

TNO-report

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**Employer level Monitoring Surveys -
An International Inventory**

Work and Employment

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1 Introduction and Selected Surveys

1.1 General introduction

The Dutch Ministry of Social Affairs and Employment (SZW) requested TNO for a report on the international state of the art of employer monitor surveys on the subject of organisations and work. Apart from insights that can be gained by such a report in what is being monitored abroad, and how this is done, the report can also feed into the preparations of the Dutch employer survey ('Werkgevers Enquête Arbeid'). This new survey by TNO and SZW on the subject work and organisation is currently prepared.

The present report gives an overview of several surveys on organisations and work. It provides a descriptive overview of 14 major organisation surveys in mainly European countries (national surveys) and at the European level (transnational) that monitor changes in work and organisation. Included in these 14 surveys are also a Canadian survey (the Workplace and Employee Survey: WES) because of its rather ingenious and influential linked employer-employee survey design, and, from the USA, a national broad-coverage employer survey (National Employer Survey: NES). The overview presents both the contents of the monitor surveys and their methodological designs.

Most of the surveys have a long-standing reputation, like for example the German IAB survey, the British WERS, the French REPNSE survey which can be seen as an equivalent of the WERS, the French COI, the Danish DISKO survey and in Vlaanderen (Belgium) and Sweden respectively the former PASO and MOA (used in the Swedish 'Healthy Workplace Study'). As a consequence of their reputations, the surveys provide high-quality data with high response rates and deliver good input for national policy-makers.

Another finding from our inventory, which we can already mention here, is that currently transnational European broad-coverage surveys are scarce. However, there are several interesting initiatives going on to fill this gap. In this respect, a promising development is the repeat of the ESWT (European Survey on Working Times). At this moment a second wave of this survey is prepared by the European Foundation for the Improvement of Living and Working Conditions (EFILWC). Worth mentioning also is that Eurostat's Community Innovation Survey (CIS) intends to further extend its scope by including more indicators on characteristics of organisations. Furthermore, the Agency for Safety and Health at Work in Bilbao is undertaking preparations for a European-wide survey on Occupational Safety and Health measures. The increasing tendency in comparable transnational survey data, is an expression of the growing attention given to monitoring in European policy. These instruments also fit well in the European policy frame of the 'open method of coordination' (cf. the Lisbon Strategy as revised in 2005).

The structure of the present overview study is as follows. This first Chapter discusses the way the 14 surveys were selected. Chapter 2 systematically and extensively maps the aims, objectives and content of the surveys. This is structured according to the policy domains which primarily are of relevance for SZW and for TNO. The third Chapter concerns the methodology applied in the respective surveys. It describes (1) the sampled unit and 'who is the respondent?'; (2) the research design applied in the surveys; (3) the population under study (public and/or private sector); (4) the response rates; (5) the frequency and continuity of the surveys and (6) the data collection method.

The next section explains the selection of the 14 organisation surveys involved in this overview.

1.2 Selection of surveys: inclusion criteria

Several inclusion criteria are used for selecting surveys for this report. Important dimensions here are the ‘content’, ‘scope’ and ‘continuity’ of the surveys.

The content of the survey is, of course, a first important selection criterion: the surveys retained and studied extensively here, are those that contain indicators in at least several of the domains of interest for SZW and TNO. We categorised these domains as follows:

- Working conditions, work organisation and OSH policies;
- Human Resource Management;
- Internal and external labour market and their dynamics;
- Industrial relations and labour-management relations;
- Social security;
- Product, process, technological innovation and organisational change;
- Organisational performance.

Two other inclusion criteria are related to *scope* and *continuity* of the surveys. The scope of surveys varies as for example Huys and Ramioul set out in their paper ‘Measuring the degree of organisational transformation; A methodological benchmark of organisation surveys’ (2007) (Box 1).

As far as scope is concerned, the present inventory is targeted at *restricted and unrestricted diverse surveys* (Box 1).

Box 1. Survey scope

Four types of scopes of surveys (source: Huys & Ramioul, 2007; Sels, Ramioul, Huys & Van Hootegem, 2008)

One research method gaining in popularity is the *single-type organisation survey*, usually in the form of a sector survey or intra-industry survey, where the field of validity is limited by selecting organisations from the same industry (Dunlop & Weil, 1996; MacDuffie, 1995; Womack et al., 1990). This approach allows the operationalisation of variables to be developed in a sector-specific manner and therefore enables more precise questions to be asked. Moreover, this is a good method for keeping many confounding variables under control. To give a simple example: by comparing companies which make similar products using comparable technology, it is easier to examine the pure effect of the features of human resource management on turnover, labour productivity, etc. However, the question arises whether the relationships we find in one industry can be generalised for other industries? What is the relevance of the advantages ascribed to lean production in car assembly for the chemical industry, banks or hospitals?

As it is difficult to generalise the results from a survey in one industry for other sectors, a *multiple sector survey* can be executed. The study by Appelbaum on high performance work systems (Appelbaum, Bailey, Berg & Kalleberg, 2000) is an example of such an approach whereby the operationalisation of the survey variables is carried out on a sector-specific basis, but at the same time derived from one generic conceptual framework. As a result, the results are comparable for the basic dimensions of the conceptual model. By developing several intra-industry surveys one after the other, the findings from one sector or industry can be replicated in other sectors. However, the costs of developing sector-specific questionnaires can be high. If the questions vary by sector, comparability can succeed or fail depending on the strength of the underlying conceptual framework.

Restricted diverse organisation surveys expand the population further. In this survey method, no restrictions are imposed on sectors or activities but limits are imposed, for example, on the size of the company. Expectations regarding response or the accessibility of companies are often used as arguments, for example, for excluding companies with fewer than 20 employees. Often, surveys are confined to private enterprises because no all-embracing sample frames are available. This type of intervention means that a substantial proportion of reality (such as the growth of small businesses) remains hidden. *Unrestricted diverse organisation surveys* therefore have the widest scope.

In terms of the *continuity* criterion the surveys included are those which regularly measure work and organisation subjects - or which did so until recently. This includes both surveys which aim to provide periodic cross-sectional measurements and panel surveys. Regarding continuity, in general the majority of surveys is conducted once, which implies that they cannot give a precise indication of trends in organisations and work. However, due to our selection criteria several surveys which are presented in this overview, involve regular questioning of a random sample of organisations. The survey uses a similar sampling method and questionnaire and therefore can measure changes at the level of the overall population (i.c. *periodic cross-sectional analyses*). The other surveys in this overview apply *organisation panels*. They offer by far the most possibilities for analyses. The same organisations are questioned at various times. This makes it possible to chart the organisation dynamics at micro-level, i.e. that of the individual organisations. Cross-sectional time series can give the impression of a fairly stable situation, when in fact major restructuring is underway at organisation level. A cross-sectional analysis is also inadequate for monitoring the impact of particular measures, where the situations before and after implementation have to be compared. In this overview we choose to include both periodic cross-sectional analyses and organisation panels. Because we are interested in surveys with a monitoring character, this implies that surveys which are carried out only once (one-shot surveys) are excluded from this overview. Furthermore, the last wave of a survey was required to date back 10 years maximally: surveys with their most recent wave in or before 1997 are excluded from this overview.

A fourth criterion applied in the selection process resulted from the fact that we are mainly interested in work and organisation surveys which are of most relevance for the Netherlands. Currently this is the European and EU context. As stated in the introduction, exceptions were made regarding two interesting North-American surveys: the WES and the NES.

Lastly, some other, more practical, considerations on whether or not to include a survey, were related to:

- the availability of (high-quality) documentation about the survey.
- And, this information needed to be written in English, French, German or Dutch.

1.3 Information sources about the surveys used for the overview

The information on the surveys, covered in this overview, has been obtained from several sources. Worth mentioning here are three high-quality extensive earlier studies and projects with to some extent comparable aims as ours. These studies provided a good starting point and information. These earlier works were conducted in the context of:

- The WORKS project (Work Organisation and Restructuring in the Knowledge Society), funded by the European Commission under its 6th Research Framework Programme. The project aims at improving understanding the major changes in

work in the knowledge-based society. The project applies a variety of research methods, but a specific part focuses on available information on changes in work emerging from organisation surveys in European countries and at the European level. This involves mapping the existing organisation surveys that are relevant to measure changes in work, but also assessing the comparability of these information sources. A total of 14 major organisation surveys are involved in this comparative study, which can also be consulted in the section ‘digital toolkit’ on the website of the project (interested readers can find more information on: www.worksproject.be).

