

Dortmund/Brussels Position Paper

Summary: Workplace Innovation as Social Innovation

Definition: Workplace Innovation is a social, participatory process which shapes work organisation and working life, combining their human, organisational and technological dimensions. This participatory process simultaneously results in improved organisational performance and enhanced quality of working life.

Importance¹: Social Innovation in the workplace enables technological and economic innovations to take effect, delivering a productivity and innovation leap for private and public enterprises. The lack of investment in Workplace Innovation leads to lost opportunities and the underdevelopment of the knowledge economy, a gap intensified by the emergence of new working patterns and new types of organisation. Also, investment in Workplace Innovation would help the new Industrial Policy developed by the European Commission. Workplace innovation has undoubtedly positive effects.

Investments in organisational change are visible and show that 'intangible' investments influence up to some ten percent of economic growth (Corrado e.a., 2005). Consistent with earlier results of the *Erasmus Competition and Innovation Monitor* (2009) technological innovation by means of R&D and ICT investments determines 25% of innovation success, whereas social innovation (management, organisation and work aspects) determines 75% (Volberda et al., 2011). At the same time the data of the European Working Conditions Survey (EWCS; Eurofound, 2012) demonstrates that workplace Innovation results in active work situations: workplaces and jobs in which workers have sufficient autonomy to control their work demands coupled to more discretionary capacity for learning and problem-solving.

Overall, however, the number of organisations investing in Workplace Innovation in Europe is too small. Market forces fail to provide organisational decision-makers with adequate information and knowledge resources to understand and instigate Workplace Innovation.

What should Europe do? The Dortmund/Brussels Position Paper stresses several core priorities:

- The EU should address the push, pull and uplift factors required to scale up Workplace Innovation in Europe. National and regional action based programmes should be stimulated, based on a shared vision and a shared understanding of the conditions required for sustainable and systemic change.
- The current thrust of European research spending on 'hard tech' issues must be balanced by the development of Workplace Innovation. The new Framework programme *Horizon 2020* should allocate thirty percent of the technology investments to Workplace Innovation investment.
- Direct support for new capacity and network building is required to pump prime actions in many Member States. Transfer of knowledge inside Europe (within the North and from North to South and East) should be stimulated to enhance Europe's competitive edge through Workplace Innovation. A targeted transnational initiative should establish new coalitions and fund demonstrator projects in Member States currently lacking national programmes.
- Measurable performance targets relating to work organisation need to be incorporated within the Integrated Guidelines of the European Employment Strategy based on systematic data collection. Measures to raise awareness of the significance of work organisation should be targeted at ESF operational structures at national and regional level.

¹ See Factsheet for data on Workplace Innovation at the end of this paper.

Dortmund/Brussels Position Paper²

Workplace Innovation as Social Innovation

This paper, reflecting the views of a diverse body of practitioners and experts across several Member States, argues that Workplace Innovation needs to be recognised as a core element within the EU policy framework. The paper demonstrates that the competitive and social advantage of Europe depends greatly on how our workplaces are shaped, and outlines the key role of the EU in enabling Workplace Innovation to achieve its full potential in realising the goals of the Europe 2020 Strategy. In this Position Paper we define Workplace Innovation and examine how Europe can support it.

In this way, this Paper fully supports the opinion of the European Economic and Social Committee on 'Innovative workplaces as a source of productivity and quality jobs' (March 2011)³. It also builds on the 'Vienna Declaration' on the importance of social innovation research, notably 'Workplace Innovations for smarter and better working' (November 2011)⁴. Likewise it supports the WORK-IN-NET 'Berlin Declaration' (March 2010)⁵ which defined core arguments for raising the profile of the workplace in EU policy and research.

Workplace Innovation should be recognised as a core policy issue for the reasons examined below.

