

Coriat, Benjamin

Working Paper

The state of organizational reform in European firms: Evidence from a comparative overview of ten EU countries

LEM Working Paper Series, No. 2004/04

Provided in Cooperation with:

Laboratory of Economics and Management (LEM), Sant'Anna School of Advanced Studies

Suggested Citation: Coriat, Benjamin (2002) : The state of organizational reform in European firms: Evidence from a comparative overview of ten EU countries, LEM Working Paper Series, No. 2004/04, Scuola Superiore Sant'Anna, Laboratory of Economics and Management (LEM), Pisa

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Laboratory of Economics and Management
Sant'Anna School of Advanced Studies

Piazza Martiri della Libertà, 33 - 56127 PISA (Italy)
Tel. +39-050-883-343 Fax +39-050-883-344
Email: lem@sssup.it Web Page: <http://www.sssup.it/~LEM/>

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Working Paper Series

The State of Organizational Reform in European Firms

Evidence from a comparative overview of ten EU countries

Benjamin CORIAT*

** CEPN-IIDE, CNRS Research Unit 7115, University Paris 13*

2004/04

March 2004

The State of Organizational Reform in European Firms

Evidence from a comparative overview of ten EU countries¹

Benjamin Coriat
CEPN-IIDE, CNRS Research Unit 7115

University Paris 13
coriat@club-internet.fr

(this version, March 2002)

Summary Based on some recent surveys, the paper is intended to offer an overview of the diffusion organisational change in European firms and their effects in terms of performance and impact on employment. Taking into account the differences in national industrial relation systems in which the changes have taken place, contrasted “national” trajectories are exhibited. Three “models” of diffusion are thus highlighted. The main conclusion of the paper is that – in spite of positive effects in terms of performance – the process of organizational change in the European firms is still timid and carried on under strict managerial control.

Key Words : Organizational Innovation, Organizational Competencies, Flexibility, Labor Markets.

¹ This paper is one of the outcomes of the DYNACOM project sponsored by the European Commission.

INTRODUCTION

Objectives

This paper is intended to offer an overview of the diffusion organisational change in European firms and their effects in terms of both performance and impact on employment.

Relative to the available research on this topic, the present study offers several original features:

- First of all, the empirical data (derived mainly, as will be seen, from two rather exhaustive European surveys²) permit *a unique comparative analysis of the transformations occurring in this domain in ten European countries*. Unique, let's insist on this point, because these surveys are the only ones available covering ten countries and using a sole and identical questionnaire applied to a great sample of firms (5 768, see the Appendix presenting the technical details of the surveys) Thus, in spite of the usual limitations faced by survey-based data (see below for a discussion of this issue), the comparative dimension should allow us to go beyond existing studies in identifying and understanding the processes at work in the diffusion of organisational innovations.³ In particular, the available statistical material will permit the formulation of results that serve to re-evaluate what earlier studies (country-based) have left at the stage of simple conjectures or hypotheses. Thus, in the first section of this paper while presenting some basic results of the EPOC surveys, our purpose is limited to the goal of presenting new evidence to better qualify and discuss some of the results presented in the existing "national" surveys on organizational innovation⁴.

In addition to these considerations, the nature of the data compiled allow to explore, even if in a very preliminary way⁵, two new types of questions.

- *The first involves an investigation on the specificities of the path – or the "trajectory" – followed by the European firms and countries in the area of organisational change*. In particular, the question has been raised as to whether it is possible to identify *one or several 'models' of change* among European firms and countries. This, in turn, calls for a consideration of the impact of social relations--and notably the national system of industrial relations--on the firms' behaviour in the area of organisational change. A first series of results concerning this point are presented in section 2.
- The other new question addressed in this paper is that of the *effects of organisational changes on employment*. Here too, the nature of the data gathered and the way they are processed by

². These studies are cited throughout this article as EPOC and EPOC-1999 (cf. bibliography).

³. Most of the existing studies are country-based. Among the most detailed existing surveys focusing on organisational innovations are: Disko [1996-16] and [1996-17] for Denmark; ERSC [1997] for UK; Lay et al [1999] for Germany, and Greenan [1996a] and [1996b] for France. For a critical analysis of these contributions but also their limits to the understanding of the way organisational innovations can be analyzed and characterized, see Coriat, 2001a. Other important country based surveys are Nutek, 1996 for Sweden and Osterman, 1994 and 2000 for United States.

⁴. In particular, this first section refines certain propositions advanced on the basis of the study of three country surveys on organisational innovation (Denmark, UK and Germany), the results of which are presented in our (2001a) paper.

⁵ "Very preliminary", because of the lack of data to be confronted to the ones established by the EPOC surveys

the European surveys used (which distinguish two main models, one focused on “functional flexibility” and the other on “numerical flexibility”⁶) allow to establish a first series of results that show sharp contrasts depending on the type of adaptation to competitive pressures privileged by the firms in the different European countries. The key results are presented and discussed in section 3.

Relations with the theory of organisations and innovations in organisation

While main concern of this study is to present some results of recent empirical investigations on the field of employee participation and organisational change, the connections between these empirical concerns and more theoretical considerations have played an important role at each stage of the analysis. Indeed, the literature on phenomena related to organisational innovation reveals *a vast gap between studies of a theoretical nature on the one hand and empirical ones on the other*.

Over the past two decades, the development of the theory of organisations and its penetration into the core of microeconomic analysis has profoundly shaken the traditional vision of the firm and especially the understanding of the way firms ensure their survival on competitive markets by establishing relative advantage over their rivals. More particularly, for our purposes, along with 'technological competencies' that have long been the subject of numerous and often sophisticated studies, *the theory of organisations has brought out the existence of specific 'organisational capabilities'* and, in order to do so, has developed a series of tools that are often quite refined (cf. Azoulay and Weinstein [2000], Dosi, Nelson and Winter [2000], Dosi, Coriat and Pavitt (2000) for recent overviews of this issue).

On this line of reasoning, based on Penrose's [1958] seminal work, the revival of the “resource-based theory” of the firm (Wenerfeld 1984, Montgomery 1995, Conner and Prahalad 1996, Foss and Knudsen 1996, Foss 1997a and 1997b, Grant 1996) evolved significantly with behavioural (Cyert and March [1963]) or evolutionary approaches to the firm (see among a large and diversified body of contributions: Nelson and Winter 1982, Nelson 1991, Chandler, 1992), Dosi and Marengo 1994, Dosi and Teece 1998, Prahalad and Hamel 1990, Dosi, Nelson and Winter 2000).

With regard to the notion of organisational innovation, all these studies have put forward the idea that --all things being equal-- *firms' (differing) capacity for drawing on appropriate protocols and routines to co-ordinate the information and knowledge distributed between the individuals belonging to the organisation is one of the key elements allowing the firm to establish persistent relative advantage*.⁷ To a certain extent this recent theorising has given new strength and relevance to the “X efficiency” hypothesis, first formulated in the seminal paper by Leibenstein, 1982.

Unlike prevailing approaches, such as Porter's, that lay the emphasis on firms' positions on markets and on the ways they use their market power, these analyses focus on firms' specificities and the internal elements accounting for their performances. One of the basic features of the approach is to insist on the fact that “the resources” created inside the firms are not and generally speaking, *cannot be acquired on the market* : the firm must create them by itself, or assimilate them after a period of

⁶ For a precise definition of these two notions and the proxys used to measure them see infra section 3

⁷ In addition to the survey by Azoulay and Weinstein cited above, cf. Dosi and Marengo (2000), who clearly bring out the specific features of the 'competence-based' approaches relative to those coming out of transaction costs theory or agency theory.

learning. As Teece, Pisano and Shuen [1997] put it, “*the very essence of most capabilities/competencies is that they cannot be readily assembled through markets*”⁸. Moreover, in this line of reasoning, and following Penrose basic intuitions, a firm’s growth and success is supposed to rely essentially on an *internal* and *endogenous* creation and accumulation process of specific resources often characterised as «organisational capabilities» or “competencies ».

In this paper, leaving aside the question of the so-called technological capabilities, we shall focus only on those «capabilities » that consist in using human resources by delegating more initiative to the individuals or by combining the existing skills in specific «combinative » arrangements (Kogut and Zander 1992) allowing the firm to strengthen its efficiency in the conduct of its activities.

Unfortunately this vision of firm organisational competencies has not given rise to *systematic* empirical investigations. What is available is only a series of partial and limited studies dedicated to this object, consisting either in partial country based surveys or in case studies⁹. The ambition of the present article is to undertake *a modest and admittedly partial attempt to fill this gap*. As we shall see, the tools of empirical exploration used here are wherever possible related to the categories established by recent developments in organisation theory to analyse competencies and organisational innovation as a means of creating relative advantage. In spite of the difficulty of rendering available data consistent with the theoretical categories, we hope to convince the reader that the initial results presented here demonstrate the relevance of the competence-based approaches and will encourage the undertaking of new and more refined studies on this subject in the future.