- The MEADOW project (MEAsuring the Dynamics of Organisations and Work) in which TNO participates together with 13 other European institutions (from the Netherlands also the OSA and UM Merit participate). This project is also funded by the European Commission under its 6th Research Framework Programme. Aim of the MEADOW project is to develop guidelines for European survey research with theoretical concepts and methodologies and indicators which are harmonised across European countries. The development of the survey design aims at linked employer-employee surveys in order to gain the most valid insights in changes in work and organisation and their social and economic impacts. The Advisory Board of the MEADOW project consists of the institutions OECD, Eurostat and the European Foundation for the Improvement of Living and Working Conditions (EFILWC), while the number of institutional observers increases (interested readers can find more information on: www.meadow-project.eu).
- Surveys studied in the above projects also partly overlap with those which have been reviewed by Weiler (2007) in an inventory of surveys on working conditions. That study was issued by the European Foundation for the Improvement of Living and Working Conditions (EFILWC).

Furthermore all information was checked in the survey questionnaires and by (additional) queries on the Internet directed at, for example, the websites about the surveys.

1.4 Selected surveys

As a result of the above criteria, for this study we were able to select and to acquire all the information on the 14 surveys listed in Table 1. The abbreviation (acronym) is also given for each survey and will be used in the remainder of this overview. Table 1 also indicates per survey the country or countries the results relate to, and which organisation(s) is or are responsible for the survey, as a sponsor and/or as the coordinator. The next Chapter systematically and extensively maps the surveys’ aims, objectives and contents. This is structured according to policy domains which primarily are of relevance for SZW and for TNO.

Table 1: Overview of the surveys examined in present study

Acronym	Full name	Country	Institutional setting	Coordination
AES-CVTS	Adult Education Survey – Continuing Vocational Training Survey	France	Céreq, EUROSTAT, INSEE, DARES	Céreq
CIS	Community Innovation Survey	EU-27, Iceland, Norway	Eurostat, Statistical Office of the European Communities	National level: national statistical offices
COI	Changements Organisationnels et Informatisation	France	Centre d’Etudes de l’Emploi (CEE), INSEE, DARES (Statistique publique)	CEE
DISKO	Danish Innovation System: Comparative analysis	Denmark	Aalborg University - Denmark Statistics; IKE, CARMA (CCWS, CIP 2006)	Aalborg University - Denmark Statistics
EMS	European Manufacturing Survey	Germany, Austria, Croatia, France, Great Britain, Italy, Slovenia, Turkey Greece, Netherlands, Spain	Consortium agreement between 12 different research institutions.. Fraunhofer Institute of Systems and Innovation Research ISI in cooperation with partners in the consortium	Fraunhofer ISI
ESWT	Establishment Survey on Working Time and Work-Life Balance	EU-15, Czech Republic, Cyprus, Hungary, Latvia, Poland, Slovenia	European Foundation for the Improvement of Living and Working Conditions (EFILWC); TNS Infratest Sozialforschung	EFILWC
FIT3	Fit for Work, Fit for Life, Fit for Tomorrow	Great Britain	The questionnaire was developed by the Health and Safety Executive (HSE) in consultation with IPSOS MORI	HSE
IAB	Institut für Arbeits- und Berufsforschung	Germany	Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit (IAB), Nuremberg; TNS Infratest Sozialforschung, representatives of the co-financing federal states and their assigned institutions	IAB
MOA	The MOA method for assessment of organisations and changed working conditions	Sweden	National Institute for Working Life (NIWL); survey conductors now employed at Göteborg University, Department of Work Science	NIWL (Göteborg University)

Acronym	Full name	Country	Institutional setting	Coordination
NES	National employer survey	USA	The National Center on the Educational Quality of the Workforce (EQW). Designed by the National Center on the Educational Quality of the Workforce (EQW). Administered by the Bureau of the Census Funded by the Office of Educational Research and Improvement, U.S. Department of Education. The 1997 survey fell under the aegis of the National Center for Postsecondary Improvement (NCPI) and the Consortium for Policy Research in Education (CPRE). The 1998 survey was funded by the National School-to Work Office	EQW
PASO	Panel Survey of Organisations	Flanders (Belgium)	VIONA – Steunpunt OOI – ESF Vlaanderen	VIONA
REPONSE	Relations Professionnelles et Négociations d'Entreprise	France	DARES (Ministry of Labour)	DARES
WERS	Workplace Employment Relations Survey	Great Britain	Department of Trade and Industry (DTI); Advisory, Conciliation and Arbitration Service (Acas); Economic and Social Research Council (ESRC); Policy Studies Institute (PSI)	DTI, ACAS, ESRC and PSI
WES	Workplace and Employee Survey	Canada	Statistics Canada - Human Resource Development Canada	Statistics Canada
WHASS	Workplace Health and Safety Survey	Great Britain	Prepared for the Health & Safety Executive (HSE). Prepared by BMRB Social Research, Part of BMRB International Limited.	HSE

2 Contents of the monitor surveys

Table 2 presents in detail the aims and objectives of the surveys under study. The information in the Table enables interpreting the content of the various surveys: the reason why survey questions are included in the surveys and the extent by which a subject is central to the survey.

Table 2: Aim and objectives of the surveys

Acronym	Objectives of the survey
AES-CVTS	<p>The - French version of the - AES-CVTS survey is intended to document what makes the core concerns of the French law of May 4, 2004: “<i>make it possible to each employee to be an actor of his/her training</i>”. The aim is to analyse what is done around training with a panoramic instrument of observation making it possible to analyse the employees’ capabilities vis-à-vis the training organised by the enterprise.</p> <p>The continuous vocational training (CVT) perspective is central in AES-CVTS where structural traits are considered at system level, CVT activities at organisational level and participation in learning activities at individual level. AES-CVTS focuses on written vocational training plan and internal training arrangements, and specifically it focuses on assessments on future needs.</p>
CIS	<p>The CIS (CIS) collects data on innovation activities in enterprises, namely on product innovation (goods or services) and process innovation. The CIS is based on the Eurostat/OECD Oslo Manual 1997. The main objectives are:</p> <ul style="list-style-type: none"> - to explore the link between innovation and growth; - to identify the main sources of innovation, including co-operation; - to measure the extent of public funding, with respect to innovation; - to study human capital and innovation.
COI	<p>The COI survey is intended to identify the organisational and ICT changes that have characterised corporate life the last 3 years and their impacts on economic and social performances, in particular in terms of employment, employee’s qualifications and job contents. The first wave of the COI survey was designed to elicit the so-called Solow paradox (computers can be seen everywhere except in the productivity figures). The idea was that the analysis of ICT diffusion could not be disassociated from the study of organisational changes, since these played a mediating role in the genesis of innovative uses of information technology. Then, in order to construct a robust system for measuring change, it seemed appropriate to bring together the viewpoints of the employer and those of its employees. COI was also designed to better understand the forces driving job contents and working conditions. In particular the influence of employer’s decisions in terms of everyday work practices was at stake. Matching two surveys provides a more complete overview of the organisation and allows seizing interactions between employers and employee. Identifying the moment of change is important to analyse relationships at the system, organisation and individual level.</p>
DISKO	<p>To present aspects of the Danish innovation system described and understood in terms of the “learning economy”. The aim is to trace the relationship between technical and organisational innovation together with the development of the employees’ qualifications and related to competition and performance.</p>

Acronym	Objectives of the survey
EMS	The survey aims at systematically monitoring the production structures in the European manufacturing industry regarding their modernity and performance. It focuses on the diffusion of innovative technological and organisational concepts of operational problem solving as well as on the changes in the personnel and qualification structures. Additionally, the characteristics and trends of firm level performance variables are captured.
ESWT	The survey aims to complement existing Foundation (EFILWC) data and research on working time which is based primarily on surveys of individual workers and on literature reviews and case studies. The aim is to canvas the opinions of managers and workers' representatives on working time arrangements and to gain an insight into current working time policies and practices, as well as work-life balance issues in European companies.
FIT3	This survey's aim is to provide baseline data which would be used by the HSE to monitor progress of its FIT3 programme (Fit for work, Fit for life, Fit for tomorrow). This program was established by the HSE to deliver its PSA targets for reducing work place injury, ill health and days lost by 2007-2008. HSE commissioned a programme of surveys of employers and employees to get their views on various aspects of topics including exposure to risk; risk controls measures and their effectiveness. The surveys are collectively known as FIT3 surveys and are used to support the monitoring of progress of the FIT3 programmes. The surveys have been designed to run in three waves over three years.
IAB	The IAB Establishment Panel was created to meet the need of the Federal Employment Agency to provide further and detailed information on the demand side of the labour market.
MOA	The MOA instruments are aimed at identifying complex patterns in modern working life. The objective is to link organisational characteristics and changes to effects on work and health among employees. Different aspects of organisational change and their impact on changes of working conditions are of particular interest. The instruments ask for directions of change retrospectively (increased – decreased, improved - deteriorated) rather than asking for "states" or "levels".
NES	The objectives of the survey are to provide and relate information on worker education, employer training and employer business characteristics, including business productivity. Education, human services, and economic policy agencies use the study results to assess what kinds of education and training most affect business productivity, and encourage actions and develop initiatives that increase productivity. Employer businesses and industry associations use the results to assess existing and potential company and industry practices, and take actions that will increase business productivity, profitability, and international competitiveness. In 1997 and in 1998 the instrument was expanded to explore participation in school-to-work partnerships and involvement in community and education initiatives.
PASO	The objective of PASO Flanders is to map out contemporary trends in human resource management and the organisation of work. The focus is on the impact of these trends on the functioning of the internal and external labour markets and on changes in job and qualification structures.
REPPONSE	The REPPONSE survey is intended to map the employment relations. Topics include economic characteristics of the company and position of the workplace, and in the workplace representative structures, work organisation, job management, pay systems, worker involvement, negotiation and conflicts.