1 What is Workplace Innovation?

1.1 Workplace Innovation is defined as a social process which shapes work organisation and working life, combining their human, organisational and technological dimensions.⁶ Examples include participative job design, self-organised teams, continuous improvement, high involvement innovation and employee involvement in corporate decision making. Such interventions are highly participatory, integrating the knowledge, experience and creativity of management and employees at all levels of the organisation in a process of co-creation and co-design. This simultaneously results in improved organisational performance and enhanced quality of working life. It is important to see Workplace Innovation not as an end state but as a

² The Dortmund/Brussels Position Paper' refers to a seminar in Dortmund, 26 – 27 April 2012, of researchers from a number of European countries, organised by the SFS Dortmund/TU Dortmund, CESO/University of Leuven and TNO. In this seminar, the initiative for the position paper was taken to develop a common frame of reference for joint activities and policy discussions. Next to the Dortmund meeting, lessons learnt from the Brussels meeting on May 30th (Ter Kamerenbos) were added to the first draft of the position paper.

³ EESC (European Economic and Social Committee) (2011). Innovative workplaces as a source of productivity and quality jobs. Brussels: EESC.

⁴ The 'Vienna Declaration' on the most needed social innovations is one of the outcomes of the international conference 'Challenge Social Innovation', Vienna (19 -21 September 2011).

⁵ WORK-IN-NET: "The Grand Societal Challenge: sustainable European work to withstand global economic change and crisis" (Berlin declaration), Berlin (March 2010).

⁶ This refers to the HOT-model (combining Human, Organisational, Technological change) in Germany and the TOP-model (combining Technology, Organisation, Personnel) in the Netherlands. Interventions related to both models include redesigning work organisation, human resource management, leadership and management, and supporting / enabling technologies and social media.

- dynamic, reflexive process in which all stakeholders are continually engaged in reflecting on, learning about and transforming work processes and employment practices in response to both internal and external drivers.
- 1.2 The wider policy outcome of Workplace Innovation is to contribute to sustainable economic, ecological and social change by fostering the innovative capacity of organisations and individuals. Workplace Innovation is considered a necessary enabler of effective technological innovation. Developing and deploying human talent and fostering a willingness to cooperate are an indispensable component of a versatile network economy, relying heavily on participation, dialogue and self-organisation by engaged individuals working in and between organisations.
 - 1.3 Based on this definition, it is clear that Workplace Innovation embraces diverse EU policy fields including Social Innovation Europe, Flagship Initiative Innovation Union, Flagship Initiative New Skills and Jobs, Flagship Initiative on Industrial Policy and Occupational Safety and Health. Defined this way, Workplace Innovation is social in its goals as well as in its means.
 - 1.4 'Workplace Innovation' is a unifying concept, bringing together diverse narratives about the workplace and work organisation used at different times and in different Member States. These include work organisation, high performance work systems, learning organisations, workplace social dialogue, and both direct and representative participation.
 - 1.5 Little is known about how Workplace Innovation drives and adapts to recent and emerging social developments in the world of work: the growth of self-employed individuals, the growth of the network economy and multi-located working sites, the notion of the mobile and boundless 'workplace', the concept of distributed leadership and management, the changing institutional roles of unions and occupational groupings, the ageing work force, complex patterns of self-organising linkages connecting organisations and individuals, the application of ICTs and the use of social media. These highly unpredictable emerging patterns demand social intelligence and innovative capacity which transcends technical or economic perspectives alone.

2 Why is Workplace Innovation essential for the future of Europe?

- 2.1 Data on the spread of Workplace Innovation practices in Europe is sparse. The small amount of information that is available from the different Member States shows that number of organisations investing in Workplace Innovation is quite limited, at best some fifteen percent across the EU⁷. Workplace Innovation is more common in the North of Europe than in the South, but the gap between evidence-based practice and common practice is extensive throughout Europe.
- 2.2 EU Member States and institutions have committed themselves to pursuing the 'Europe 2020' strategy to help them emerge stronger from the crisis, transforming the EU into a smart, sustainable and inclusive economy delivering high levels of employment, productivity and social cohesion. Innovation is central to this agenda, an argument strongly underlined by the 'Flagship Initiative Innovation Union'. 'Innovation' can be understood in terms of changes in, for example, products and services, new marketing and business methods, new processes to make goods and services, new applications of technology, ICTs and social media, and new ways of working