1. THE DIFFUSION OF ORGANISATIONAL INNOVATIONS : A COMPARATIVE OVERVIEW OF TEN EU MEMBER COUNTRIES

After recalling the context in which it has been launched and the essential features of the EPOC survey, we shall present some of the key results that it allowed us to establish. In the process, relations between the data from the survey and the categories derived from the “competence-based” theory of the firm will be specified. This section concludes with an initial characterisation of the overall 'path' followed by the European firms.

1.1. Context, Objective and Method of the EPOC survey

⁸. This vision, as pointed out by Azoulay and Weinstein (2000) « *imply a rather radical criticism of the standard vision of firms and competition. In a Walrasian world, with perfect information and where there are markets for all goods and factors of production, it seems obvious that there cannot be firms with different characteristics and performances*».

⁹. For countries based surveys on organisational innovation cf. note 2. As regards cases studies, see among other works, Andreassen et al (1995). More recently the consulting firm Business Decisions Limited has undertaken, for the DG 5 of the European Commission, a review of the literature, (cited hereafter as DG 5, 1999) that includes a short presentation of a number of cases studies.

To fully understand the objective and the methodology of the EPOC study, it is useful to recall here some elements of the context in which the survey was launched.

Throughout the decade 1990, in the business circles as well as within the Commission of the European Communities, the debate was intense, about the question of innovations in organization. Under the pressure of the spectacular ascent of the competitiveness of the Japanese firms, the discovery of the "Toyota model" and the theorization it has given rise to (Aoki, 1988 and 1990...), Europe, after United States, began to wonder about the virtues of a "High Performance" model of work organization. In Europe, the question is all the more lively as the question fits into the debate on the existence of a so called "*European paradox*", a view according to which one of the reasons of the relatively poor performances of the European firms regarding technological innovations lies in the fact that Europe is still blocked in rather "rigid" modes of organisation, largely inherited from the old Tayloristic and Fordist models, allowing too narrow a space for employee initiative. Thus the question of being able to promote a process of organisational innovation is considered as key to unlocking the capacity of European firms to improve their performance, especially in the field of innovation.

During this period, the European Community launched two "Green Papers", one on "Growth, Competitiveness and Employment" (1993), and the other on "Partnership for a New Organisation of Work" (1997). They both heavily insist on the need to facilitate vigorous organisational reform in European firms. The 1997 "Green Paper" in particular, after having insisted on the idea that "... *the purpose ... is to stimulate a European debate on new forms of organisation of work*" ... states that "... *It is about the scope for improving employment and competitiveness through a better organisation of work at all workplaces, based on high skill, high trust, high quality. It is about the will and ability of management and workers to take initiatives, to improve the quality of goods and services, to make innovations and to develop the production process and consumer relations*".

In this context, the DG 5 (Social Affairs) launched a series of case studies to better identify the potentialities and the obstacles to organisational innovation¹⁰. Moreover, it seems not exaggerated to say that the Green Paper's objective might be interpreted as a will to define a specific "*European Social Model*", and the appropriate means to insure its diffusion inside the firms of the member states.

Beside these initiatives, is the hypothesis that the new Human Resources Management practices developed throughout the 80's and the middle of the 90's (often referred to in the Managerial literature as "best practices"), are important tools to be used and invested in by firms to strengthen their competitiveness. This is the reason why the survey launched by EPOC is designed around the notion of "*employee participation*". The objective of the questionnaire is to draw some mapping of the situation in European firms regarding the different forms of employee participation, these forms being used as a "proxies" to evaluate and measure the level of penetration and diffusion of the new organisational practices that have emerged in the last 15 years.

¹⁰. A work to which the author of this paper was associated (see Andreassen et al 1995).

The structure and the basic content of the questionnaire is presented in the Appendix of this paper. Let's just recall here that the survey offers the singular advantage of having carried out an inquiry on a ten-country sample on the basis of *a single grid of questions*. One thus is able to draw on a unique set of *directly comparable data*, which makes this survey a exceptional work tool.

The limitation --and not a minor one-- stems however, from the fact that the investigation does not bear *directly* on practices of innovation in organisation. In fact, the survey is focused on the identification, evaluation and interpretation of a subject designated as covering the *practices of 'direct participation' of employees in the conduct of production operations*. Such an objective imposed itself, because, as argued above, in the context of the early 90's the implicit idea prevailed that "*forms of participation*" were as such efficient means to improve, not only the working conditions of the employees, but also, some of the key elements underlying the competitiveness of the firms.

More precisely, what is identified and evaluated consists of 6 forms of "*direct participation*", which are themselves established according to two basic registers. Thus, the analytical grid (cf. Box 1) distinguishes 6 forms of direct participation (DP)¹¹.

BOX 1

Forms of "direct participation" identified in the EPOC Survey Definitions and Basic Content

The EPOC survey identifies 3 forms of "consultation"...

They are defined as follows:

- **Individual consultation :**

- "*face to face*" : arrangements involving discussions between individual employee and immediate manager, such as regular performance reviews, regular training and development reviews and "360 degree" appraisal;

- "*arms-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 of employees that discuss various work related topics on an ongoing basis, such as quality circles

¹¹. It has to be noted that in the EPOC categorisation "*direct participation*" (as defined in Box 1) is distinguished from "*representative (or indirect) participation*". "Representative participation" includes : "*joint consultation*" , "*co-determination*", "*collective bargaining*" and "*worker directors*", i.e. forms of participation that explicitly involve employee representatives. One consequence of this methodological choice is to under-estimate (in some way) the relative weight of employee participation of the countries where formal collective bargaining agreements include for example "co-determination" (as it is the case in Sweden) or "workers councils" (as it is the case in Germany). We shall come back to this point later on (cf. section 2 on this paper).

... and 2 forms of “delegation”

- **Individual delegation :**

individual employees are granted extended rights and responsibilities to carry out their work without constant reference back to managers - sometimes known as "job enrichment"

- **Group delegation :**

rights and responsibilities are guaranteed to groups of employees to carry out their common tasks without constant reference back to managers - most often known as "group work".

Source : EPOC (p.18)

The two situations identified in the survey may be thus characterized as follow : i) a first situation corresponds to the sole '*consultation*' of employees, with no obligation on management's part to incorporate the resulting demands and suggestions into work practices; ii) in the second case, there is a genuine '*delegation of power*' to individuals or groups aimed at allowing employees--in circumscribed and pre-established areas of activity--to carry out the responses that they consider the best adapted to accomplish their assigned tasks and functions.

If these distinctions are related to the basic categories of the theory of organizations, we may first observe that what is involved here is ultimately a criterion of distinction internal to what the theory of organisations associates with the notion of '*decision-making process*' (DMP), the goal of which is to examine the organisation's internal modes of information processing in view of decision making¹². From this standpoint, the survey ultimately distinguishes two modes of DMP:

- In the first, employees can express their viewpoints or demands but are *not* authorised to process the information in order to make decisions;
- In the second, employees (in predetermined areas) have the right and power to process the information and *make decisions*.

In the language of the theory of organisations, we may then say, following March and Simon, 1951, or more recent evolutionary theorists (Cohen et al 1995), that the two levels identified in the survey correspond to two methods of setting up “problem-solving devices”.

From this standpoint, we may suggest another complementary distinction, according to whether i) the problem-solving devices target “individuals” vs. “groups” and ii) according to the fact that they are implemented under strict “hierarchical” managerial control vs. designed so as to permit more “horizontal” coordination.

Table 1
Level and nature of “problem solving devices” present in the EPOC survey

	“Hierarchical”	“Horizontal”
Individual	Individual participation : « arms length »	Individual participation : « face to face » (Job enlargement*)
Group	Project Groups	Work Teams

¹². On this point, see March and Simon (1958) or March [1994], who demonstrate at length the importance of these processes and their the creation of firm’s relative advantages.

(Quality Circles**)

Source : Author's construction based on the EPOC survey

(*) Job enlargement is placed in parentheses since it does not really correspond to the idea of horizontal coordination; in practice the concept of "job enlargement" refers to the modification of individual jobs and *not to the relation between jobs*, relation which is implicit key to the idea of horizontal coordination. Reference is made to the practice since it implies a decentralisation of initiative to the individuals to whom is given a responsibility for a greater number of tasks.

(**) The practice of "quality circles" is classed under the category 'group/horizontal' in conformity with the criteria used in the EPOC survey. It remains the case that studies focusing on this issue have clearly established that there exist various types of quality circles. In the majority of these, coordination is hierarchical in the sense that the members suggestions are transmitted to management who decide whether or not to implement them. For this reason the practice is placed in parentheses.

