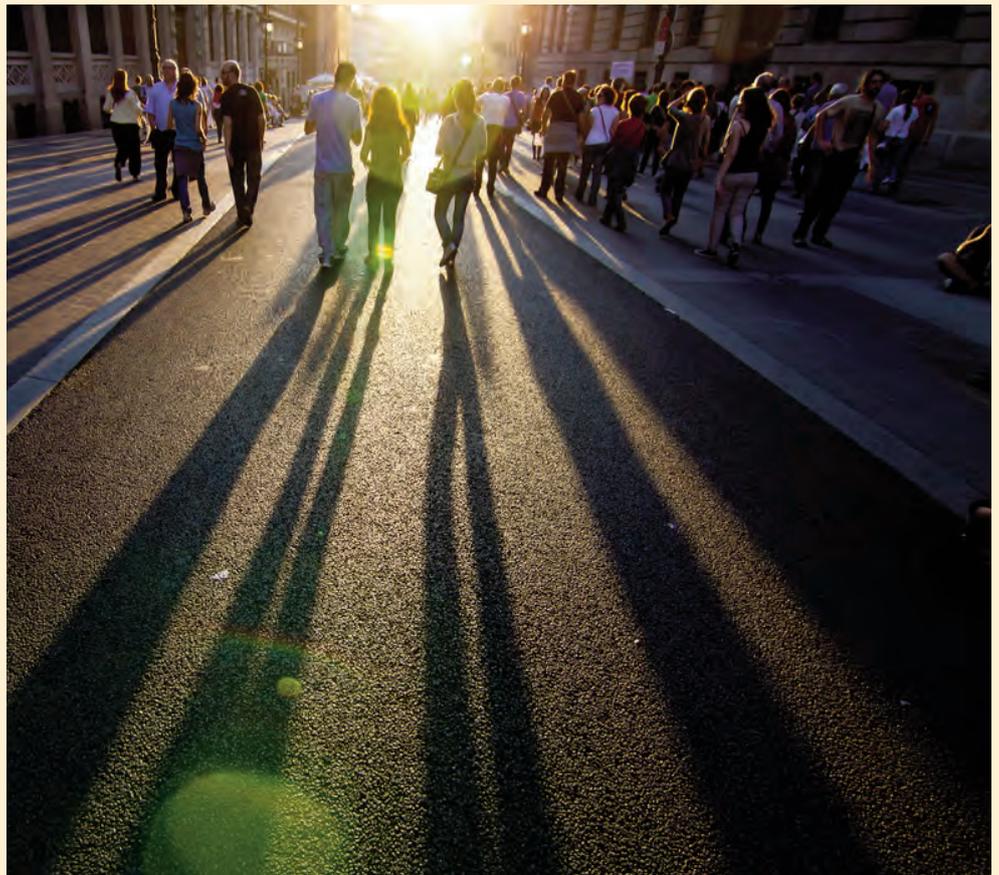




European Foundation for the Improvement of Living and Working Conditions

Work organisation and innovation in Ireland



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Abbreviations used in this report

AMO	ability, motivation and opportunities
ECS	European Company Survey
EPOC	Employee Direct Participation in Organisational Change [survey]
GVA	gross value added
HPWP	high performance work practice
HR	human resources
HRM	human resources management
ICT	information and communication technology
Ideas	Institute for the Development of Employees Advancement Services
IPRP	individual performance-related pay
JCM	job characteristics model
JDC	job demands and control
NTF	National Training Fund
NCPP	National Centre for Partnership and Performance
OCB	organisational citizenship behaviour
OECD	Organisation for Economic Co-operation and Development
R&D	research and development
SIPTU	Services, Industrial, Professional and Technical Union
TEEU	Technical, Engineering and Electrical Union
TNP	Training Networks Programme
WERS	Workplace Employment Relations Survey

Country codes

BE	Belgium	IT	Italy
DE	Germany	NL	Netherlands
DK	Denmark	PL	Poland
ES	Spain	PT	Portugal
FI	Finland	SI	Slovenia
FR	France	UK	United Kingdom
IE	Ireland		

Executive summary

Introduction

Innovations in work organisation have the potential to optimise production processes in companies and improve employees' overall experience of work. This report explores the links between innovations in work organisation – under the broader label of high performance work practices (HPWPs) – and the potential benefits for both employees and organisations. It draws on empirical evidence from three case studies carried out in the Republic of Ireland, where workplace innovations have resulted in positive outcomes and where social partners played a significant role in their design and development.

Policy context

Innovations in work organisation can contribute to meeting the goal of the Europe 2020 strategy to attain 'smart growth' through the development of higher-quality jobs in higher value-added industries and 'inclusive growth', in which all citizens have access to high-quality employment opportunities. Innovations in work organisation may also lead to wider innovation in products and services, which could result in employment growth. Within Ireland, considerable policy interest has been given to social partnership and fostering innovation in employment practices over the past two decades, although this has come under increasing pressure as a result of the financial crisis.