⁷ See for example: Oeij, P.R.A., Klein Hesselink, J., Dhondt, S. (2012). Sociale innovatie in Nederland: stilstand is achteruitgang. (Workplace innovation on the Netherlands: Stagnation means decline.) *Tijdschrift voor HRM*, 1, 7-32

- of and between individuals in networks, teams or other configurations. The effective and sustainable implementation of such innovations at the organisational level depends on securing convergence between improved economic performance and enhanced quality of working life, reflecting Europe's social market economy and the European Social Model. Workplace Innovation lies at the heart of this convergence. Likewise concepts such as Enterprise 2.0 and Innovation 2.0 represent highly participative approaches in which the organisation of work is co-created by diverse stakeholders. Workplace Innovation builds the innovative capacity of private and public enterprises.
- 2.3 Demographic shifts require employers to be more flexible and more receptive to workforce diversity. This requires new policies at the workplace: more attention to work-life balance, more sensitivity to intergenerational issues and more attention to labour market inclusion. The way that workplaces are shaped needs to change. Workplace Innovation supports such change by engaging active workers and drawing on their knowledge and experience. However a better understanding is required of the ways in which Workplace Innovation addresses demographic and workforce change, and enables successful adaptation to changing labour markets.
- 2.4 New technologies enable work to be undertaken in diverse locations connected by information technologies with the potential to empower individuals to work independently of time and place, even at home. Such ways of working constitute new configurations of social practice which need to be negotiated and shaped through the widest possible participation. Workplace Innovation is the locus of Social Innovation at the organisational level.
- 2.5 In the production of goods and services, work can be organised in ways which either enable or constrain the innovative capacity of the individual worker. Companies and public sector employers should build on the innovative power of their staff. Workplace Innovation creates active work, and active workers are the basis for an active society. Active workers are also more conscious workers, aware of the important connections between ecology, productivity and sustainability. Active work is also healthy work, with a long term effect on ameliorating the increasing cost of cure and care systems. Job autonomy, for instance, is not only an effective means of solving production problems and improving work processes but can also reduce the risk of work related stress.
- 2.6 At the societal level innovation turns out to be a complex issue. Although an exclusive focus on technology as a source of innovation transparently fails to meet the needs of a knowledge and service-based society and economy, concerted action is required to ensure the necessary paradigm shift towards the integration of technological and social perspectives. Social Innovation in the workplace enables technological and economic innovations to take effect and can deliver a productivity jump. It is often a pre-condition for the successful implementation of new technologies. Workplace Innovation is therefore a sine qua non.
- 2.7 At the same time returns on investment in Workplace Innovation, as with other forms of social innovation, are not necessarily found in directly measurable indicators. Rather Workplace Innovation can contribute significantly to the long-term creation of intangible assets and outcomes across a range of social and economic factors. Lack of immediate measurable returns in such cases makes companies and public sector employers hesitant to invest. It is unclear to employers whether new organisational concepts and new technologies such as social media will work and provide sufficient future returns. In short, the market has failed to provide organisational decision-makers with adequate information and knowledge resources to understand and implement approaches which achieve the necessary integration of social, organisational and technical dimensions. At the societal level, the lack of investment into

Workplace Innovation leads to lost opportunities and less than required knowledge development. To address this market failure it is essential that Workplace Innovation is supported in the same way as innovation research and development.

2.8 Technology can also act as an enabler of Workplace Innovation. ICTs can help organisations engage employees and develop participative approaches to change but employers need to gain a better understanding of how this can work in practice.

2.9 Several countries and regions have over the years developed programmes to stimulate Workplace Innovation in companies and organisations, some of which receive help from the European Social Fund. That support, although greatly needed, is territorially constrained and not directed at creating a Europe-wide approach to Workplace Innovation. Consequently there are few channels for capturing and distributing lessons from such programmes at the European level. The opportunity to scale up Workplace Innovation and achieve systemic change is not seized. Neither previous nor current European and national initiatives have focused on upscaling Workplace Innovation or on the drivers of systemic change. The barriers to progress (such as risk aversion and insufficient awareness) have not been addressed. Likewise little attention has been paid to raising awareness in ways that stimulate demand from policymakers, companies and social partners for the resources and capacity required to support Workplace Innovation. The urgent need is to identify and resource the intermediaries (social partners, politicians, regional institutions, educational institutions) who can animate demand and instigate forms of social innovation at national and regional levels capable of supporting innovation in the workplace.