Thus, what is identified and evaluated is not *organisational innovations as such* but rather *different modes of information management and decision making processes* at the employee level. The image obtained refers to *the degree and level of horizontal' and decentralised decision-making power in the handling of information necessary for carrying out production tasks..* Thus, the new "organisational forms" as such are not the subject of the investigation, the central purpose of the survey being to bring out and measure a group of 'key features' (or "characteristics") introduced in the organisations, namely, through the identification of types of employee participation implemented, those concerning the way information is processed and decisions are taken.

Although these "characteristics" of the type of DMP provide only an indirect description of the new organisational forms introduced, we hypothesise that *they are nonetheless representative of the existence of innovations in organisation.* Several of them, moreover, *are explicitly described and identified in the EPOC survey as typical of the different modes of direct participation.* Thus, the following correspondences can be established:

Table 2
Correspondences Between Modes of 'Direct Participation'
and "Organisational Forms" Cited in the Survey

MEANS OF PARTICIPATION	REPRESENTATIVE ORGANISATIONAL FORMS CITED
INDIVIDUAL CONSULTATION	
? Face-to-Face	
? Arm's length	
GROUP CONSULTATION	
? Temporary groups	"project groups", "task force", etc.
? Permanent groups	"quality circles"
INDIVIDUAL DELEGATION	"job enrichment"
GROUP DELEGATION	"group work", "team work", TQM groups, etc.

Source: Established by the author on the basis of EPOC methodology

Finally, even if there is no direct and immediate relationship between modes of 'participation' and types of innovation introduced¹³, the principle of “correspondence” that we have just indicated permits the passage from one to the other. On this basis, some inferences may be drawn.

1.2. An initial view of diffusion for ten countries: a level of penetration that remains modest and a process carried out under strict managerial initiative

If we consider only the most widespread forms, the observations and commentaries that they evoke differ according to whether one reasons in terms of *modes of “direct participation”* like the EPOC report or, as we are attempting to do, analyses the diffusion of the *organisational forms* held to be innovative.

Table 3 below (derived from the EPOC data on the basis of the correspondences established in Table 2) presents the percentages of the different forms of DP identified in the European firms. The organisational forms that may be associated with these DP practices are added in parentheses.

Table 3
Quantitative evaluation of the different “forms of participation”
and relations with the new “organisational forms” involved
(% of workplaces concerned)

	Individual (Information sharing)		Group (Information and knowledge sharing)*	
	“ Face-to-face ”	“ Arm's length ”	Temporary groups (project groups,etc.)	Permanent groups (quality circles, etc.)
“Consultative” Participation	(35 %)	(38 %)	(32 %)	(31 %)

¹³. Following this line of interpretation one may observe that for instance, “job enrichment”, which corresponds in the hierarchy of organisational innovations to a practice that is at once an old practice (dating at least from the 1970s) and considered to be of minor importance because it does not call into question Taylorist principles of work organisation at individual stations, corresponds nonetheless to a high degree of direct participation because it is associated with “delegation” rather than “consultation”. Conversely, “project groups”, which correspond to what is considered a high degree of organisational innovation insofar as they generally associate workers of different skills belonging to different department of the enterprise, are given a modest rank in the order of direct participation because they depend on consultation alone. “Work groups” are practically the only category that is at once a form considered innovative and depending on a high level of direct participation.

“Delegative” Participation	(job enlargement, etc.) (54 %)	(work teams, TQM groups, etc.) (33 %)**
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N.B : The total (223 %) is superior to 100 percent because the same workplace may involve its workers in several practices.

*Taking into account the very complex nature of most of the forms of “group participation” (especially the ones consisting in “project groups” and the like...), we hypothesize that, *what is shared between the individuals composing the groups, is much more than simple “pieces” of information*. One may reasonably hypothesise that, beyond the sole exchange of informations, *elements of knowledge* - dispersed in the more skilled employees composing the groups - are too shared between the participants. If we consider in particular the case of “project groups”, we may presume that these rather “complex” groups involve this type of “combinative” capabilities of the firms, defined by Kogut and Zander (1992).

** The relatively high score of “group delegation” is explained by the fact that this category includes TQM practices. As it will shown later on, if one refers to a more strictly defined notion of group delegation (i.e. “group work” and “team work”), the score falls sharply to 4 % (cf.. below 1.5 and the discussion around the Table 1.7).

Source: Established by the author from EPOC data.

The data assembled in this table suggest the following observations:

- i) While the different 'modes' of participation or 'forms' of organisational innovations yield relative scores that are significantly close (ranging from 31 to 38 %), *one form clearly stands out (namely : 'individual delegation' with a score of 54%), which in fact corresponds to 'job enlargement' or 'job enrichment'*. As indicated above, this form is quite old and easy to implement, which may explain why the yield is so high.
- ii) The total for forms based on '*consultation*' (which, as has been emphasized above, correspond to very *elementary* forms of direct participation) *largely surpasses that for 'delegative' forms* (146 vs. 87).
- iii) If we consider the “delegative forms”, apart from the fact that individual delegation in the form of “job enrichment” or “job enlargement” comes out largely ahead, it appears from complementary data provided in the EPOC survey, that within “work-teams”, the prevailing type is the team with a 'low intensity' of exchanges (namely the so called “Japanese” team). 'Scandinavian' forms of teams (broad autonomy, long and largely reconfigured cycles of work) occupy only a limited place.¹⁴

¹⁴. On this point, it is important to say that the authors of the EPOC Report propose a distinction between 'Swedish' teams (considered as very innovative) and 'Japanese' teams (considered as not very innovative) on the basis of a panoply of criteria which do not seem completely convincing and relevant. Such a characterisation (defining Japanese teams as having “low work content” and consequently with a low content of innovation) does not take into account the fact that “Japanese” teams constitute *only one element in an overall system* which includes high training levels, rotation of tasks not only within but between teams and a quasi-systematic “internal labour market”. Characterising Japanese teams as 'weak' implies a value judgement on the overall innovation level of the organisations considered, which is hardly relevant here. This is a typical case where the failure to take into account *the systemic dimension* (the place of the teams in the overall organisation) may lead to interpretative biases.

The fact remains however, that according to the sole criteria of degree of “worker autonomy” and length of “work-cycles”, the 'Swedish' teams can be regarded as much more “innovative” than the 'Japanese' ones. But one has to recall here that, strictly speaking, the only teams that can be qualified as 'Japanese' are those which are included in the protocols of “just-in-time” principles and “continuous improvement” methods, points which are not identified as such in the EPOC questionnaires. On this debate, see also Adler and Cole 1993, Berggren 1994, OECD 1999 and our own essay on Toyotism : Coriat, 2000.

It should also be noted that the practice of 'combining' forms is fairly infrequent, notably for the simultaneous use of three or more forms: the proportion drops from 22-25 % for 1-3 forms to 16 % for the simultaneous use of 4 modes of DP (cf. Table 4).

Table 4
The incidence of multiple forms of direct participation : ten countries

	Total %
One form	23
Two forms	25
Three forms	22
Four forms	16
Five forms	10
Six forms	4
Total %	100

Source: EPOC (p. 58).

Taken as a whole, these results yield a relatively precise image of the state of European workplaces. It should thus be observed that innovative practices *enjoy only a modest rate of penetration*. Europe thus seems to have been relatively timid in the management of its workplaces. *Rather than an organisational reform aimed at in-depth transformations, the data collected give the impression of witnessing no more than a partial reform of the 'hierarchical' model of organisation based on strictly defined individual job stations inherited from Taylorism.*

This remark is based on the double evidence that a) the most diffused forms are the “simplest” one, related to *individual* “job enlargement” and “job enrichment”; b) rarely they are combined with most advanced ones. Making a step further, it seems not exaggerated to observe that this “renovation” of the old practices are aimed at loosening the most disadvantageous constraints and limitations resulting from the classic Taylorist model. Such a loosening is itself pursued in two directions. On the one hand, there is the introduction of greater expression for employees, along with practices to enrich tasks on certain individual work places, in order to overcome the excessive division of tasks inherited from too strict application of the Taylorist principles of work organization. On the other hand, some 'horizontal' work groups are implemented in order to overcome excessive 'functional' compartmentalisation of tasks and functions. Ultimately, it is as if the organisational reforms were aimed above all at a better expression and co-ordination of information and knowledge of the employees with the goal of better mobilising some of the organisation's 'internal competencies' of the firm. It should also be noted that this process is achieved not mainly through “*decentralisation*” of the initiatives but mainly to facilitating *management's decision making*.