Key findings

Each case study firm was facing significant performance challenges around quality and price, which provided an important motivator or 'burning platform' that inspired change. These problems reflected challenging market conditions for the manufacturing sector more widely during the past five years, linked to intensified global competition and reduced consumer demand. The common business strategies being adopted by the case sites were focused on quality enhancement and cost reduction.

The organisations adopted innovations including lean production, teamworking and cellular manufacturing, combined with much greater employee involvement and empowerment to make decisions, with improved communications between managers and staff. Trade unions negotiated initial bargaining positions, and the case sites provided significant volumes of training for all staff.

Impact on employees and workplaces

The major effects on employee behaviour were evident in increased suggestions being put forward and implemented as a result of considerable efforts to involve employees in the change process that the innovations entailed and as an outcome of new ways of working. As managers gave more responsibility to employees, employees became more conscientious about quality standards and more engaged with fixing problems. Organisational commitment was generally high at the case sites as many staff had worked in the organisations for a long period of time, and the threat of financial difficulties served to reinforce attachment to the firms that provided their income.

Organisational benefits included enhanced productivity through greater efficiency and involvement of staff in ensuring quality standards were met. Improved productivity and efficiency also contributed to enhanced production capacity. Teamworking, alongside training to enhance employee skills, increased information-sharing and opportunities for employees to make suggestions. These measures, backed up with a share in the rewards of improved performance, combined to enhance employees' ability to do their jobs and provide opportunities and motivation to make a difference to organisational outcomes.

Role of social dialogue

In all three case studies, trade union representatives played a significant role in facilitating employee acceptance of the innovations and in implementing the changes. Notably, trade union sources also provided inspiration for some of the elements of joint partnership working and problem-solving through the work of the Ideas Institute, set up by the trade union SIPTU. At site level, trade union representatives were critical to obtaining a perceived ‘fair deal’ for employees through negotiating pay deals and changes to terms and conditions. Operational changes were made possible within an institutional framework that safeguarded or improved employee terms and conditions. Establishing and working within formal representation structures seems to have been particularly helpful in setting up and working in new team structures, because the principles of joint working, reduction in status hierarchies and expectation of shared responsibilities were useful in forging new cultural norms.

Judging the impact of social dialogue and partnership on employee and organisational outcomes is difficult when comparing organisations facing challenging market conditions with those experiencing more prosperous circumstances. Comparative ‘in-sector’ case studies within the same country are needed to answer this question. Social partnership approaches adopted in the Irish case sites were based on ‘competitive solidarity’ rather than beliefs about the intrinsic value of improving employees’ working conditions. These reflect intensified global competition in some of the key industries where social dialogue is enshrined through sectoral tradition. Some experts have argued that the quality of problem-solving approaches is a better measure of the efficacy of social dialogue and partnership than organisational outcomes in themselves, since it is the ability of management and employee representatives to work together to address challenges and tensions that these approaches are intended to foster.

Policy pointers

It is clear that the policy stimulus to promote social partnership in Ireland and the work over the past 10 years to promote work organisation innovations have had a positive legacy. Within the case study organisations reviewed here, the adoption of innovative practices has helped to secure and sustain employment and workplaces. This leads to the following recommendations for action.

1. The Irish government should continue to promote HPWPs among employers. The government should signpost employers and social partners to sources of European funding that can help implement work organisation innovations to secure jobs and growth.
2. The Irish government can take the opportunity, following its Presidency of the Council of the European Union, to engage with its successor Presidencies to promote the diffusion of HPWPs across the European Union and to showcase the innovations that have taken place within workplaces in Ireland to inspire employers in other Member States.
3. The Irish government can take the opportunity to link work organisation innovations to the scope of actions open to Irish firms within the Skillnets programme in line with the recommendations in the Forfás report *Making it in Ireland: Manufacturing 2020*.
4. Employers, employer associations and trade unions have an important role to play in continuing to raise awareness of benefits of work organisation innovations across Irish enterprises, which can provide win–win benefits for employers and workers.

Introduction

This report provides an overview of work organisation innovation practices in Ireland. It is part of a recent Eurofound project entitled ‘Work organisation and innovation’, which explored the links between innovations in work organisation – under the broader label of high performance work practices (HPWPs) – and the potential benefits for both employees and organisations. The research drew on empirical evidence from case studies carried out in 13 Member States of the European Union where workplace innovations have resulted in positive outcomes.