Acronym	Objectives of the survey
WERS	To map employment relations practices in workplaces across Great Britain, and to monitor changes in those practices over time. To inform policy development, and to stimulate and inform debate and practice. To provide a comprehensive and statistically reliable dataset on British workplace employment relations that is made publicly available for research. Topics covered include: work organisation; employee involvement; workforce flexibility; employee representation; pay systems; workplace performance; and employee attitudes.
WES	To explore a broad range of themes relating to employers and their employees. The survey aims to shed light on the relations between competitiveness, innovation, technology use and human resource management on employer side; and technology use, training, job stability and earnings on the employer side.
WHASS	The Health and Safety Executive (HSE) planned to conduct a programme of large-scale workplace surveys during the period 2005-2015, in order to study the state of health and safety in Britain's workplaces. This survey is intended to take a leading role among the range of sources used by HSE to assess the progress towards government targets set for health and safety at work. In advance of the main survey, BMRB has been commissioned to conduct a 'Dress Rehearsal' of the main survey to test this innovative and challenging approach. Separate reports (process and technical reports) have been produced describing BMRB's experience of the Dress Rehearsal. BMRB has also been commissioned to conduct standalone surveys of employers and employees in order to test the questionnaires and to provide baseline data in advance of the main survey. This is the employers stand alone survey.

2.1 Content of the surveys

In this section we describe the results for the content of the surveys. As mentioned in the Introductory Chapter we chose to examine the content according to several policy fields, because in European and Dutch national policy they are also distinguished separately to a large extent:

- Working conditions, work organisation and occupational safety and health (OSH) policies;
- Human Resource Management;
- Internal and external labour market and their dynamics;
- Industrial relations and labour-management relations;
- Social security;
- Product, process, technological innovation and organisational change;
- Organisational performance.

Interestingly, several of the surveys in this inventory apply a linked employer-employee design (or linked employer-employee representative design) for several reasons. In the next Chapter per survey the research design is shown. Regarding the content description of the surveys in our overview, in case of linked surveys we make a restriction to the content of the employer survey.

As Table 3 shows, all surveys examined cover two or more of the distinguished subjects - which was a criterion for including a survey in this overview. As can also be seen, the DISKO, ISAB, PASO, MOA, NES, and WES cover all domains, while this is

to a much lesser extent the case for the AES-CVTS and the CIS. These two surveys instead focus primarily on training and innovation respectively. Although several surveys seem to cover all domains, they do so with differing emphasis and with a differing level of detail, as will be shown in the Tables in the next sections.

Table 3: Domains covered in the surveys

	Working conditions, work organisation and OSH policy	HRM	Internal and external labour market	Industrial relations and labour-management relations	Social security	Product, process, technological innovation and organisational change	Organisational performance
AES-CVTS		√		√		√	
CIS		√	√			√	
COI	√	√	√	√		√	√
DISKO	√	√	√	√	√	√	√
EMS	√	√	√			√	√
ESWT	√	√	√	√			√
FIT3	√			√		√	
IAB	√	√	√	√	√	√	√
MOA	√	√	√	√	√	√	√
NES	√	√	√	√	√	√	√
PASO	√	√	√	√	√	√	√
REPNSE	√	√	√	√		√	√
WERS	√	√	√	√		√	√
WES	√	√	√	√	√	√	√
WHASS	√		√	√	√		√

2.1.1 Indicators on working conditions, work organisation and OSH policy

Working conditions, work organisation and OSH policies are a first domain we looked into. The indicators studied concern for instance physical, ergonomic and psychosocial risks and preventive actions (OSH policy). Related to this domain of working conditions is the work organisation which by its nature can cause these risks (job rotation, autonomous groups, delegation of responsibility, quality circles, systems for collecting proposals from employees, interdisciplinary work groups, integration of functions).

As can be seen from Table 4 these topics are covered with a high level of detail by the PASO and MOA study. Also the WHASS and the FIT3 study deal with this domain extensively. However, the latter two surveys have a strong focus on physical and ergonomic risks and OSH policy, and not on work organisation.

Table 4: Indicators on working conditions, work organisation and OSH policy

	Indicators on working conditions, work organisation and OSH policy
AES-CVTS	-
CIS	-
COI	Employee authorities/discretion; division of work; maintenance/repairment; pay; quality control (self inspection) Proportion of computer users; intranet; internet. Internal organisation (hierarchical levels, functions, employees' responsibilities)
DISKO	Job rotation, autonomous groups, delegation of responsibility, quality circles, integration of functions Telework/distance work

	Indicators on working conditions, work organisation and OSH policy
	Change in qualification level of work
EMS	Teamwork; planning and quality control included in the responsibility of the team; multitasking, Internal monitoring of employee satisfaction; illness incidence rate or fluctuation
ESWT	Variations in workload (plus arrangements for coping with workload peaks, like asking regular workers to work more hours, employing temporary workers, outsourcing) Extended operating hours, work at unusual hours (Saturdays, Sundays; shift system and changing working hours, plus how much notice given in advance) Problems regarding high absenteeism and high sickness rate; low motivation of staff
FIT3	Risks (stress, slips and trips, hand and arm vibrations, noise, falls from height, workplace transport, skin problems, respiratory conditions, musculoskeletal disorders, cancer, violence) Preventive actions; written OSH policy; all kinds of risk preventions, measures to reduce risks, sickness absence; health surveillance; training concerning risk prevention Received a health and safety inspection in last 12 months. Familiarity with (new) regulations. Sickness absence
IAB	Delegation of responsibility; autonomous teamwork; Number of hierarchical levels. Analysis of absence rate due to sick leave; surveying of employees on workplace health protection; employee meetings on health problems in the workplace (“health circle”); training in healthy behaviour.
MOA	Decentralisation of decision making (breaks; planning; follow-up) Type of skills required Length of the work cycle in basic operations; Degree of use of technology and technology dependence plus vulnerability in basic operations Vertical integration (planning and operations) and horizontal integration (flow production) Collaboration across units in production, planning, follow-up of results/quality control, choice of production technology, services and product development Rotation over different departments; Group work; Project organisation Extent of daily social contact with customers Management by standard procedures; detailed job descriptions; task specification; technical control; direct customer control; order control; group control Distance work Operating hours In-house occupational health service; Safety representatives at the workplace; Health and safety training; Investments in development of the working environment Extent of reported occupational injuries; Short-, Long-term sick leaves
NES	Job rotation, Self managed teams Health and safety training provided by employer Meetings organised concerning working conditions, health and safety
PASO	Decentralisation of authority/job control, support tasks and coordination: by workers, supervisor or other; job rotation; work meetings (incl. supervisor) and topics discussed Qualification level of work; Repetitive, routine work Policy aims regarding: health, safety, stress Absence rate (not only due to sick leave) Number of hierarchical levels Teamwork (or project teams): types/characteristics of teamwork: type of dependency between the teams (sequential/line, functional, flow); own preparing and support tasks; rotating team leadership Types of and share in machine/automation (paced) jobs
REPOSE	Discretion over work; job rotation; self inspection quality; autonomous teamwork; number of hierarchical levels; work in multidisciplinary groups; work in project groups; job security; working conditions (safety, work environment); shortage of personnel; appreciation/recognition; social climate Risk evaluation performed; Existence of a Health and Safety Committee Use of employee satisfaction survey Absence perceived as a problem

	Indicators on working conditions, work organisation and OSH policy
WERS	Variety in work; discretion over work; involvement in work organisation; job rotation; self inspection quality; teamwork and team's decision authorities; number of hierarchical levels Proportion of computer users Presence of a health and safety committee; Health and safety meetings and/or committees Proportion of work days lost through employee sickness or absence; Types of illness and injuries
WES	Work organisation Existence of grievance system for employees
WHASS	Three most common risks and three most severe risks Health and safety systems (e.g. risk assessment and control of risks, use of external information sources, annual plan, ISO and similar systems, training of health and safety representatives etc.) Management of attendance, and accident and illness recording. Policies based on these records Working at home (not on payroll), off-site, health and safety information provision to/responsibility sub-contractors and suppliers on-site, workers at home Proportion of total costs spent on health and safety issues Health and safety climate. Work related injuries and ill health (plus near misses), work-related illness and days lost, disability

2.1.2 *Indicators on Human Resource Management (HRM)*

Human Resource Management consists of several fields. Under this heading several subjects can be put like the provision in training, competence management, recruiting and selection, motivation, incentive and pay systems, working time arrangements, work-life balance and diversity policies, and knowledge management. As Table 5 presents, most surveys examine one or more of these subjects, although the emphasis differs. The PASO in particular is one of the surveys which surveys (almost) all of these subjects (Table 5).