1.3. The motives for change

The insights provided by the questionnaires on this subject are extremely clear and confirm those of the preceding analyses¹⁵, so we shall limit our comments to the following:

Concerning the *motives* advanced by the managers to explain the changes undertaken, from the data collected, it would appear that (EPOC p.82)¹⁶: i) Whatever the mode of DP considered, the motive cited by the manager is always first and foremost the pursuit of *improved productivity*; ii) The *pursuit of quality* is also an important factor, very often mentioned by the managers; iii) The *combination of the two motives* (“*productivity + quality*”) appears to be particularly important; iv) Finally, it should be noted that the demands of employees or their representatives, or the requirements arising from collective agreements or labour law, *are very rarely cited* as motives for the introduction of changes (p. 82).¹⁷ For the authors of the EPOC report, this situation suggests that direct participation is '*primarily management inspired*' (EPOC p. 82), a diagnosis that confirms some the observations already made (see the conclusions of the previous paragraph)

As it will be argued later on, the idea of the process of transformation being “*primarily management inspired*” seems to be key to understanding what happened in European firms in the domain of organizational change, and to evaluating its successes as well as the limits it has reached.

¹⁵ . cf on this point the results already established by the the existing country based surveys already mentioned (see note 2).

¹⁶ The figures 5.1, 5.2 and 5.3 of the EPOC survey (not reproduced here for reasons of space) provide precise data of the issues examined in this paragraph

¹⁷ . However, where there is high employee representation, the motive of meeting collective bargaining demands is more often advanced. This corresponds to practices aimed at improving working conditions. On this point it should be noted, according to the managers, that in Sweden, Denmark and the Netherlands, the motive of improved working conditions (namely the combination the *combination* : “*productivity + improved working conditions*”) is more often cited than is the other countries.

1.4. Effect on firm performance

The changes introduced with the basic purpose of increasing productivity and quality and, in certain cases (which are less numerous), of improving working conditions, seem to fulfil their objectives perfectly. Table 5 below presents a synthesis of the results obtained from the questionnaire.

Table 5
Effects of the different forms of direct participation--% of those responding 'Yes'(*)

	Individual consultation : 'face-to-face'	Individual consultation : 'arm's-length'	Group consultation : temporary groups	Group consultation : permanent groups	Individual delegation	Group delegation
Reduction of cost	61	66	64	61	60	56
Reduction of throughput time	64	66	66	62	69	66
Improvement in quality	94	92	95	94	93	94
Increase in total output	52	47	48	53	44	58
Decrease in sickness	39	40	31	37	22	32
Decrease in absenteeism	42	39	39	39	28	37
Reduction in nos. of employees	27	37	30	26	26	30
Reduction in nos. of managers	26	25	23	22	28	31

(*) Questions posed to managers

Source: EPOC (p. 112).

The following comments may be made with regard to this table:

i) According to the managers¹⁸, *all the modes of participation have positive results on performance*, without any one mode (except “quality improvement”, see the following observation) distinguishing itself clearly in terms of its relative effectiveness;

¹⁸ . Of course this type of evaluation of the performances is of limited significance. But more refined criteria based on quantitative analysis provide very analogous results, see especially on this points Lay et al, 1999 in the case of the German survey.

ii) By contrast, the *improvement of quality* effect displays particularly high scores (ranging between 92-95 % positive responses depending on the mode of participation considered); these figures should be compared with those of the positive effect in terms of *reduction of costs* (56-66 %) and *increase in output* (48-58 %), which are also high, but less so than those obtained for improvement of quality.

It is also worth noting the clearly positive effects in terms of *reduction of absenteeism* (37-42 %)--an indicator often used as a proxy for working conditions--suggesting that the changes are well accepted by employees.¹⁹

Overall, we arrive at the basic result, which confirms what has already been observed in the review of the country surveys (on Denmark, Germany and UK (cf. Coriat 2001) and confirmed by other ones on Sweden : Nutek '1996 or United States : Osterman, 1994 and 2000), namely that *innovation in organisations is characterised by both "cost effects" and "quality effects" mixing gains stemming from both cost and non-cost factors of competitiveness*. This key point, which confirms the conclusions drawn from preceding studies, serves to define the nature of the relative advantages that can be constituted on the basis of the kind of 'organisational capabilities' that the firms have or are able to acquire through the implementation of innovative HRM practices.

1.5. Combination and benchmarking of the 'forms' examined

One of the merits of the EPOC survey, in relation to its predecessors, has to do with the attempt to go as far as possible in benchmarking the effect of the different modes of DP (and in certain cases their cumulative effects) on different performance indicators. If certain of the findings obtained are not surprising and confirm results which are already available, others are, by contrast, less predictable and thus worthy of closer attention.

An evaluation of these effects is proposed in the following tables:

Table 6.1
The effect on performance of multiple forms of direct Participation (% of those responding 'yes')

	1-2 Forms	3-4 Forms	5-6 Forms
Reduction of costs	58	65	69
Reduction of throughput time	59	66	71
Improvement in Quality	90	95	98
Increase in total output	43	47	73
Decrease in sickness	30	35	45
Decrease in absenteeism	28	41	49
Reduction in the no. of employees*	25	32	38

¹⁹ Interestingly enough, the lowest score (by far: 28 % positive responses) is that received by 'individual delegation of responsibility (i.e. job enrichment), which suggests that in this particular case, the 'working conditions' effect, if it was sought after--which is in no way presumed--was not obtained. This offers another proof for the argument that the reform is indeed carried out with a vision and objectives that are mainly managerial.

Reduction in the no. of managers*	15	26	35
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Source : K. Sisson (2000)²⁰

Table 6.2
Differences in performances between companies using 5 or 6 modes of DP
and those using only 1 or 2

? cost reduction	+ 18 %
? out-put increase	+ 35 %
? lay-offs*	+ 14 %
? reduction of managers*	+ 28 %

Source: EPOC (p. 114).

* The presence of the last two items (lay-offs and reduction of managers) poses a problem insofar as the improvement of performance is obtained by the elimination of personnel, thus raising the question of the effects of DP on employment and the labour market. This particularly important and sensitive issue will be addressed below (cf. section 3). At this stage, we shall simply observe the significant nature of the disparities (regardless of the items considered) between low and high-innovation firms in terms of the introduction of modes of DP.

A key result, stemming out from these data, is that the *combined utilisation* of different modes of DP yields improved performance, a proposition that the authors of the report formulate in the following terms: “*Performance shows even greater improvement when the use of numerous modes of DP are combined; in particular, the effects on performances are systematically better for firms that simultaneously use five or six modes of DP than for those that use only one or two*” (EPOC, p. 113).

With regard to the benchmarking of the *different modes of DP*, the EPOC report also offers some useful indications). In particular, forms of consultation under the heading of 'temporary groups' appear to have in most cases more impact than those in 'permanent groups' (respectively : 64 % vs. 61 % , for 'reduction of costs', 66 % vs. 61 % for 'reduction of throughput time' and '95 % vs. 94 for % 'improvement of quality'). (Sisson, 2000, p.6)

This point may be, at first glance, somewhat surprising, since one could hypothesise that “permanent groups” are more suited to benefit from “learning effects” (Cole, 1979 and 1993, Coriat 2000) . In fact, if one refers to the content of “temporary groups” (“project groups” and the like vs. “permanent” ones : basically “quality circles” and the like), the observation that the “temporary” groups have more positive effects than the “permanent” ones is not completely surprising, since the 'temporary' forms of DP correspond to *forms of organisational innovation which are often more advanced and complex (involving employees of different levels and skills) than the 'permanent' ones (quality circles, most often composed of workers positioned at very similar skill levels)*. Further, this observation is consistent with the idea put forward by Kogut and Zander, 1992, according to which the “*combinative capabilities*” of a firm (involving individuals of different types and levels of skills and belonging to different sphere of activities of the firm) are the real locus of its competitive advantage. At the same time, this observation seems consistent with the idea that

²⁰ This study is recent publication from the EPOC group providing some more precisions based on the analysis of the the same 1996 basic questionnaire.

the most significant performance effects correspond to the most daring organisational innovations.

In any case, it results from the data provided by the survey that *the economic benefits of organisational reform in Europe seem directly correlated to the level of managerial involvement*. For both “individual” and “group” forms of innovation, the best results in terms of performance are associated with the “forms” that directly imply a high level of managerial involvement.

These observations must, however, be tempered by others concerning the 'delegative' forms of DP. On this issue, one the salient conclusions of the report states that : *“In the case of 'individual delegative' modes of DP, the best performance effects are associated with giving a margin of initiative to individual players in terms of relations with customers and mastery of their own organisations”* (EPOC p.115). In the same vein, the Report emphasises too, that in the case of “group delegation” : *“the scope and intensity of group delegation were of particular importance for economic performance”* (ibid). This last point is clearly illustrated by some data provided by Sisson, 2000.

Table 7
The effects on performances of different types of group delegation (% of respondents saying “Yes”)

	“Toyota model” (low intensity)	Scandinavian Model (high intensity)
Reduction of costs	44	80
Reduction in throughput time	56	80
Improvement in quality	91	96
Increase in output	27	99

Source : Sisson, 2000, (p. 11).