Innovations in work organisation can contribute to meeting the goal of the Europe 2020 strategy to attain ‘smart growth’ through the development of higher-quality jobs in higher value-added industries and ‘inclusive growth’, in which all citizens have access to high-quality employment opportunities. Innovations in work organisation may also lead to wider innovation in products and services, which could result in employment growth. The main report from the research and 13 company case studies are available at <http://www.eurofound.europa.eu/publications/htmlfiles/ef1272.htm>.

This special report for Ireland focuses on three company case studies that illustrate how changes are implemented and the potential benefits for both organisations and workers. The organisations were all selected as examples of work organisation innovations that had strong involvement from trade unions in the development of the innovations. The findings should not be treated as representative but as illustrative of the roles that particular forms of employee representation can play in implementing work organisation innovations. It builds on the work of an earlier report (Eurofound, 2012), which examined work organisation innovations in 13 case studies across a range of industrial sectors and EU Member States.

The work is timely because it coincides with the Irish Presidency of the Council of the European Union, which has set its agenda as focusing on a ‘people-centred recovery’, which will be ‘driving a pro-growth and pro-employment agenda’ across Europe, aiming for smart, sustainable and job-friendly economic growth (Irish Presidency of the Council of the European Union, 2013). The case studies serve to illustrate the potential role that innovations in work organisation can play in achieving this goal. Furthermore, Ireland has adopted a distinctive approach both to managing its own way out of the financial crisis and to designing initiatives to foster innovative human resource management (HRM) practices that can provide win–win solutions for employees and firms. These are rooted in a national industrial relations tradition of social partnership, bolstered by coordinated institutional arrangements at national level, which have come under pressure as a result of austerity.

The report adopts the following structure:

- This introduction provides some information on the national economic, employment and industrial relations context and Irish policy initiatives on work organisation innovation.
- Chapter 1 provides a short summary of the definitions of work organisation innovation and outlines the framework adopted for the project together with an account of the data collection methods used.
- Chapter 2 compares and contrasts the three organisational case studies, focusing in particular on the role that institutional social partners can play in sparking ideas for work organisation innovation and supporting implementation.
- The final chapter sets out the main factors that were identified as important for successful introduction of HPWPs and the lessons learnt from the experiences of the three firms.

Current economic context

The effects of the global financial crisis and national recession in Ireland are well documented (for example, see Roche et al, 2013). They locate the origins of the employment crisis in the high and unsustainable levels of job growth in the construction sector during the 2000s and banks struggling to deal with bad debts in the wake of the financial crisis. These factors had major effects on employment levels, with particular consequences for the employment prospects of young people and heavy job losses in construction and agriculture. Employment levels in manufacturing appear to have fallen less severely than in other sectors, which is interesting in light of the work organisation innovations adopted by the case study firms reviewed in this special report, as an attempt to secure their futures.

A distinctively Irish approach to the negotiation of deficit reduction emerged, which was widely reported overseas. It entailed a series of increasingly stringent budgets comprising higher taxation, pay and benefits cuts, and reforms to health and education systems. This strategy is partly reflected in the approach to industrial relations and negotiation of HRM arrangements within enterprises, where Ireland has had a relatively strong tradition of partnership until recently. National centralised pay deals lasting two or three years were made between 1987 and 2009. These helped to slow the overall rate of pay increases and provide stability in the industrial relations system. Following the breakdown of national bargaining arrangements in 2009 due to disagreement over the best way of tackling the public sector borrowing deficit, this has left companies with much greater freedom to choose how to tackle the impact of the recession. This is illustrated in some of the options relating to pay and conditions that were agreed within the case study firms. More broadly, Roche et al (2013) point to the possibilities for HR management and work organisation innovation strategies to come to the fore as firms seek routes out of recession, for innovative HR management practices to take a back seat among firms that adopt a 'slash and burn' approach, or for a more nuanced, complicated and possibly contradictory set of responses to be made by individual firms on a pragmatic and ad-hoc basis. Common areas of focus are likely to be: adjustment in pay levels and employment levels; rigorous performance management; reorganisation of working time; and increased emphasis on voice, engagement and talent management to secure motivation and commitment among remaining workers.