3 What should Europe do?

3.1 The EU should address the pull, push and uplift factors required to scale up Workplace Innovation in Europe. Support is required to create, develop and sustain national and regional programmes based on a shared vision of Workplace Innovation and a shared understanding of the conditions required for its sustainable development.

3.2 **Pull:** Awareness of Workplace Innovation should be created to stimulate demand for such investments. Several measures are needed to achieve such awareness:

- A common database of evidence-based practice should be created to enhance understanding of Workplace Innovation.
- Research on Workplace Innovation, in different forms, can help to create sufficient awareness and demand. Action-oriented research into the conditions for effective and sustainable change in organisations remains a priority, establishing the conditions under which improved organisational performance and enhanced quality of working life can converge.
- The current thrust of European R&D spending into ‘hard tech’ issues must be balanced by research on Workplace Innovation in order to build a comprehensive view of the conditions for sustainable economic and social progress. The new Framework programme *Horizon 2020* should balance investment in technology with investment in Workplace Innovation. At least thirty percent of invested funds in *Horizon 2020* should be allocated to Workplace Innovation.
- Workplace Innovation linked to the introduction of new forms of work organisation makes a significant impact on indicators that lie at the heart of Europe 2020, including producti-

vity, innovation, quality of jobs, active ageing, healthy work and the acquisition of appropriate skills. Targeted intervention by public agencies and social partners works as a means of stimulating and resourcing Workplace Innovation in ways that produce win-win outcomes for enterprises and employees. Europe should include such awareness in its narrative on Europe 2020.

3.3 **Push:** Work organisation is a critical factor for the success of skills development and enterprise strategies.

- Funding to promote Workplace Innovation through the ESF should therefore be at the heart of its Operational Programmes at national and regional levels.
- In a number of Member States, Workplace Innovation is well-established as a policy issue. As Europe grows closer together and companies operate across geographical borders, it becomes even more important that knowledge and practices should be shared between Member States by means of joint programs, networks and collaborative action.
- Countries and enterprises are already deeply interconnected and face common challenges in embracing globalisation. It is an EU-level responsibility to ensure a structured approach to learning from Europe's diversity and to turn such learning into a unique competitive advantage in the global economy. Diversity management in relation to Workplace Innovation has to be recognised at EU level as an essential means of stimulating and enhancing exchange of knowledge, experience and creative thinking between Member States. Such learning can be done by supporting European Joint Research, or by creating a framework through which more can be learnt from the separate programmes in different countries.
- Enterprises need support in creating and embedding a holistic innovation culture. Europe already has a vast store of research-based knowledge and case study experience, but little of this exists in a form readily available to practitioners. In part this reflects a lack of translation between languages and in part a lack of translation between academic research and practice. New mechanisms for capturing, distilling and distributing knowledge of work organisation throughout the practitioner community are required.
- Social partner organisations at national and local levels can play a key role as knowledgeable participants in stimulating, guiding and resourcing workplace change, but they also need help and support to fulfil this role. More support is therefore needed for renewed social dialogue and capacity building actions targeted at national and local social partners.

3.4 **Uplift:** Many countries lack the intermediate organisations capable of bringing together policymakers, social partners, researchers and practitioners around collaborative action relating to the modernisation of work organisation.

- Direct support for the creation of new capacity and network building is required to pump prime actions in many Member States. The transfer of knowledge within Europe (both within the North and from North to the South and East) will help enhance the European competitive edge through Workplace Innovation.
- A targeted transnational initiative should be launched by the European Commission to resource the establishment of new coalitions and to fund demonstrator projects in Member States which currently lack national programmes. This could be based on convergent actions involving DG Enterprise and Industry, DG Employment, Social Affairs and Inclusion, and DG Regional Policy.