Table 5: Indicators on Human Resource Management (HRM)

	Indicators on HRM
AES-CVTS	Training policy: assessments of future needs (manpower, skills and training) Training policy of enterprise; Continuous vocational training; Internal learning
CIS	Internal or external training specifically for the development and/or introduction of innovations
COI	Use of Internet in training, recruiting and selection Working time arrangements
DISKO	Written personnel plans (decisions concerning recruitment, dismissals, training, etc. Time perspectives of recruitment planning) Educational level employees (register data) (Change in) Working time arrangements Proportion of workforce that participated in training Any employees in training as a consequence of organisational change Continuous competence development Importance of conditions for management's efforts to secure continuous development of skills: solving work problems; sparring time; planned job rotation; work in teams; prompting co-operation and networking across groups; standard courses; educational activities; long term educational planning. Wages according to qualifications or functions; performance related to pay
EMS	Knowledge management: where does critical knowledge reside (processes/individual/group)
ESWT	Proportion in skilled jobs Flexible working hours:

	Indicators on HRM
	<ul style="list-style-type: none"> - Reasons for introduction of part-time work; policy regarding requests for part-time work; motivation of, and promotion prospect of part-time workers, complications of organising work - Working time accounts, flexible working time arrangements (possibility of adapting time of beginning or finishing daily work) (effects hereof) - Overtime (proportion of employees; regularly or only exceptionally; volunteers or selected workers; form of compensation) - Child care leave, long-term leave (effects/wishes/training when parental leave is finished; form of coping with absence of workers on parental leave; problems related to parental leave) Special services offered to facilitate work-life balance (plus opinion about whether it is a private responsibility of employees)
FIT3	-
IAB	<p>Staffing and staffing strategy</p> <p>Measures on equal opportunities males-females</p> <p>Competence development</p> <p>Level of wages in workplace; Use of profit sharing and staff shares</p>
MOA	<p>Staffing and staff policy (e.g. policy for coverage of short/long absences)</p> <p>Family friendly policy</p> <p>Company's skill structure; Company-specific skills; Competence level; Policy for enhancement of employee skills; Training policy</p> <p>Overtime compensation; Financial incentives; Salary system; Control systems: hard (management by results/quantitative measurements) and soft (e.g. dialogue, development talks)</p> <p>Working time arrangements</p>
NES	<p>Employee training including purposes, formal and informal programs, duration, effectiveness.</p> <p>Job sharing, flexi-time</p> <p>Pay, benefits, profit sharing, bonuses, gain sharing</p> <p>Employees covered by Family leave; Paid vacation/holidays; Stock options</p>
PASO	<p>Policy aims regarding: diversity, equal opportunities males-females and ethnic groups, work-life balance, financial arrangements and facilities</p> <p>Diversity in management team</p> <p>Organisational flexibility strategies</p> <p>Possibility for employees to choose working time arrangements</p> <p>Systematic personnel planning; recruitment (ways), procedures for selection and criteria)</p> <p>Competence management policy</p> <p>Qualifications required; Training of employees/managers; share of company specific training; amount spent on training</p> <p>Profit sharing</p> <p>Pay system plus classification of jobs</p> <p>Decentralisation of HRM: selection, coaching of new organisation members</p> <p>Evaluation of contribution HRM policy to organisation performance</p> <p>(HR) Instruments and certificates: (HR) balanced scorecard; IIP; Social audit; Sustainable investment screening; ISO; TQM; EFQM etc.</p> <p>Use of external organisations in HRM policy fields</p> <p>Policies to retain 'special' employees</p> <p>Performance appraisal interviews plus procedure</p> <p>Knowledge management practices</p> <p>Use of training cheques, advice/consultancy cheques (introduced by Flemish government)</p>

	Indicators on HRM
REPOSE	Hiring policy (3 most important personnel characteristics of applicants) Staffing policy: annual formation plan in relation to future needs Time needed for learning to perform the job well Payment system; Performance appraisals; Wages; Non-wage benefits; Target-setting; Consultation and communication; Disciplinary action
WES	Compensation of overtime per type of job. (How vacant positions are usually filled; responsibilities for human resource matters (training)) Various types of training; Training expenditures; Training related to new technology, Duration of training Telework Individual/group/profit-sharing etc.; Incentives in pay/compensation system (per type of job); Wage system; Total labour cost, proportion of workers per salary category
WERS	Management of personnel; specific practices relating to staffing: recruitment and recruitment procedures to encourage applications from (six) special groups, equal opportunities policy Training aimed at functional flexibility; Share of employees off-the-job training in last year Payment system; Performance appraisals; Wages; Non-wage benefits; Target-setting; Targets for employee satisfaction; Commitment; Disciplinary action
WHASS	-

2.1.3 *Indicators on internal and external labour market and their dynamics*

Regarding the internal and external labour market and their dynamics the surveys contain indicators on vacancies, staff inflow and turnover, internal promotions, leaves, downsizing and dismissals linked to restructuring. Per survey Table 6 lists the examined indicators on the internal and external labour market and their dynamics. Apart from some exceptions, all surveys pay attention to this domain although the accent given differs somewhat. Interesting for example is that some cross-sectional surveys aim to examine changes in the workforce composition, specified to type of jobs and/or socio-demographic characteristics.

Besides outsourcing (i.c. 'off shoring'), also some surveys and in particular the EMS examine the opposite of off shoring, namely: relocation/repatriation, including the reasons for bringing previously outsourced activities in-house. Furthermore it turns out that the MOA is the only survey in which changes in gender segregation are investigated.

Table 6: Indicators on Internal and external labour market and their dynamics

	Indicators internal and external labour market and their dynamics
AES-CVTS	-
CIS	Staff turnover
COI	Employment level, composition 'Financial' restructuring (fusion, acquisition, employment growth and/or layoffs etc.) and delocalisation Staff turnover (register data)
DISKO	Change in categories of flex workers in the last three years Register data on gross inflow and outflow of employees Numerical and external flexibility (temporary, part time work) Any employee with a different ethnic background

	Indicators internal and external labour market and their dynamics
EMS	Fluctuation of employees; Share of part-time employees; Workforce profile. Relocation (off shoring) and repatriation of activities and jobs (plus proportion graduates), and reasons for relocation or repatriation
ESWT	Workforce profile (proportion female workers; temporary and fixed term staff, agency workers; freelancers; part-time workers; proportion males in part-time work) Increase/decrease of number of employees Difficulties in finding staff for skilled, respectively low skilled or unskilled jobs Difficulties in retaining staff Child care leave, long-term leave (parental leave and men taking parental leave. Possibility of (un)paid long-term leave) Need to reduce staff levels
FIT3	-
IAB	Personnel structure (educational level) and flexibility (working time arrangements, Number of parttime, fixed-term and temporary workers - and how many females) Flexibility measures (and operating hours of the organisation) Changes among personnel from full- to parttime (plus females involved) Share of low paid employment Expected employment development Vacancies; difficulties in filling vacancies (plus reasons); vacancies announced to employment office. Filled latest vacancies with workers older than 50 years (reasons if not) Dismissals plus reasons Apprenticeships and employing successful apprentices/graduates (plus reasons if not) Restructuring/closings/mergers/outsourcing/off shoring
MOA	(Change in) Personnel structure; Staff turnover Extent of internal promotions Availability of manpower (Change in) Gender segregation; (Change in) Proportion of employees with foreign background Outsourcing; 'Financial' restructuring
NES	Hiring practices, costs on recruitment and selection of employers
PASO	Difficulties in filling vacancies (which type of jobs; reasons; measures) or too much staff or balanced number of employees. Staff (composition: number and distribution of personnel; in types of jobs; types of different contractual forms, shift work) Inflow and outflow of employees (reasons, amount recruited, staff turnover, reasons for quitting; in and outflow in (un)qualified jobs) Number of days temporary unemployment Number of non-European workers Expected grow/decrease in number of employees Collective dismissals and procedure
REPONSE	Difficulties in filling vacancies (for which type of jobs) Working time reduction applied (lois Robien ou Aubry) Workforce profile (temporary and fixed term staff, increase/decrease in types of jobs/departments) Change during past 3 years in: types of jobs/departments; 'restructuring' (mergers, take-overs, employment growth and/or layoffs, etc.) Changes in outsourcing, or, the opposite, bringing activities in-house

	Indicators internal and external labour market and their dynamics
WES	Share of temporary workers, part-time workers; number of work hours per week per type of job. Number of new employees hired during previous year (plus in which categories) Number of currently unfilled vacant positions (plus number which remained vacant for 4 months or longer) Separations (due to resignations; no special incentives); Lay-offs; Special workforce reductions; Dismissal for cause; Retirement (No special incentives); Other permanent separation) Temporary lay-offs Workforce: male-female distribution
WERS	Workforce profile (temporary and fixed term staff, agency workers; distance work, working time flexibility; labour turnover; increase/decrease in types of jobs/departments). Redundancies. Change during past 2 years in: types of jobs/departments; 'restructuring' (mergers, take-overs, employment growth and/or layoffs etc.) Proportion employees from minority groups, incl. 'disabled' Changes in outsourcing, or, the opposite, bringing activities in-house
WHASS	New staff to temporarily or permanently replace injured or work-related ill workers

2.1.4 *Indicators on industrial relations and labour-management relations*

The indicators in the domain of industrial relations and labour-management relations relate for example to employee representation, works councils, trade unions, bargaining and industrial conflicts.