These observations are important. They suggest that there is not simply one path, or to put it in more provocative terms, “one best way” for obtaining 'high performance'. Besides the dominant direction followed : *that of consultation with a present and active management*, it appears that there is another parallel way (not necessarily alternative) : *that of effective delegation of tasks and functions to individuals or groups*. The data from the EPOC survey clearly show, however, that *European managers unambiguously prefer the first direction, i.e. that of spurring a 'consultative' type of organisational reform under the close control of management*²¹. And this is the case in spite of the fact that some of the EPOC data indicate that the second path (illustrated by the high level of performances obtained by the “Scandinavian model”) seems very promising.

²¹ This observation is confirmed by a set of data concerning more directly the composition and the functioning of “team works” First of all, it has to be noted that only 4% of the workplaces are concerned with the implementation of group work, a score which is undisputably very low. Moreover ... *“in the majority of cases the appointment of team leaders is a managerial prerogative. Joint decision-making occurs only about one fourth of all cases, while management decide the composition of the team in almost 40 % of workplaces and in only 15 % do the group members alone decide who may become of the work group”* (EPOC Newsletter 2000).

If, in conclusion of this section, we attempt to determine the significance of the whole of the data and observations presented thus far, it is possible to indicate the essential features of the 'European path' in the organisational reform now underway.

1.6. An intermediate conclusion : first indications about the trajectory followed by European firms

In very condensed fashion, the path towards organisational reform followed by European firms may be characterised as follows:

With regard to the modes and forms of change introduced, if organisational reform depends on varied forms, the analysis of the answers to the questionnaire clearly show that the reform is much *more widely aimed at the modification of tasks and functions on pre-existing individual work posts than at the setting up of work groups and teams in place of such posts.*

As regards "individual" employee expression and consultation, the reform seems to place the *essential burden of decision making on the managers* rather than delegating powers of decision to individuals and groups. As regards "group" participation, in the same way, the organisational reform relies fairly broadly on the setting up of 'transfunctional' groups *to overcome excessive rigidities in the functional division of labour inherited from the Taylorist era.* Here too, these 'temporary' groups have a mission that is strictly consultative: they are placed under the authority of managers who have the final say in matters of choice and decision making.

Concerning the level of diffusion, if one refers to the previous studies on this issue provided by existing "national surveys" on organisational changes (whose results are presented in Coriat 2001), the spread of innovations in organisations is less profound than expected. The EPOC data show that few companies seem resolutely committed to the reforms, *with only 4 percent of them are using five or six forms simultaneously;*

However, if the criterion is lowered (passing from 5-6 forms to 2-3 forms implemented) a less sombre image emerges: it may then be considered that the group of firms participating in organisational reform covers nearly one-third of the population. This remains a quite modest figure, however, given the scope of the changes Europe is facing in the competitive context and the importance of the adaptations that are deemed necessary by all observers.

This (modest) result is all the more surprising in view of the performance effects. In this field, the data neatly show that the reform 'pays'! The economic benefits (in terms of *cost and quality alike*) are *patent*, and all the more clear when the reform is daring, that is, when several forms are used simultaneously.

Turning to a more qualitative evaluation, as pointed out above, the data show that there are *two different paths* towards 'high performance': broader employee expression under the authority of an immediate management on the one hand, frequent delegation of responsibilities to individuals or groups on the other.

In more conceptual terms, if such an extrapolation may be attempted, it is as if high performance were associated with two modes of a single principle: the implementation of specific *problem-solving devices* at different levels of the organisation. This implementation can be achieved either by delegation of decision-making power to the players directly confronted with the problems posed, or by the gathering of relevant information and hierarchical decision making as close as possible to the players concerned by the decision. However as already indicated, the EPOC data show that the European organisational reform largely *privileges the “consultative-hierarchical” path*, even if the presence and the efficiency of the other ('delegative') path is manifest.

* *
*

After this inventory of EPOC's contributions in areas analogous to those of the “country studies” already available²², we should now like to turn to a series of *original data and observations related to subjects of investigation addressed for the first time in a treatment of the EPOC data published in 1999*.²³ In particular, and in the vein of the characterisations presented above, the question raised in the following section is whether one (or several) European model(s) of organisational change can be identified and defined.

2. ONE OR SEVERAL 'EUROPEAN MODEL(S)' ?... THE IMPACT OF NATIONAL SYSTEMS OF INDUSTRIAL RELATIONS ON ORGANISATIONAL REFORM

This section draws mainly on two studies. The first one is the new EPOC report already cited and published in 1999 (designated hereafter as EPOC-1999), which offers another treatment of the data from the initial EPOC survey. The second is an OECD report (cited here as OECD-1999) which draws on certain data from EPOC and EPOC-1999 and recasts them somewhat in order to compare them where possible with other data from studies on changes in organisation carried out in other OECD member countries, notably Japan and the United States. Box 2 below gives a brief presentation of the methodology and objectives of these two reports.

Box 2

The OECD-1999 and EPOC-1999 Reports New Approaches to the study of organizational reform in Europe

Although they are based on very different principles, the two reports are largely complementary on certain key issues.

²² On this point see, above, note 2

²³ This report is entitled "Employment through Flexibility--Squaring the Circle: Findings from the EPOC Survey". Hereafter, this second publication of the Dublin Institute will be cited as EPOC-1999 to distinguish it from the first one (cited as EPOC in this article).

EPOC-1999

While it uses the data gathered and published in 1997, the second EPOC report clearly differs from the earlier one in the following respects:

- i) The subject is more narrowly focused on flexibility and, in particular, on a basic distinction between '**functional flexibility**' and '**numerical flexibility**', with precise definitions of these two notions determined through the use of a range of indicators in order to carry out quantitative comparative analyses.²⁴
- ii) The methodology is also revised: while EPOC simply presents and comments on data tables corresponding to the responses to its questionnaires, EPOC-1999 systematically uses econometric techniques of multivariate analysis.²⁵
- iii) Most important, the second EPOC report shifts the problematic by relating innovations in organisation to changes that have *affected the labour market* ('internal' to the companies and more global). This new, complementary perspective lies at the heart of the key relationship linking changes in organisation and changes in the labour markets.

OECD-1999

In certain areas, this report provides a useful complement to EPOC, notably insofar as it enlarges the field of comparison by complementing the data on the ten European countries surveyed in EPOC with data from other OECD member countries through the creation of standard reference forms allowing an international comparison.

In practice, there are three typical "reference forms" designed by the OECD survey, and used as indicators of organisational change. Among them, the most important are (see Table 8 of this paper) :

- **Rotation of tasks**, understood as "*a system of defining tasks which authorises employees to alternate work stations among themselves*";
- **Teamwork**: the category used by the OECD study is "*Self-directed work teams*" defined as "small groups of workers whose members have the authority to handle a wide range of issues relating to the team as they see fit, in order to fulfil its objectives; a further formal distinction is made between 'Japanese-type' and 'Swedish-type' teams on the basis of criteria analogous to those used in EPOC;
- **Delegation of responsibility**: consisting of "*a dissemination of information at the levels where different kinds of responsibilities are transferred, as well as the evidence of a flattening of hierarchical levels*".

As in the previous section, we shall not explore all of the areas covered in these two reports; rather, we shall concentrate on two key questions for which the three reports taken together allow the formulation of new responses:

- Can we detect of *one (or several) 'European model(s)'* and if so, what are their distinctive features?
- What is the *influence of industrial relations* --beyond : what are the influences of regulation and institutional setting in which the firms are embed-- on the design or diffusion of organisational

²⁴. We shall return below to the more precise criteria used.

²⁵. Such techniques are necessary because the FONCFLEX and NUMFLEX categories at the core of the EPOC-1999 analysis are themselves constituted by crossing data from very different sections of the questionnaire. The econometric techniques permitting the isolation of dependent variables and the monitoring of certain correlations thus become indispensable tools. For further details, see EPOC-1999.

innovations? More precisely, is it possible to identify models that are relatively more orientated towards 'functional' or 'numerical' flexibility?

2.1. Diffusion by countries and 'regions': can we speak of one (or several) representative European model(s)?

The question arises from the available results concerning the diffusion of new forms by country. Although no indisputably clear image emerges, certain manifestations of a 'country effect' may be perceived, and the differences observed merit special attention and comment.

From the data gathered by EPOC²⁶, it emerges that certain groupings among countries seem to be discernible, corresponding to *'patterns' or 'models' of diffusion that are distinct from one another*, even if, as will be seen, they are unevenly identified and typed.

EPOC-1999 thus distinguishes (with appropriate caution) three models or patterns of diffusion : A *'Northern' model*, corresponding to the most profound diffusion of the DP modes and forms of organisational innovation; a *'Southern' model*, corresponding to a slight diffusion; and an *'Intermediate' model* situated between the other two.