- Workplace Innovation can enhance policy effectiveness. ‘Work organisation’ appears frequently as an issue in EU policy documentation and even in the European Social Fund, but there is insufficient evidence of its translation into action. Measurable performance targets relating to work organisation need to be incorporated within the Integrated Guidelines based on systematic data collection. Measures to raise awareness of the significance of work organisation should be targeted at ESF operational structures at national and regional level.

Signatories of the Dortmund/Brussels Position Paper

- **Agence Nationale pour l'Amélioration des Conditions de Travail (ANACT) (France)**: Julien Pelletier, Ségolène Journoud.
- **Bulgarian Academy of Sciences - Institute for the Study of Societies and Knowledge (Bulgaria)**: Dr. Vassil Kirov.
- **European Association of National Productivity Centres**: John Heap, Marc De Greef.
- **Erasmus University, Rotterdam School of Management (Netherlands)**: Henk Volberda, Kevin Heij.
- **Flanders Synergy (Belgium)**: Chris de Wulf, Mieke Van Gramberen.
- **Hungarian Academy of Sciences - Centre for Social Sciences - Institute of Sociology + Szent István University - Faculty of Economics and Social Sciences (Hungary)**: Csaba Makó.
- **IAO, Fraunhofer Institut für Arbeitswirtschaft und Organisation (Germany)**: Walter Ganz.
- **INSCOPE, Research for Innovation (Netherlands)**: Henk Volberda, Andries de Grip, Aard Groen, Steven Dhondt.
- **IRES ER, Institute for Economic and Social Research Emilia-Romagna (Italy)**: Volker Telljohann.
- **ISF München, Institut für Sozialwissenschaftliche Forschung e.V. (Germany)**: Fritz Böhle, Judith Neumer.
- **Katholieke Universiteit Leuven, Centre for Sociological Research (CESO) (Belgium)**: Pierre van Amelsvoort, Jos Benders, Ezra Dessers, Steven Dhondt, Geert Van Hootegem.
- **Maastricht University, Network of Social Innovation (NSI) (Netherlands)**: Andries de Grip, Lex Borghans, Anita van Gils, Paul Iske.
- **Novitech (Slovak Republic)**: Attila Tóth.
- **Prevent (België)**: Marc De Greef.
- **PT-DLR, Projektträger im Deutschen Zentrum für Luft- und Raumfahrt e.V.; Innovative Arbeitsgestaltung und Dienstleistungen, Bonn (Germany)**: Claudio Zettel.
- **Radboud University Nijmegen, Institute for Management Research (Netherlands)**: Frank Pot, Ben Fruytier, Jac Christis, Roel Schouteten.
- **Roskilde University, Centre for Working Environment and Working Life (ENSPAC) (Denmark)**: Helge Hvid.
- **RWTH Aachen University, Institute Cluster IMA/ZLW & IfU: Institute of Information Management in Mechanical Engineering (IMA)/Center for Learning and Knowledge Development (ZLW) & Ass. Institute for Management Cybernetics (IfU) (Germany)**: Sabina Jeschke, Frank Hees, Anja Richert, Sven Trantow.
- **Swedish Council for Working Life and Social Research (Sweden)**: Carin Håkansta.
- **Technische Universität Dortmund, Sozialforschungsstelle Dortmund (Central scientific unit) (Germany)**: Hans Werner Franz, Jürgen Howaldt, Ralf Kopp, Antonius Schröder.
- **TEKES, the Finnish Funding Agency for Technology and Innovation (Finland)**: Tuomo Alasoini, Elise Ramstad.
- **TNO, Netherlands Organization for Applied Scientific Research, Work and Employment (Netherlands)**: Steven Dhondt, Klaas ten Have, Peter Oeij, Frank Pot, Fietje Vaas.
- **The Social Innovation Foundation.org (Netherlands)**: Jan Jacob Hilberdink, Tony van Acquoy, Peter Everts en Jack Crielaard.
- **UKWON - the UK Work Organisation Network and Workplace Innovation Limited (United Kingdom)**: Rosemary Exton, Peter Totterdill.
- **Universidad de Navarra – IESE Business School (Spain)**: Antonio Davila
- **Universidad Politécnica de Valencia (Spain)**: Dr Clara Bollaín Pastor
- **University of Twente, NIKOS Centre for Innovation and Entrepreneurship (Netherlands)**: Aard Groen
- **University of Copenhagen – Center for Health and Society (Denmark)**: Robert Karasek.
- **USI Ulbo de Sitter Institute for Disruptive Design and Change (Flanders and Netherlands)**: Geert Van Hootegem, Pierre van Amelsvoort.
- **VTT Technical Research Centre of Finland (Finland)**: Heli Talja, Marja Toivonen