As their names already indicate, especially in the French REPONSE and also - to a little lesser extent - in its British equivalent WERS and in the Flemish PASO many indicators can be found for this domain (Table 7). Furthermore, almost all surveys have at least one or more questions which relate to the proportion of the workforce that is member of a trade union membership, employee representation and/or on collective labour agreements. NES and WERS examine the existence of formal grievance or complaint systems in the organisation.

Table 7: Indicators on industrial relations and labour-management relations

	Indicators on industrial relations and labour-management relations
AES-CVTS	Joint agreement covering CVT for the employees between employer and employee
CIS	-
COI	Employee consultation in case of (most important) organisational change
DISKO	Cooperation between management and employees in relation to organisational changes Employee representatives or bodies involved in or informed about organisational change decisions and its stage(s) Extent of employee influence Share of employees covered by collective labour agreement Specific cooperation channels in relation to organisational change; Level of employee influence; Specific influence on recruitment/dismissals/training/competence development/personnel policy
EMS	-
ESWT	(questionnaire administered to the employer representative)
FIT3	Worker involvement in safety and health management (e.g. suggestion schemes, trade union health and safety representative)

IAB	Existence of work council/personnel council/other employee representation at the establishment Presence of a collective labour agreement
MOA	Contributors in the change-process of the organisation (top management of the workplace; HR and planning department; lower and middle management; personnel affected by the change process (plus employee categories); trade union representatives; consultants) Power structure within the workplace Proportion of employees member of trade union Communication between workers and management; trade unions and management
NES	Union representation Employees covered by formal grievance or complaint procedures Proportion of workforce covered by collective bargaining agreements
PASO	Decentralisation of employment relations regarding working time Negotiation on which level on loans; Collective labour agreements Channels applied in informing employees and topics Social consultation: presence of work council and/or trade union (membership per job category); committee for prevention and protection; topics (especially education/training) dealt with in social consultation Social conflicts in last year and types, plus frequency hereof, plus reasons of longest strike (e.g. working conditions, job security, technological or work organisational change, work climate (sanctioning, disciplining), process of collective bargaining, pay, working time)
REPONSE	Structure of representation and collective bargaining (trade union participation and membership among employees) Domains covered by collective labour agreements Impact of Social Dialogue Law (2004) on representation in establishment Negotiations (and agreements reached)/Employee involvement, consultation and representation in: organisational and technological change; pay proposals; employment; working time; work organisation; qualifications; working conditions; social protection (Collective) Conflicts and tensions in previous three years; mediation; forms of industrial action in establishment (strikes etc.)
WERS	Trade union membership and en-/discouragement hereof Representation: degree of consultation and negotiations with employee unions/representatives Communication; Manager's ratings of employment relations; Forms of industrial action in establishment (strikes etc.) Procedures for individual and collective disputes, individual and collective actions at the workplace Employee grievance procedures
WES	Institutionalised influence (on ten areas); Rating of labour-management relations; Occurrence of collective conflicts in last year; Proportion of full-time, part-time personnel, employees per type of job (not) covered by collective labour agreement
WHASS	Workplace member of a trade association Share of workers member of trade union, professional organisation Worker involvement/representation in management of health and safety in the workplace

2.1.5 *Indicators on social security*

Table 8 makes clear that only few of the surveys - 6 in total - cover the social security domain, while if they do so, the number of indicators is low. Especially noteworthy is that the WHASS applies indicators on liability and increases or decreases of claims.

Most other surveys relevant for the social security domain apply indicators related to activation programmes, pension plans and/or early retirement.

Table 8: Indicators on social security

	Indicators on social security
AES-CVTS	-
CIS	-
COI	-
DISKO	Any employees with a formal agreement about less straining work due to reduced working capacity Number of 'unofficial' light jobs (no grants) within the firm Unemployed people in activation agreements in firm Cooperation with local authorities (revalidation in companies, early disease follow up)
EMS	-
ESWT	Phased retirement, early retirement (possibility to reduce working hours before retirement; possibility of early retirement - based on legal regulations or on a collective labour agreement; extent of use of early retirement scheme; encouragement hereof, and reason)
FIT3	-
IAB	-
MOA	Rehabilitation programme
NES	Establishment using or providing government grants/subsidies to train workers Employees covered by Pension Plan; Severance Plan; Medical or health insurance; Dental care benefits; Child care subsidies; Life insurance; Sick pay
PASO	Employees employed via job scheme or loan grants system developed by government
REPONSE	-
WERS	-
WES	Pension plans; supplements to employment insurance Non-wage benefits (health related; pension related), split by full-time and part-time employment
WHASS	Rehabilitation arrangements (e.g. 'Return to work interview'; Preparation and agreement of a return to work plan; Written policy on rehabilitation; Training/coaching of line managers and supervisors to manage rehabilitation). Settled claims under employer liability insurance relating to this workplace in last 12 months; how many due to health and safety Increase/decrease in employer liability insurance premiums and annual cost

2.1.6 *Indicators on product, process, technological innovation and organisational change*

We divided the subject innovation into sub-themes, namely product innovation and process and technological innovation. Related of course to some forms of innovation is the theme of organisational change. It can be concluded from Table 9 that these subjects are being taken up in all surveys except from the ESWT and WHASS.

The indicators in the surveys range from 'hard' indicators on for example R&D investments and share of new product as a proportion of total sales, to 'soft'/organisational indicators on work organisation practices that can facilitate the development of new products and services. Such work organisation practices comprise for instance systems for collecting proposals from employees, interdisciplinary work groups and co-operation with suppliers (cf. also section 2.1.1 with the other indicators on work organisation). Distinctive for the FIT3 survey is that it contains some indicators on process improvement regarding OSH policy (Table 9).

Table 9: Indicators on product, process, technological innovation and organisational change

	Indicators on product, process, technological innovation and organisational change
AES-CVTS	<p><i>Product innovation and/or technology:</i> Introduction of technologically new or improved products or services in last year</p> <p><i>Process innovation:</i> Introduction of new/improved method of producing in last year</p> <p><i>Organisational change:</i> Mergers, take-overs, restructuring</p>
CIS	<p><i>Product and process innovation:</i> Introduction of new/improved products/services in last 3 years (Product new on market, Share of total turnover, Time to Market, External R&D cooperation, R&D-intensity)</p> <p><i>Process innovation and/or technology:</i> New or significant improved production processes (Responsibility for development of process innovations, Ongoing/abandoned process innovations, Factors hampering process innovations)</p> <p><i>Organisational change:</i> Implementation of new/significantly improved management systems/organisation of work/relation to other firms</p>
COI	<p><i>Process innovation and/or technology:</i> ICT innovations/change in ICT tools: Internet, intranet, extranet, web site, data base, ERP, data-mining, workflow, groupware, etc.</p> <p><i>Organisational change:</i> Changes in hierarchical levels, organigram, employee authorities/discretion.</p> <p>Recourse to external consulting and/or internal project groups in case of organisational and technological changes. Description of the most important change. Obstacles to change (bad definition of the objectives, technical problems, conflicts, etc.)</p> <p>(Changes in) Management tools to manage the relations with clients and suppliers, the production, the human relations...: certification (ISO..), just-in-time, CRM, RFID, e-business, value analysis, reporting, etc.)</p>
DISKO	<p><i>Product innovation:</i> Introduction of new products/services during past 3 years (New product/service found on national/world market, Share of total turnover/earnings on new products/services, Evaluation of new products/services)</p> <p><i>Process innovation and/or technology:</i> Introduction of new ICT technology during past 3 years; systems for collecting proposals from employees, interdisciplinary work groups (Drivers behind introduction of new ICT; efficiency, internal and external communication, flexibility, shorter production time, cuts in workforce)</p> <p><i>Organisational change:</i> Important organisational changes during past 3 years; Changes in the management structure during past 3 years (Objectives of the organisational changes, Use of specific organisational principles and practices)</p>
EMS	<p><i>Product innovation:</i> Introduction of new or significantly improved products in the last 3 years (Product new on market, Share of total turnover, Importance, External R&D cooperation)</p> <p><i>Process innovation and/or technology:</i> Introduction year/status of use/intensity of different technologies/planned introduction of new technologies (specific technological concepts, process related performance indicators)</p> <p><i>Organisational change:</i> Introduction year/status of use/intensity of various organisational concepts; planned introduction of new organisational concepts (specific organisational concepts; performance indicators of organisational processes)</p>