In our view, these designations might be modified somewhat: in place of the 'Northern' and 'Southern' models, it might be better to simply refer to models, or better yet, patterns of *'high' and 'low' relative intensity diffusion of innovative forms* (with an 'intermediate' group retained for the third model). The advantage of these terms, we would argue, is that they replace the 'geographic' dimension which (as the authors of the EPOC report note it), is rather arbitrary and ultimately of little relevance--with *a criterion that is internal to the modes and processes of diffusion*. In the new grouping proposed, the notion of 'high' or 'low' relative intensity is built on *the average number of innovative practices introduced by country relative to the average of the ten countries*.

On the basis of this analytical framework, and if we to focus on the most innovative practices (namely "individual" and "group delegation"), the following data can be extracted from the OECD-1999 study :

Table 11
Indicator of delegations of responsibility
(Percentage of workplaces reporting presence of practice)

	Individual delegation 1996*	Group delegation 1996*	Total	Quality circles 1992**
Sweden	69	56	125	9
Denmark	57	30	87	10
Netherlands	59	48	107	15
Germany	64	31	95	19
France	54	40	94	20
United Kingdom	53	37	90	18
Ireland	62	42	104	11

²⁶. We refer here essentially to the Tables 4.8 to 4.11 of the EPOC survey, which cannot be reproduced here for lack of space. However, Table 11 of this paper (see below) provides some evidence on this "country effect", based of the data related to "individual" and "group delegation".

Italy	44	28	72	..
Spain	40	10	50	17
Portugal	26	26	52	11
Unweighted average	55	35	90	14

Source : Assembled on the data provided in OECD-1999

*Data on individual and group delegation are from the EPOC survey.

**Data on quality circles are from the Price Waterhouse Cranfield survey; they are presented here as complementary informations.

Looking more closely at these data and confronting them with the more detailed ones provided in the EPOC survey, it appears that there is indeed *a group of countries whose diffusion patterns clearly display lower than average intensity*, namely what the EPOC-1999 report designates as the 'Southern' model, corresponding to Italy, Spain and Portugal. This is the most clearly identifiable group. It is also possible to identify a group of countries exhibiting a model of diffusion *with higher than average intensity*. *Sweden and the Netherlands clearly belong to such group*, but the rest of the membership is more ambiguous. Depending on the kind of innovative practice considered, it may include Ireland or Germany (less frequently). We shall come back to the sensitive problems of interpretation that this group poses. Finally and by subtraction, so to speak, there is also an *'intermediate' model*, which most often includes France, England and Denmark.

This first overall distinction calls for a series of more specific remarks.

1. A group with low relative intensity of diffusion (the “Latin” group)

This group, typically composed of Italy, Spain and Portugal, is very sharply defined. Whatever the indicator used, *the three countries show performance levels below the average of the ten EU countries and (almost systematically) the lowest performance among all the countries*, even if, the performance levels of Italy are the least inferior of the three.

An interesting point in the case of Spain and Portugal is that the foreign firms established there do not show higher scores than local ones, which, according to the authors of the EPOC report, suggests that, *'[M]ore than in other countries, lower labour costs may have been an important consideration in the location decision'* (EPOC, p. 64). Going still further, the creation of a kind of vicious circle may be feared: a) the low level of organisational modernisation solicits types of investments and facilities that can do without this kind of modernisation; b) that being the case, the organisational reform is introduced slightly or not at all and thus, c) the vicious circle is maintained.

2. A group with high relative intensity (the “Nordic” group)

This group seems less clearly identifiable than the preceding one. More 'fluid', *it appears not to have well defined borders*, as if it were still 'open' to changes. If it certainly includes Sweden and Netherlands, whose performance are almost systematically above the average of the EU 10, Ireland (for a great many number of practices) or Germany (less clearly, and only for certain types of practices²⁷) can be attached to it. Here, future developments will surely be decisive, with one country or another 'catching up' with the leading countries or conversely, losing its status as candidate for the group of leaders to 'fall behind' in the 'intermediate' group.

²⁷ See below the results of some correlation tests done by the OECD-1999 study.

3. An intermediate group, composed of countries whose performances fluctuate around the average (England, France, Denmark)

Depending on the indicators used, the disparities in performance between these three countries can be considerable. This group is obtained more *by default* than by homogeneity of performance, and for this very reason it may be imagined that over time the countries included will follow different trajectories. If a few sporadic performances place one or another of these countries in this group on the fringes of the 'leaders' (i.e., those with 'high relative intensity'), the performances as a whole give the clear impression that the organisational reform has not yet had a comparable impact on the members of the group, than the one observed for the "leading group".

2.2. The role of industrial relations and institutionalised forms of employee representation

Even if conclusions on this question must remain circumspect, available data suggests a certain influence of industrial relations systems. The outcome will depend on the nature and level of precision of the relations sought.

The **group of "leading" countries** in the narrow sense of the term (Sweden, Netherlands) or more broadly (if we add Germany) corresponds to types of industrial relation systems which, if they encompass national differences that are sometimes significant, also show notable common features. In all cases, these are countries where *union activity is highly institutionalised* and where *structures of personnel representation traditionally play a genuine role in internal regulation and the everyday work situations*. As may be imagined (or hoped), DP seems to be more deeply established in these countries than elsewhere.

Moreover, even if cautiousness is here especially required, certain of the econometric investigations made in the OECD survey do provide some confirmation of the role of industrial relations arrangements. Commenting a series of correlation tests, the OECD survey notes that : *"The industrial relations system in place is significantly associated with whether or not initiatives have been recently taken. Establishments with work councils--more precisely those employers who have representatives of the employees in the largest occupation group recognised for consultation or joint decision-making at the workplace--are more likely to take initiatives in all practice areas, except for teams"* (p. 46). On the basis of another series of correlation tests, the same report adds : *'the presence of collective bargaining agreements also has a significant relationship with the two summary variables, with unionized workplaces more likely to have flattened management structures and to have installed teams'* (ibid).

Finally, from the rough data provided by the EPOC survey, or from the econometric tests done by the OECD study, it seems difficult to challenge the fact that the countries where unionism is the most solidly institutionalised and traditionally recognised as a partner are also those where the organisational reform has made the most inroads. An observation also confirmed by some EPOC-1999 survey which states that ... *'the most accomplished forms of personnel representation are associated with the most extended forms of direct participation and vice versa'*.

Finally all these observations bring to the fore the idea that the more the industrial relations system reserves a place for union activity and personnel representation, the more the diffusion is pronounced.

At this point let's make it clear that on our view there is no contradiction between this observation and the one indicated earlier to the effect that the organisational reform depends overwhelmingly on a *strict managerial initiative*. Industrial relations intervene only secondarily; they are neither at the origin of changes nor responsible for the content they assume. The result we have just presented implies only that even if the initiative comes from management, the existence of "institutionalized form of employee representation in certain industrial relations systems is more favourable to the diffusion of innovative forms, and the most innovative among them in particular.

3. FROM ORGANISATIONAL INNOVATION TO ORGANISATIONAL FLEXIBILITY: EFFECTS ON EMPLOYMENT AND THE LABOUR MARKET

This topic was already addressed in the EPOC study (with certain paradoxical results), but the new study goes into much greater detail.

3.1. 'FUNCFLEX', 'NUMFLEX' and the labour market: problematic and indicators

One original contribution of the EPOC-1999 study, as already noted, consists in building a series of synthetic indicators allowing an evaluation of the penetration and relative impact of two basic forms of flexibility defined as 'functional' and 'numerical' flexibility. Without going into the lengthy, complex debate concerning the definitions of flexibility²⁸, it may simply be recalled that a terminology seems to have emerged in recent years to distinguish between two opposing forms, which, adopted by EPOC-1999, are defined as follows:

■ **Functional flexibility:** is intended as '*[T]he ability to deploy employees to the best effect. Its common features are job rotation, delegation of responsibility and the use of teams, together with an emphasis on continuous training to enable employees to acquire new skills and competencies*' (EPOC-1999 p. 4). This type of flexibility is often also called '*internal flexibility*'. It refers to operations and changes carried out largely within the enterprise and performed *within the existing contract structure of the enterprise* (OECD 1996). Functional flexibility is most often focused on "quality" and non price factors of competitiveness. It is sometimes referred to as the "*high road*" towards competitiveness (Boyer 1986). In more theoretical terms functional flexibility can also be referred to policies designed to the strengthening of "*primary*" and "*internal*" markets to use here the categories first introduced by Doeringer and Piore, 1971.