- **ZSI, Zentrum für Soziale Innovation (Austria):** Josef Hochgerner, Anette Scoppetta.

Annex: Workplace Innovation - facts and figures

Workplace Innovation is important because of its social, economic and labour market impact.

Societal level

While the debate about regional and national innovation systems has predominantly centred around the structural, political and institutional prerequisites for innovative capacity on a national and regional level, management and work-related aspects of innovative capacity have become more and more important (Howaldt e.a. 2010). Investments in organisational change are now visible in the New Growth Accounts (Corrado e.a., 2005). From the analysis of these accounts, it is clear that such 'intangible' investments influence up to some ten percent of economic growth. The amount of such investments are very different between countries. It is still unclear 'how much investments' are needed, but not investing in organisational change leads to lower economic growth. These analyses demonstrate that:

- Such investments lead to competences at the company level which are 'fixed'. Investments in other 'intangibles' such as R&D, in patents, in HR can disappear overnight. For policy makers, organisational competences once developed remain local.
- With the European Union the highest investments are made in the UK, The Netherlands, Belgium and Germany. The lowest investments are made in Greece, Romania and Spain (Jona-Lasinio e.a., 2011).

What is unclear in these macro-figures is the type of investment classified under 'investment of organisational competences'. Research at the company or firm level is needed to show the differential impact of different types of investment.

Company/firm level

Different types of research shows consistent results on the positive economic and social impact of Workplace Innovation. The analysis of the European Community Innovation Survey (CIS) shows that organisational innovation is the only innovation type that leads to higher contemporaneous Total Factor Productivity levels. Product and process innovation only lead to higher TFP when performed in combination *with* organisational innovation. This is true for industry and service sectors, but with stronger effects in services (Polder e.a., 2010). Information and Communication Technologies explain productivity differences between the US and the European Union, but the impact on innovation runs via organisational innovation (Polder e.a., 2010). A review of some sixty American articles shows that the magnitude of the effects on efficiency outcomes is substantial, with performance premiums ranging between 15 percent and 30 percent for those investing in Workplace Innovation (Appelbaum e.a., 2011). A review of European research shows that improvements in both the quality of working life and organisational performance can go together very well (Pot e.a., 2009). The most comprehensive research on this topic in the European context is based on 470 workplace projects between 1996 – 2005 in Finland. Findings suggest that the main performance driver is staff participation (Ramstad, 2008). The most striking difference between the best and worst groups was that, in the former, staff played a role in initiating the project more often, employee participation was stronger and internal collaboration was better than in the worst group (Ramstad, 2009).

What is unclear from these results is the prevalence of Workplace Innovation practices in companies. In the *Innobarometer*, commissioned by the European Commission, innovation trends were investigated between 2006 and 2009 in sectors of industry that are supposed to be innovative. Surveyed firms had at least 20 employees. Of these enterprises, 49% introduced new or significantly improved organisational solutions (e.g. in knowledge management, workplace organisation or external relations). However this survey might be somewhat selective. In

the Dutch situation, such social innovative companies would account for at best 15% of all companies (Oeij e.a., 2011). Workplace Innovation would account for 75% of innovation, technological innovation only 25% (Volberda e.a., 2011). Even with such evidence of the impact of WPI on performance results, it remains strange that so few companies are investing in Workplace Innovation.