ESWT	-
FIT3	<p><i>Process innovation:</i> Changes in kinds of risk management (e.g. replacement of old tools/equipment with newer tools/machinery)</p> <p><i>Organisational change:</i> Changes in involvement of workers in OSH management</p>
IAB	<p><i>Product innovation:</i> Introduction of new/improved products or services during 2 years</p> <p><i>Process innovation and/or technology:</i> Investments in ICT (Share invested in ICT development).</p> <p>Proportion of employees involved in R&D.</p> <p>Co-operation in R&D with other companies, universities/engineering companies.</p> <p><i>Organisational change:</i> Most important organisational change last two years (Introduction of 10 specific measures of organisational change; Consequences/reasons). Reorganisation of department structure.</p>
MOA	<p><i>Product innovation:</i> Introduction of new products during the last 2 years. Share invested in service/product development.</p> <p><i>Process innovation and/or technology:</i> Change in use of IT; Changed production processes. Share invested in ICT development. Introduction of new processes during the last 2 years. Just-in-Time production.</p> <p><i>Organisational change:</i> Reconstruction of organisational chart; Structural changes of the whole or part of the organisation. (Different aspects of organisational change (28 aspects), Contributors with initiative to change process). Change in vertical integration and in horizontal integration.</p>
NES	<p><i>Product and process innovation and/or technology</i></p> <p>Equipment and technology included capital assets, recent investments, age of equipment, use of computers per job category, research activities</p>
PASO	<p><i>Product innovation:</i> Enlargement/reduction of the product/service gamma (New products, Better products, Internal or external development of products, Investments in R&D).</p> <p>Co-operation in product development with customers, suppliers, knowledge/consultancy or government institutions</p> <p><i>Process innovation and/or technology:</i> Development/implementation of technology/automation, new production or work processes; quality procedures and systems; suggestion system; quality circles; co-operation in process development with external partners (see above)</p> <p>Procedures for selection and screening of suggestions for innovation projects; management of innovation projects</p>
REPPONSE	<p><i>Product innovation:</i> Introduction of new/improved products or services during past 3 years</p> <p><i>Process innovation and/or technology:</i> Introduction of: Robots/CNC machines; Systems assisted by a computer (PAO, CAO, DAO, FAO ..); Enterprise Resource Planning software (ERP). Monitoring of performance and quality at the workplace; Just-in-time; Attainment of quality standards (ISO, BS). Use of problem-solving groups or quality circles.</p> <p>Encouragement of cooperation across departments.</p> <p><i>Organisational change:</i> Introduction of: Flattening of hierarchical levels (decrease of hierarchical level(s)); Total Quality Management (TQM); An important organisational change during past 3 years Change during past 3 years (a) payment systems; (b) working time</p>

WERS	<p><i>Product innovation:</i> Introduction of new/improved products or services during past 2 years</p> <p><i>Process innovation and/or technology:</i> Introduction/upgrading of (a) computers; (b) other types of new technology; or (c) work techniques or procedures (Impact on employees of main change in past 2 years; involvement of trade unions; involvement of employees). Use of problem-solving groups or quality circles or continuous improvement groups.</p> <p>Just-in-time management. Monitoring of performance and quality at the workplace: use of benchmarking techniques; Attainment of quality standards (ISO, BS)</p> <p><i>Organisational change:</i> Changes during past two years in: (a) organisation of work; (b) payment systems; (c) working time; (d) employee involvement. (Impacts on employees of main change; involvement of trade unions; involvement of employees)</p>
WES	<p><i>Product innovation:</i> Introduction of new/improved products or services during 2 years. (Product new on world market/national market/local market)</p> <p><i>Process innovation and/or technology:</i> Implementation of new software/hardware or other new technologies. (How many employees use the new technology; investment technology); Number of subcontractors</p> <p><i>Organisational change:</i> Organisational change in last year, related to 15 organisation practices</p> <p>Objectives of most significant organisational change; questions on organisational change that affected the greatest number of employees.</p>
WHASS	-

2.1.7 Indicators on organisational performance

Lastly, except from FIT3 and AES-CVTS, all employer surveys of this inventory contain not surprisingly one or more indicators on organisational performance (Table 10). The indicators used range from hard measurements (e.g. figures on turnover, sales and products to be reworked) to estimations of the experienced effects of the introduction of certain measures in the organisation (cf. for example the CIS and ESWT in Table 10).

Table 10: Indicators on organisational performance

	Indicators on organisational performance
AES-CVTS	-
CIS	<p>Estimation of effects of (organisational) innovations: product oriented, process oriented, other effects. Importance of effects (also employee satisfaction and employee turnover) of organisational innovations</p> <p>Total turnover</p>
COI	<p>Economic performance (register data)</p> <p>Change in market share during previous 3 years</p>
DISKO	Result before tax on earnings stemming from products or services
EMS	<p>Total sales turnover; return on sales</p> <p>Delivery lead time; confirmed delivery date; quality (percentage of products that have to be scrapped/reworked); average manufacturing lead time; changeover time</p>
ESWT	<p>Rating of economic situation of establishment</p> <p>(Experienced effect of introduction flexible working hours on: paid overtime hours; adaptation to the workloads; absenteeism; degree of job satisfaction; (problems of) internal/external communication; costs; other (positive/negative) effects</p>
FIT3	-

IAB	Profit, Turnover, situation regarding 'rentability'/productivity. Expected turnover
MOA	Share of products/services delivered in time
NES	Total of value of sales
PASO	Turnover; investments; added value
REPONSE	Increase/decrease in volume of establishment's activity Market share (Three factors most important to the competitive success of main product/service) Rentability compared to competitors
WERS	Financial performance (interpretation by respondent: profit, values, sales, fees, budget, costs, expends, share, or other) compared to other establishments in the same industry. Idem for labour productivity and for quality of product or service Factor most important to the competitive success of main product/service
WES	Gross operating revenue from sale or rental of all products and services Gross operating expenditure Percentage of assets held by foreign interests Decrease/increase in productivity, sales, product quality, customer satisfaction and profitability
WHASS	Level of labour productivity at workplace compared with other similar workplaces; idem for level of profits and quality of products or services.

3 Methodology used in the surveys

3.1 Sampled unit and ‘who is the respondent?’

In the vast majority of the examined surveys the questionnaires are addressed to establishments (e.g. REPONSE, PASO) or workplaces (e.g. WERS, WES, MOA, WHASS), while only in some surveys companies or firms are the sampled unit. The latter is the case in the DISKO survey and some of the European-wide surveys: AES-CVTS and CIS. (Information not shown in a table).

The answer to the question ‘who, as the respondent, best represents the research unit’ depends partly, of course, on the research topics. If the emphasis is on topics such as automation, production or work organisation, it is appropriate to question the line management. If it is for example on personnel data, personnel policy, industrial relations or health and safety the personnel manager (health and safety professional) is more appropriate. As Huys and Ramioul write (2007), correct selection of respondents is important to the collection of reliable data. All too often, the head of personnel is approached with questions on issues about which he/she is insufficiently informed. Osterman (1994; cited in Huys and Ramioul, 2007) states in this respect: “Years of open-ended interviews with firms suggested to me that too often HRM staff, even at the establishment level, are not in touch with work organisation”.

The surveys in our inventory show a variety in the chosen approach addressing the question ‘who is the respondent?’ (information not shown in the Tables). In the COI and WES surveys for example the respondent is the general manager or person responsible for the workplace, while in the REPONSE, WERS and PASO surveys it is the manager responsible for personnel issues. Workplace health and safety managers are the respondents in the WHASS survey. In the DISKO survey the chosen respondent is less specified in advance: “employer representative in charge of personnel or organisational matters in the firm”.

3.2 Research design applied in the surveys

As we have set out in the Introductory Chapter, this inventory consists of both cross-sectional surveys and panels. Table 11 gives a detailed overview of the research designs chosen by the survey conductors. As can be seen, several surveys complete the information obtained from the employer survey, with a linked employee survey and/or an employee representatives survey. (The Annex of this report contains the information on the sampling procedures of the surveys - also for these linked surveys).