■ **Numerical flexibility:** on the contrary is defined as "*the ability of the organisation to adjust the quantity of labour to meet fluctuations in demand. It relies on the absence of constraints concerning hiring and firing, as well as the duration of working time, the multiplicity of forms of atypical labour (part-time, temporary, etc.) and the systematic use of subcontracting and outsourcing*" (EPOC 1999, p.4). This form of flexibility is often also called '*external flexibility*', a notion which usually involves changes in the nature and the type of contracts enjoyed by the employees. The focus of such strategies is most often to decrease costs, especially labour costs, by expanding the scope of "*secondary*" and "*external markets*" (Doeringer and Piore, 1971). Thus,

²⁸ For an penetrating reflexion on these categories see Boyer, 1986.

these strategies of “cost competitiveness” are sometimes characterized as “*the low road*” towards competitiveness (Boyer 1986).

On the basis of these definitions, the ambitions of the report are multiple: first of all, to use the EPOC data to construct synthetic indicators named “FUNCFLEX” and “NUMFLEX” and to evaluate in turn the relative penetration of the two forms in Europe and their effects on employment. The different measurements were carried out on the basis of the indicators presented in the box below.

Box 3
FUNCFLEX, NUMFLEX AND CONFLEX
Proxies and Measures

1. Functional flexibility: 'The measure of functional flexibility used..., therefore labelled FUNCFLEX, combines the scope or intensity of two of the forms of direct participation investigated in the general report: “individual delegation” and “group delegation”. Overall, this means the combined measure embraces eight rights in the case of individual delegation and eleven in the case of group delegation. To make the results digestible, the combined list was reduced to four values: 0 = no delegation; 1 = low intensity; 2 = medium intensity and 3 = high intensity'.

2. Numerical flexibility: 'The measure of numerical flexibility used in the analysis, labelled NUMFLEX, uses answers to the 'downsizing'/'back to core business' combination. The measure has three values: 0 = none of this practice; 1 = low intensity (one of this practice); 2 = high intensity (both of the practices)'.

3. Contract flexibility: 'As in the case of numerical flexibility, our measure of contract flexibility, labelled CONFLEX, had to be created anew. It combines answers to questions about whether or not there had been an increase in part-time work and temporary contracts. The measure also has three values: 0 = none of this practice; 1 = low intensity (one of this practice); 2 = high intensity (both of the practices)'.

Source: EPOC-1999 (p. 4).

3.2. Effects of innovations in organisation on employment : some basic results

We have chosen to summarise the main results in the form of six propositions accompanied by the key figures that have provide empirical support for them.

1. Not withstanding its slight diffusion, functional flexibility has positive effects on employment where it manages to penetrate.

Table 9
Extent of functional flexibility in % of workplaces

<i>FUNCFLEX level of penetration</i>	<i>Percentage of total workplaces concerned</i>	<i>Partial totals (none + low*); (average + high**)</i>
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None	42 %	
Low	36 %	78 %*
Average	17 %	
High	6 %	23 %**
N	5,786	

Source: EPOC-1999 (p. 23).

The central observation stemming out of the data is that functional flexibility in fact enjoys modest diffusion: 23 % of the workplaces are concerned, even if we adopt an 'extensive' vision of its diffusion by combining 'average' (17%) and 'high' (6 %) level of penetration . Moreover, as the report specifies, FUNCFLEX is best diffused in medium and medium-large companies.

New arguments thus emerge around the fact that the European organisational reform is still at a rather low stage of diffusion. This situation is all the more frustrating insofar as the effects in terms of employment seems fairly encouraging (cf. Table 10).

Table 10
Functional flexibility and net employment change*

Stable employment : % of establishments reporting no increase/decrease in employment	40%
Net employment change : for establishments reporting increase/decrease in employment (% of the work force employed)	+ 5
No FUNCFLEX	- 1
Low FUNCFLEX	+ 6
Medium FUNCFLEX	+ 12
High FUNCFLEX	+ 17
N	5,527

* The Table shows the net employment effects associated with different level of Funcflex, which are arrived at simply *by subtracting the percentage of establishments reducing employment from that increasing it.*

Source: EPOC-1999 (p.24)

If we consider the relations between the levels of penetration of “funcflex” and the changes in employment, the data exhibit a positive correlation between the level of penetration of FUNCFLEX and the growth of employment. *The greater the penetration of FUNCFLEX, the greater the percentage of establishments reporting positive effects on employment..*

2. Lower relative diffusion of numerical flexibility

Several dimensions of numerical flexibility are analysed. First of all, its diffusion relative to FUNCFLEX (cf. Table 11) provides the following information:

Table 11
The extent of Numerical Flexibility. % of workplaces

	FUNCFLEX	NUMFLEX
None	42	69
Low	36	na*
Medium	17 (53)**	na (26)**
High	6	5
Total	100	100
<i>N</i>	5786	5786

*: not available

** sum of low and medium;

Source EPOC-1999 (p34)

The first point (consistent with our preceding observations) to emphasise is the very high percentage of workplaces which are concerned *neither* by FUNCFLEX *nor* by NUMFLEX, 42 and 69 percent, respectively. Ultimately, a very limited percentage of workplaces are ‘highly’ involved (respectively 6% for Funcflex and 5 % for Numflex)

Nonthemess and even if the available data permits only a rough comparison, we may also observe that: only 26 % of the workplaces are affected by the (high + average) levels of penetration of NUMFLEX, compared to 53 % by the penetration of FUNCFLEX.

3. Weak combination of the two: one orientation or the other almost always predominates

Concerning relations between the two forms of flexibility, the following table brings out the essential points:

Table 12 : The combination of Functional flexibility and Numerical Flexibility
% of working places

	Funcflex/Numflex
No Funcflex or Numflex	29
Low Funcflex/low Numflex	45

Both medium	4
High Funcflex	15
High Numflex	3
Both High	4
Total	100

EPOC 1999 (p.36)

This table provides two insights. First, it shows that the two forms are not necessarily practiced exclusively. It is not impossible for the two forms to coexist, and this situation is not marginal ('both medium' and 'both high' each attain scores of 4 %). Similarly, if high/low combinations do not show elevated scores, they are still not rare. This apparent paradox may be explained by the fact that numerical flexibility is mainly approached through the combination of two indicators, '*downsizing*' and '*return to core business*', a strategy which can be taken as somewhat compatible with the practice of functional flexibility which is approached through the existence of forms of 'individual' or 'group delegation'.

Finally, a large mass of companies follow no clearly defined orientation: the combination of low functional flexibility/low numerical flexibility' concerns 45 percent of the workplaces. This last point is important: the very high score attained suggests that almost one out of two companies basically applies very few changes and follows no identifiable strategy. What predominates are very pragmatic policies, where the (rare) changes are introduced in function of highly practical considerations by drawing on available techniques as if they were recipes, without any apparently cumulative line that might be the expression of a strategy.

4. Just as functional flexibility is associated with the increase of employment, numerical flexibility is associated with its decrease

Concerning their effects on employment, the relative performance of numerical and functional flexibility are consistent with expectations. The following table summarises the essential points.

Table 13
Changes in net employment effects by levels of functional flexibility and numerical flexibility -% of workplaces

	Ten-country average
Net employment change: difference in % of establishments reporting increase/decrease in employment	+ 5
- no FUNCFLEX or NUMFLEX	+ 13
- low FUNCFLEX / low NUMFLEX	0

- both medium	- 9
- high NUMFLEX	- 52
- high FUNCFLEX	+ 29
- both high	- 26
<i>N</i>	5,530

Source: EPOC-1999 (p. 44).

With regard to the most extreme strategies (high functional vs. high numerical flexibility, respectively), the figures speak for themselves : *high numerical flexibility is associated with a very negative performance in terms of employment (- 52), while high functional flexibility is associated with clear positive performance (+ 29).*

The high score (-26) associated with the indicator 'both high' is more problematic. *It seems to suggest that the downward effects of numerical flexibility are much more important than the upward trends associated with functional flexibility* when the two strategies coexist. This hypothesis is reinforced by the fact that--as other data clearly indicate--the positive effects of functional flexibility are not immediate; in the short term, it contributes much more often to maintaining jobs than to creating them.

5. Numerical flexibility yields the best results in terms of employment when it is practised in common with 'contractual flexibility'

In order to delve further into the conditions under which functional flexibility creates or maintains jobs, it is necessary to call upon a complementary variable. Indeed, alongside numerical and functional flexibility, the authors of EPOC-1999 have attempted to identify a third strategy by means of an indicator which they call CONFLEX (contractual flexibility), which reflects the company's recourse to part-time jobs and temporary work (see Box 3).

Two results emerge from the introduction of this variable. i) As in the case of numerical flexibility, but in an even more pronounced manner, contractual flexibility combines with functional flexibility in proportions that are far from negligible. ii) Performances in terms of employment are much better in the contractual/functional flexibility combinations than in the case where functional flexibility is practised on a quasi-exclusive basis.

Table 14
Changes in net employment effects by levels of functional flexibility and contract flexibility.