Worker level

At the workplace level the best available information is found in the European Working Conditions Survey (EWCS; Eurofound, 2012). Workplace Innovation results in active work situations: workplaces and jobs in which workers have sufficient autonomy to control their work demands coupled to more discretionary capacity for learning and problem-solving. The new results of the EWCS (2010 survey) reveal striking findings:

- Job autonomy has not risen in the past decade. Improvements in autonomy over the order of tasks have been offset by decrease in autonomy over methods. The stability in job autonomy is counter balanced by an ever increasing of job demands. Over the last twenty years in Europe, some 15% more workers experience working to tight deadlines.
- Challenging work has not increased over the last twenty years. Rather, the amount of repetitive tasks has remained the same and the degree of monotonous work has slightly increased.
- New questions in the EWCS 2010 on workers' participation show that only 47% of the European workers are involved in improving work organisation or work processes in their department or organisation. Again only 47% are consulted before targets for their work are set. Of all workers, only 40% can influence the decisions that are important for their work⁸.

The results show important variations in the spread of active and learning forms of work organisation across EU Member States, with a clear distinction between Western European countries and Southern/Eastern European countries (OECD 2010, based on EWCS 2005).

Sources

Appelbaum, E., Hoffer Gittell, J., Leana, C. (2011). High-Performance Work Practices and Sustainable Economic Growth, Washington: CEPR - Center for Economic and Policy Research, March 20.

Corrado, C., Hulten, C., Sichel, D. (2005). Measuring Capital and Technology: An Expanded Framework. In: Corrado, C., Haltiwanger, J., Sichel, D. *Measuring Capital in the New Economy. National Bureau of Economic Research Studies in Income and Wealth*, Vol. 65., Chicago: University of Chicago Press, 11-45.

Eurofound (2012). 5th European Working Conditions Survey. Overview report. Dublin: Eurofound.

Fukao, K., Miyagawa, T., Mukai, K., Shinoda, Y., Tonogi, K. (2009). Intangible investment in Japan: measurement and contribution to economic growth. *Review of Income and wealth*, 55, 717-736.

Howaldt, J., Schwarz, M. (2010). Social Innovation: Concepts, Research Fields and International Trends. Studies for Innovation in a Modern Working Environment – International Monitoring (<http://www.internationalmonitoring.com/index.php?id=256&L=1>)

Jona-Lasinio, C., Iommi, M., Manzocchi, S. (2011). *Intangible capital and Productivity Growth in European Countries*. Innodrive Working Papers Series No.10, Roma: LUISS-LLEE.

OECD (2010), *Innovative Workplaces: Making Better Use of Skills within Organisations*, OECD Publishing.

Oeij, P.R.A., Klein Hesselink, J., Dhondt, S. (2012). Sociale innovatie in Nederland: stilstand is achteruitgang. *Tijdschrift voor HRM*, 1, 7-32

Polder, M., Leeuwen, G. van, Mohnen, P., Raymond, W. (2010). *Product, process and organizational innovation: drivers, complementarity and productivity effects*. Maastricht: UNU-MERIT (Working Paper Series, 2010-035).

Pot, F.D., Koningsveld, E.A.P. (2009). Quality of working life and organizational performance – two sides of the same coin? Discussion paper – economics of occupational safety and health *Scand J Work Environ Health* 2009;35(6):421–428

⁸ <http://www.eurofound.europa.eu/surveys/ewcs/2010/index.htm>

Pot, F.D. (2011). Workplace innovation for better jobs and performance. *International Journal of Productivity and Performance Management*, 60 (4), 404-415.

Pot, F., Dhondt, S. & Oeij, P. (2012). Social innovation of work and employment. In H-W. Franz & J. Hochgerner (Eds.), *Challenge Social Innovation*. Berlin: Springer (forthcoming).

Ramstad E. Innovation generating model – simultaneous development of work organization and knowledge infrastructure [dissertation]. Helsinki: Multiprint; 2008. Tykes Report 65.

Volberda, H., Jansen, J., Tempelaar, M., Heij, K. (2011). Monitoren van sociale innovatie: slimmer werken, dynamisch managen en flexibel organiseren. [Monitoring of social innovation: smarter work, dynamic management and flexible organising.] *Tijdschrift voor HRM*, 1, 85-110.