These complementary surveys can of course provide more valid information on certain topics - for example on working conditions. In this respect especially the Canadian WES survey is interesting because it also deploys a 3-wave linked employee panel; this employee panel is completely refreshed after the 3-year period. Furthermore, the Table shows that the COI, DISKO and IAB surveys enrich the data with administrative data obtained from registers.

Table 11: Population covered in the surveys and research design.

	Em- ployer		Minimum number of employees in the firm	Employee sur- vey also:		Employee representatives survey also:		Employer data matched with:	
	cross section	panel		cross section	panel	cross section	panel	employee data	employee rep- resentatives
AES- CVTS	√ (2 nd degree)		10+	√				√	
CIS	√		10+						
COI	√		20+	√				√ (also register data: <u>employer level</u> : eco- nomic performance; employment level and composition, turn- over; <u>employee level</u> : wage; working time)	
DISKO	√	√	20+			√ (2 nd degree)	√	√ (LFS data)	√
EMS	√		20+						
ESWT	√		10+			√ (2 nd degree)			√
FIT3	√		1+	√ (not matched; panel)					
IAB	√	√	1+ (employee covered by social security)	√ (2 nd degree, 1 st time in 2007)				√ (administrative data- base)	
MOA	√		1+	√ (2 nd degree)		√ (2 nd degree)		√	
NES	√	√	20+						
PASO		√	1+						
REPNSE	√	√	20+	√ (2 nd degree)		√ (2 nd degree)		√	√
WERS	√	√	cross section: 5+; panel: 10+	√ (2 nd degree)		√ (2 nd degree) (trade union representative and a non-union employee representative)		√	√
WES	√	√	-	√ (2 nd degree)	√ (2 years)			√	
WHASS	√		5+						

3.3 Population (public and/or private sector)

The inventory shows a mixture in the population studied (information not included in a Table). In a first group of surveys the population consists of both the public sector and the private sector. The surveys in this group are:

- AES-CVTS;
- COI;
- ESWT;
- FIT3;
- IAB;
- MOA;
- PASO;
- WERS;
- WHASS.

In the second group the population consists of only private sector firms/establishments:

- CIS;
- DISKO;
- EMS;
- NES;
- REPONSE;
- WES.

3.4 Response rates

Table 14 in the Annex to this report contains the information on the sampling procedure. This procedure is not always comparable due to for instance the presented different in research designs and differing business registers (sample frames) in the countries.

Also the size of the net samples is shown in this Table in the Annex, as are the response rates. As pointed out in the Introductory Chapter the British WERS shows a high response rate which is especially due to its long-standing, good reputation. Furthermore, it needs to be remarked that in France employers (and employees) are obliged to fill out the questionnaires. In case of refusal they can be fined. This, of course, explains partly COI's and Response's relatively high response rates.

In sum, it can be concluded from the information in the Annex that there are large differences in response rates between the countries. This can also be concluded on basis of the information from the transnational European surveys (CIS, ESWT).

3.5 Frequency of data collection

Table 12: Frequency of data collection

	Since	Editions	Year of surveys	Approximate frequency
AES-CVTS	1994	1	1994, 2000, 2006 (, 2010)	Every 6 years (nextly in 2010)
COI	1997	2	1997, 2006	'Every' 9 years
CIS	1993	4	1993, 1997, 2001, 2005	Every 4 years
DISKO	1996	3	1996, 2001, 2006	Every fifth year

	Since	Editions	Year of surveys	Approximate frequency
EMS	1993	7	1993, 1995, 1997, 1999: Germany (German Manufacturing Survey) 2001: Germany, Switzerland 2003/2004: Germany, Austria, Croatia, France, Great Britain, Italy, Slovenia, Turkey 2006/2007: Germany, Austria, Croatia, France, Great Britain, Italy, Slovenia, Turkey Greece, Netherlands, Spain	Before 2003 every 2 years, since 2003 every 3 years
ESWT	2004-05	1	2004-05	Next survey planned in 2008
FIT3	2005	3	2005, 2006, 2007	3 editions in 3 years
IAB	1993/1996	-	West Germany since 1993, East Germany since 1996	Annual
MOA	1995-97	-	Moa instruments: 1995-97; used in Healthy Workplace study 2002-04 & Swedish Working Life Cohort 2004, 2005, 2006	-
NES	1994	4	1994, 1996, 1997, 1998, 2000	Yearly
PASO	2002	3	2002, 2003, 2004	Yearly
REPNSE	1992	3	1992, 1998, 2004	Every 6 years
WERS	1980	5	Cross section: 1980, 1984, 1990, 1998, 2004 Two-wave panel survey: 1984-90, 1990-98, 1998-2004	Variable
WES	1999	8	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, (2007?)	Yearly
WHASS	2005	1	2005	Next edition depends on funds

3.6 Data collection method

Finally, the inventory also finds a variety of approaches regarding the data collection method which was chosen by the conductors of the surveys. All methods (face-to-face, telephone and web or postal interviewing) are applied and equally often. Most surveys also deploy a follow-up in case there are for example questions on exact figures which need to be acquired from administrative systems et cetera.

Table 13: Data collection method

	Face-to-face interview	Telephone interview	Web or postal questionnaire
AES-CVTS	√ (15%; incl. all organisations > 500 empl.)	√	√
CIS	√ (some countries)		√ (most countries)
COI		√ (follow-up)	√
DISKO			√
EMS			√
ESWT		√	
FIT3		√	

	Face-to-face interview	Telephone interview	Web or postal questionnaire
IAB	√		√ (follow-up)
MOA	√		
NES		√	
PASO			√ (Web; but also postal - for all organisations < 10 empl.)
REPOSE	√		
WERS	√		
WES	√		
WHASS		√	

4 Conclusions and Recommendations

The overview of the presented 14 employer surveys provided us with several insights in what and how monitoring of work and organisation is conducted by institutions abroad.

An overall conclusion from this overview is that, although the surveys are homogeneous on some topics, in general there is a wide heterogeneity. Although most surveys cover many of the 7 policy-fields that we distinguished for this overview, generally speaking they do so by different indicators or by different questions. Furthermore, the research design which the survey conductors deploy is quite heterogeneous. Due to the fact that the national employer questionnaires and the methodological designs applied are not yet harmonised at the international, European level, cross-country comparisons are hard to conduct. At that transnational, European level, but only for some of the relevant policy domains of our overview, there are some exceptions - with the CIS in the Innovation policy domain and the ESWT on working times and work-life balance. The CIS is conducted merely *decentrally* by the National Statistical Offices (in cooperation with Eurostat), while the ESWT is conducted *centrally*, commissioned by the EFILWC. Besides, as remarked in the Introductory Chapter preparations are underway for a survey on OSH policies, also administered centrally, by the European Agency for Safety and Health at Work. Furthermore, the EU MEADOW project develops guidelines for the collection of harmonised linked survey data that enable the measurement of changes in work and organizations. Several important European institutions which are concerned with data collection in this respect participate as stakeholder.

Therefore, if one wants to allow international exchanges and comparisons of survey results for the Netherlands too, it can be concluded that it is important for the 'Werkgevers Enquête Arbeid' to keep track with this international harmonisation developments, both on the short-term and on the long-term.

As was our main aim, this overview helped, and can help in the future, in feeding the Dutch 'Werkgevers Enquête Arbeid' with 'best practices' and with the methodological issues to take care of. As a result, some of them have been explored in detail (elsewhere) because it is a relative new area for the Netherlands: an example hereof is the principle of linking the employer data with register data (Oeij, Kraan, Sanders, Van den Bossche & Smulders, 2007). Another interesting feature, although less new for the Netherlands (*cf.* for example Dhondt, 2006¹), as applied by several of the surveys abroad is the linking of the employer survey with a survey among the employees and/or employee representatives.

Conducting such a linked survey could be an interesting option for future editions of the 'Werkgevers Enquête Arbeid' (*cf.* Oeij et al., 2007²). One of the main advantages of such a design is the fact that research topics can be addressed among the respondents that are most and best informed on the topic. For example, on the one hand one can assess among the employees their actual working conditions, work organisation and social impacts, and on the other hand among their employer the formal (written)

¹ For TNO's experiences since 1994 with linked employer-employee surveys: Dhondt, 2006.

² With respect to a linked employer-employee survey we elaborated the options in the frame of the feasibility study on the 'Werkgevers Enquête Arbeid' (Oeij, Kraan, Sanders, Van den Bossche & Smulders, 2007

policies and formal structure, collective agreements and financial outcomes. In case such a broad coverage of topics is the aim of the survey, this can yield more valid results than in case one deploys a mono-source method of data collection.

Although at current the extent to which *national* surveys that are harmonised internationally is limited, there is exchange of survey results between some European countries. This holds especially true for the British WERS and the French REPONSE surveys. It could be interesting to examine to which extent the ‘Werkgevers Enquête Arbeid’ can keep track with these surveys.

