrial relations traditions within Europe. Open, mutual learning throughout Europe is therefore an instrument that continues to be needed in this effort;
- **reciprocal interest**: if an industrial relations system is to be interested in the innovation strategy, the latter will have to demonstrate its interest in policies designed to look after 'losers' in the innovation processes. The question of how innovation practices can contribute to the goals of industrial relations was not a major part of the study. Nevertheless, the social sustainability of the innovation strategy crucially demands further attention. The benefits resulting from innovation strategies can and need to have a wider social application for there to be long-term success. In policy terms this question has to assume a prioritised role as part of the next 'bridging' step.

European Commission

EUR 17060 - Industrial relations as a key to strengthening innovation in Europe

ISBN 92-894-5666-3