Stable employment: % of establishments reporting no increase/decrease in employment	40
Net employment change: difference in % of establishments reporting increase/decrease in employment	+ 3
- no FUNCFLEX or CONFLEX	- 12
- low FUNCFLEX / low CONFLEX	+ 7
- both medium	+ 23
- high CONFLEX	+ 16
- high FUNCFLEX	+ 1
- both high (CONFLEX + FUNCFLEX)	+ 36
<i>N</i>	4256

Source: EPOC-1999 (p. 55).

CONCLUSIONS : STATE, NATURE AND DIRECTIONS OF EUROPEAN ORGANISATIONAL REFORM

If we conclude by trying to summarise certain key findings of this paper, some general but nonetheless very useful data can be taken as a starting point. In this light, let's recall that i) over 50 percent of workplaces are not concerned by any modifications whatsoever; ii) similarly, very few companies seem to be truly involved in substantial organisational reform (if we consider, for example, those combining simultaneous use of four to six forms of innovative practices); iii) nonetheless, about one-third of the companies can be considered to be involved in organisational reform in one way or another.

This first evaluation must be however tempered by the fact that a 'country' effect may be invoked and, in this case, the reform appears to be very unevenly pursued and with a different impact depending on the three major groups identified ('Northern', 'Intermediate', 'Latin').

1. Concerning the nature and modalities of the changes introduced, this is above all a reform carried out not only on managerial initiative --which is, after all, typical of our social systems-- but also one that leaves little place for delegation. *Everything occurs as if European managers intend, above all, to maintain total mastery of the rhythm and nature of change.*

This view is supported by the fact that the reform mainly involves simple forms of 'expression' given to employees, with management reserving the power of decision for itself. In terms of "delegation" the form that is by far the most widespread (53 %) is the one involving only the enrichment or enlargement on *individual job stations*.

At the same time, it should also be noted that the practice of functional flexibility seems more sought after than numerical flexibility, even if the period covered by the survey was a very difficult one for the companies, marked by *low growth and frequent recessions*, with most macro-economic policies being adjusted with the aim of reducing deficits to satisfy the convergence criteria of the Maastricht Treaty. It may thus be hoped that if Europe is able to enter in a more positive growth path, the orientation towards functional flexibility, which is already predominant, will become even more comprehensive.

2. Regarding the content of work resulting from the modifications introduced, two features emerge :

- What is involved most of the time in the changes introduced, seems to be *simple relaxations of Taylorist constraints* which have often become counterproductive. This is illustrated by the predominance given to job enrichment and job enlargement, most likely in order to limit the negative effects (economic and social) of the over-specialisation of tasks, and, more generally, the relative importance of modifications affecting only individual work (in the form of 'individual participation' or 'individual delegation').
- At the same time however, there is a significant proportion of 'collective' forms (task groups, project groups...) intended to install "trans-functional" teams. In almost all cases, the groups set up are granted simple 'expression' rights, which means that they function according to a 'hierarchical' principle. We may easily infer from this that the reform is aimed more at combating rigid compartmentalisation coming from the division of tasks and functions, also inherited from Taylorism, than at making the shift to a model of organisation with radically new features providing an alternative to the prevailing model.

No 'revolution' in work organisation is visible from the data. On the basis of a Taylorism that does not seem to have been fundamentally overturned, what has been introduced are processes of exchange of information and problem-solving devices aimed at making better use of the knowledge, experience and opinions of the direct operators.

3. In our view, this result is of major importance, because, as we shall argue, it best allows us to characterise the specifically European path. Let us note first of all that the data provided on this point by EPOC-1999, which indicate a privileged orientation towards functional flexibility, are perfectly clear. When they are combined with other results presented in the same study, what emerges is the idea that, notwithstanding the limitations singled out above (managerial initiative and simple 'expression' rather than 'delegation'), *the reform privileges the mobilisation of internal know-how*. In the face of market unpredictability and more generally, the rise of 'variety', European firms seem to have turned in on themselves in order to draw increasingly on their own resources and develop them more effectively in order to better confront the rise of uncertainties. This conclusion is less surprising than it might initially seem, when it is placed in the context of European economic specialisations and the areas in which Europe enjoys a comparative advantage. Overwhelmingly, these turn out to be areas corresponding to 'complex' products with high or very high value added

(Fontagné et al, 2000)²⁹. Under these conditions, *it is less surprising to observe that the reform is mainly aimed at developing the collective capacity to handle variety and quality, rather than seeking to lower labour costs through numerical flexibility*. This last proposition receives some confirmation if we consider the 'country effect' that we identified above. In schematic terms, the countries which have the specialisations most clearly orientated towards quality (Holland, Germany, Sweden...) are also those which have taken the most steps towards functional flexibility

Even if this last point obviously remains a conjecture rather than a clear established proposition, it is quite consistent with the central hypothesis mentioned at the beginning of this paper (taken from the resource-based theory of the firms), namely that, mobilising internal capacities of the firm through specific, non marketed “combinative capabilities”, may contribute to the building and/or strengthening of their comparative advantages.

APPENDIX : PRESENTATION OF THE EPOC SURVEY(*) “Employee direct Participation in Organisational Change”

The survey was launched by the European Foundation for the Improvement of Living and Working Conditions (Dublin), in the fall of 1996. The data were collected and processed during the year 1997. A first presentation of the results was published in 1997 based on pure descriptive statistics. A more refined treatment of the data collected was published in 1999 (cited in this paper as EPOC-99) with some co-variate analysis.

Main Characteristics of the Questionnaire and of the Sample

The data were collected through a *postal questionnaire* sent to firms in *ten EU countries* : Denmark, France, Germany, Ireland, Italy, the Netherlands, Portugal Spain, Sweden and the UK. The sample covers *manufacturing as well as service sectors* in both *public and private sectors*.

Sample sizes and questionnaire returns

Gross sample	Net sample	Questionnaire returns	Response
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²⁹. In a recent study Fontagné et al highlight a widespread bias of European exports in favour of “high quality products” (where “quality” is measured by unit prices within each products category) : high and medium quality production makes up for more than the double of the european foreign surplus in manufacturing trade (with the “low” category accounting for a significant deficit). On this point the conclusion of the authors is unequivocal: *“The answer to the question of the technological positioning of EU firms is obvious: the overall net ‘advantage’ ascribed to the trading of high-tech products masks a deficit in low market products, as this is compensated for by surpluses at the higher and middle layers. It seems that the types of products exported by the firms of the EU-15 are generally placed higher in the scale of qualities than their imported products. The EU has a comparative advantage in newer products situated at the higher and middle levels of qualitative scales, and a comparative disadvantage in older products situated at the lower level of qualitative scales.”* Montagné et al, 2000. (For a discussion of the meaning of this finding se Dosi, Coriat and Pavitt, 2000).

(*) This presentation is based on the two publications EPOC and EPOC-99. The key information is presented in EPOC (Chapter 2 « Methodology » pp.23-29)

	Absolute nos	Absolute nos	Absolute nos	%
Denmark	2 600	2 535	674	26,6
France	5 028	4 870	598	12,3
Germany	4 954	4 887	826	16,9
Ireland	1 000	984	382	38,8
Italy	3 949	3 849	499	13,0
Netherlands	2 386	2 303	505	21,9
Portugal	1 000	996	298	29,9
Spain	5 062	4 872	460	9,4
Sweden	2 448	2 401	732	30,5
United Kingdom	5 000	4 881	812	16,6
Total	33 427	32 582	5 786	17,8

Source EPOC (p.)

It has been addressed to “*Managers*”. The respondent were ‘*either the general manager or the person he or she feels was the most appropriate*’ (EPOC, p.13). The size of the firm threshold was 20 employees (for the smallest countries), or 50 employees (for the biggest ones). All the questionnaires were returned by November 1996.

The questionnaire was designed to collect data on changes having affected the “*workplaces*” of the companies, mainly “in the last three years (see question 9). The “changes” tackled were those related to the *implementation of diverse forms of “consultation” or “delegation” of the workers, by types of workplaces (see Table ... for the definitions of the different forms of “direct participation”)*

Organisation and Content of the Questionnaire

The questionnaire includes 77 questions, and is organised in 4 sections.

- Section A (questions 1 to 12) is addressed to inventory “The workplaces’ activities and labour force”, *the most important question being here question 9 asking “Which of the following initiatives have been taken by the management of the workplace in the last three years ? “; the list of answers includes “down sizing, flattening of management structures, outsourcing, back to core business, greater involvement of lower level employees, installing of team work organization, job rotation...”*
- Section B (questions 13 to 23) focuses on the characteristics of “*The largest Occupational Group*”
- Section C, by far the largest section of the survey is directed towards identifying and describing “*The practice of Direct Participation*” (24 to 67); the questions are designed to identify the level of diffusion of the different practices (consultative and delegative forms of DP, and their impacts on performances)
- Section D (question 68 to 77) entitled “*General opinion on Direct Participation*” is addressed to better understand the “vision” of the managers with questions like impact of DP on competitiveness.

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