A lesson that can be learnt from these surveys is also that they have a long-standing, good reputation which also results in high response rates. These can especially be explained by a high degree of commitment of the governmental and operational stakeholders and sponsors involved.

References

- Appelbaum, E., Bailey, T., Berg, P., and Kalleberg, A. (2000). *Manufacturing advantage: Why high performance work systems pay off*. London: ILR Press.
- Dhondt, S. (2006). Experiences with questions of quality of work in the Dutch survey on Work in the Information Survey. Presentation at 'Measuring changes in work; International workshop of the quantitative pillar of the WORKS project', Leuven, Belgium, 22-24 February, 2006.
http://www.worksproject.be/documents/Steven_Dhondt_presentation_Leuven.ppt#256,1,Session
- Dunlop, J. & Weil, D. (1996). Diffusion and performance of modular production in the US apparel industry, *Industrial Relations*, 35 (3), pp. 334-355.
- Huys, R. & Ramioul, M. (2007). Measuring the degree of organizational transformation. A methodological benchmark of organisation surveys. Paper presented at 'Measuring changes in work by organisation surveys; 2nd workshop of the quantitative pillar of the WORKS project', Leuven, Belgium, 19-20 March, 2007.
- MacDuffie, J.-P. (1995). Human Resource Bundles and Manufacturing Performance: organizational logic and flexible production systems in the world auto industry, *Industrial and Labor Relations Review*, 48, pp. 197-221.
- Nielsen, P. et al. (Aalborg University Denmark) & other MEADOW partners (2008, forthcoming). States of the Art in Surveys and Concepts. Deliverable D2.1 MEADOW project.
- Oeij, P., Kraan, K., Sanders, J., Bossche, S. van den & Smulders, P. (2007), *Werkgeversmonitor Arbeid 2008 en 2010: Resultaten haalbaarheidsstudie 2007*. Hoofddorp: TNO Kwaliteit van Leven | Arbeid. Notitie.
- Osterman, P. (1994), How common is workplace transformation and who adopts it?, *Industrial relations and labor relations review*, 47, pp. 173-188.
- Sels, L., Ramioul, M., Huys, R. & Hootegem, G. van (2008), Measuring the Degree of Organizational Transformation. A Methodological Benchmark of Organization Surveys, *Sociological Problems*, pp. 58-80.
- Smulders, P.G.W. TNO Work and Employment in collaboration with a group of partner organizations (2003). A review and analysis of a selection of OSH monitoring systems; Report to the European Agency for Safety and Health at Work. Luxembourg: Office for Official Publications of the European Communities.
- Weiler, A. (2007), Working conditions surveys - A comparative analysis. Dublin: EFILWC, report no. ef0744.
- Womack, J.P., Jones, D.T. & Roos, D. (1990). *The machine that changed the world*. Rawson Associates. New York.

A Annex: Sampling procedure, sample and response rate

Table 14: Sampling procedure, sample, response rate

	Sampling procedure	Size of net sample	Response rate
AES-CVTS	1 st degree: sample of employees respondents. Follows a six-quarter sample rotation in which households remain in the sample for six waves and one quarter is replaced for each year 2 nd degree: all the enterprises of employees interview at the employee level	<u>Employer:</u> 8,615 with 4,792 respondents <u>Employees:</u> 18,000 persons <u>Matched:</u> 2000 expected	<u>Employer:</u> 55,6% <u>Employees:</u> 97%
CIS	Stratified by 2-digit classification of economic activities, by size class of enterprises and by region	125,000	Varies by country, range between 22% and 80%
COI	<u>Employers:</u> - stratified by sector and size. <u>Employees:</u> - stratified by enterprise	<u>Employer:</u> private sector: 13,700 enterprises, 7,700 matched) <u>Employees:</u> 19,780	<u>Employers:</u> 85% <u>Employees:</u> 72%
DISKO	Sample composed of three parts: (1) surviving firms from former DISKO surveys; (2) all firms with 100+ employees; (3) sample of firms with 20-99 employees drawn to un-bias total sample	2006: 1,775 questionnaires	2006: 43%
EMS	<u>Minimal recommendation:</u> - stratified random sampling - 60 to 300 establishments pr country depending on size of the country <u>German EMS-Dataset:</u> - stratification by sector (NACE 2 digit level) and 6 size classes - randomly selected proportional sub-samples	<u>Germany 2006:</u> 1,663 valid questionnaires	<u>Germany 2006:</u> 12,4%
ESWT	Random selection of establishments Weighting procedure used to correct for disproportioned sample structure	Size depends on country size. Management interviews range between 400 (Cyprus) and 5,000 (Slovenia)	Varies, range between 11% (Hungary) and 61% (Poland)
FIT3	This is a quota survey which sets interlocking size and sector quotas (i.e. quotas by employee size <i>within</i> each sector category). There were 57 sector categories and 4 size bands, giving a total of 228 quota cells. This is a survey of business <i>establishments</i> rather than enterprises. The sample frame of establishments used was the the Experian Business Database. The IDBR was used to boost the sample for the public sector.	6,015	23%

	Sampling procedure	Size of net sample	Response rate
IAB	Sample of establishments with at least one employee that is covered by social security: - stratified by sector, size and region (federal state (Bundesland))	<u>2006</u> : West Germany: 9,856 East Germany: 5,593	More than 80%
MOA	Strategic sampling by organisation/workplace and secondly employees at these workplaces (MOA). Total sample of employees (Healthy workplace study)	82 organisations (220 employees) (MOA) 90 organisations and 3,500 employees (Healthy workplace study)	71% organisations, 99% employees (MOA) 99 % organisations 81 % employees (Healthy Workplace study)
NES	1994, 1996, 1997: The sample was evenly divided between manufacturers and non-manufacturers, with explicit oversampling of establishments that have 100 or more employees and implicit oversampling of manufacturers because they are greatly outnumbered by non-manufacturers in the Business Register universe. 1998: A selection process was designed to increase the changes of surveying establishments likely to hire youth. A sampling probability was derived from two components: taken directly from the NES 1997 and computed from the Census Bureau's Current Population Survey (CPS) data.	<u>1994</u> : 3,347 <u>1996</u> : 2,378 (75% from 1994 panel) <u>1997</u> : 6,971 (900 from the 1994 panel) <u>1998</u> : 1,003 (439 from 1997 panel)	<u>1994+1996</u> : 72% <u>1996</u> : 75% <u>1997</u> : 78% <u>1998</u> : 72%
PASO	Stratified random sample by sector, size, province	<u>2004</u> : 1,884 questionnaires	<u>2004</u> : 25,3%
REPOSE	Sample of workplaces stratified by sector and size. 2 nd degree (1): random selection of a representative in the workplace 2 nd degree (2): sample of 8 to 12 employees by workplace (the sample of employees is not drawn in the workplace, but independently from administrative databases)	For example in <u>2004</u> : <u>Employers</u> : 2,930 interviews <u>Representatives</u> : 1,970 interviews <u>Employees</u> : 11,760 questionnaires	For example in <u>2004</u> : <u>Employers</u> : 62% (face-to-face in the workplace) <u>Representatives</u> : 88% (face-to-face in the workplace) <u>Employees</u> : 32% (postal at home)
WES	Longitudinal employer sample; employees followed for two years	Employer 1999 - 6,322 2000 - 6,068 2001 - 6,207 2002 - 5,818 2003 - 6,565 2004 - 6,159 (Employee: 1999 - 23,540	57% in 1999 82% in 2004 (incl. panel)

	Sampling procedure	Size of net sample	Response rate
		2000 - 20,167 2001 - 20,352 2002 - 16,813 2003 - 20,834 2004 - 16,804)	
WERS	<p><u>Sample of workplaces:</u> - stratified by size of workplace and sector</p> <p><u>Employees:</u> - random selection of 25 employees in each workplace that participate in the cross-section survey</p> <p><u>Second wave of each panel survey:</u> - random selection of those workplaces participating in the previous cross-section survey</p>	<p><u>Cross-section surveys (2004):</u> 2,295 workplaces 22,451 employees</p> <p><u>Panel survey (1998-2004):</u> Management interviews at 938 workplaces</p>	<p><u>Cross-section surveys (2004):</u> 64% workplaces (HR manager), 77% employee representatives, 60% employees 51% financial performance questionnaire</p> <p><u>Panel survey (1998-2004):</u> 77% workplaces (HR manager)</p>
WHASS	<p>Sample was drawn from the Inter-Departmental Business Register (IDBR) and included local units with five or more employees.</p> <p>Coverage: The sample should be selected from the population of local units with 5 or more employees, classified within SIC (2003), including units from both private and public sectors.</p>	<p><u>2005</u> 966 workplace health and safety managers.</p>	63%