Industrial relations system and Irish policy on work organisation innovation

The Irish national industrial relations system is based on principles of voluntarism borrowed from the UK system (Farrelly and Sheehan, 2012). Collective bargaining coverage is estimated at 44%, with union density at 33%. Union recognition is concentrated in public sector, rather than private sector, organisations, which also tend to be larger workplaces, in common with many other EU Member States. In recent years, employment rights accorded to individuals through employment law originating in European policy have tended to have an increasing influence above rights negotiated by trade unions. Relationships between employers and trade unions tend to be characterised as adversarial, with recourse to the Labour Court to solve any disputes (Roche, 2001). This was supplemented, in the recent past, by an institutionalised national framework agreement, which set pay increases between 1987 and 2009. This also had an important influence on employers that did not recognise trade unions but 'shadowed' national pay levels. Social partners and community groups also came together to develop policy on lifelong learning and equality issues, which are now also subject to decision-making at company level. High levels of foreign direct investment in Ireland and the establishment of sites by multinational companies also exposed some firms to European works councils. For others, the EU regulations on the information and consultation of employees have afforded employees access to information and consultation about issues affecting the future of their workplaces. During the past two decades, the influence of overseas investment and the ethos of partnership established through the national framework agreements fostered a climate conducive to increasing interest in the role of social partnership, dialogue and HPWPs in improving organisational performance and working conditions at national and company levels. This was also supported by the encouragement of 'enterprise partnership' at firm level within national social agreements (Teague, 2004). Enterprise partnership attempted to encourage firms to make improvements and innovations in training, work organisation, equal opportunities, health and

safety, and employee involvement in the interest of improving competitiveness. The resulting set of arrangements seems like a rather uneven patchwork of voluntary measures to improve working conditions, while preserving liberal approaches to global trade, with limited focus on social welfare provision and labour standards (except a relatively generous national minimum wage) (see McDonough and Dundon, 2010).

Within this context, Ireland has long recognised the potential contribution of work organisation to organisational performance. Between 2001 and 2007, the National Centre for Partnership and Performance (NCPP), based in Dublin, operated as an Irish government agency to promote workplace modernisation and innovation through partnership. Its aim was to develop ‘workplaces of the future’ to support government policy of increasing foreign direct investment by making Ireland an attractive place to locate. By supporting the transformation of Irish workplaces into high-performing, high-quality places of work, the goal was to contribute to national competitiveness, improved workplace productivity and performance, and better experience of work for employers and employees alike. The NCPP was subsequently subsumed into the National Economic and Social Development Office.

Similar initiatives have been implemented effectively in other fields. Skillnets is an enterprise-led support body dedicated to the promotion and facilitation of training and upskilling as key elements in sustaining Ireland’s national competitiveness. It is funded through the Department of Education and Skills from the National Training Fund (NTF). It supports and funds networks of enterprises to engage in training under the Training Networks Programme (TNP). These networks are led and managed by the enterprises themselves to design, manage and deliver specific training programmes across a broad range of industry and service sectors nationwide. Since 1999, Skillnets has facilitated almost 70,000 Irish enterprises, in over 400 networks, to improve the range, scope and quality of training and has allowed over 300,000 employees to upskill and meet their work-related training needs. In the current year’s TNP, Skillnets networks are also providing training to job-seekers, who are training with those in employment. By training with those in employment, job-seekers can access networking opportunities and keep up to date with their sector while participating in relevant industry-specific training programmes. There are over 50 networks designing and delivering training in a variety of sectors and regions.

Definitions, framework and the role of social partnership 1

Work organisation innovations are situated within a wider body of literature on innovation. Literature on innovation in organisations is both extensive and multidisciplinary, drawing on studies from management science, operations management, technology studies and economics among others. However, as Pot and Vaas describe (2008), the concept of innovation can be viewed in both social and technological forms. A number of authors argue that there has been a tendency to equate analysis of innovation solely to advances in technology and product markets, at the expense of social reforms and changes to organisational structures, policies and processes, which can play an equally significant role and have important implications for how people are managed (Mulgan, 2006; Pot and Vaas, 2008).

The OECD Oslo manual (2005, pp. 47–51) defines innovation as relating to any of the following:

- the introduction of a new product or service;
- the introduction of new production processes such as those enabled by new technology or new work routines;
- the introduction of new forms of organisation;
- new market behaviour, new strategy, new marketing methods or new alliances.

It is evident that the categories can be mutually dependent, so the introduction of a new production process may demand innovations in how work is organised. However, within this framework, the innovations relating to the management of people are predominantly covered by the category of new forms of organisation or ‘organisational innovation’. Within this category, organisational innovation includes:

- business practices – including knowledge sharing and staff development;
- workplace organisation – including devolution of decision-making to employees;
- external relations – between employees in one part of an organisation with those of other departments or externally;
- other innovations – including use of variable pay as a change to reward systems or atypical employment contracts.

These workplace practices typically include innovation across the following main areas (this is an indicative and not necessarily exhaustive list):

- practices that structure work organisation and job design, such as use of (autonomous) teams, redesign of jobs to enlarge or enrich their content, and working-time arrangements including flexible start and finish times and flexible total number of hours, home or teleworking;
- practices that ensure high-level skills are an input to the production process, such as careful recruitment and selection, and training and development, including on- and off-the-job training using any means of development, for example formal courses, self-study, workshops, secondments, mentoring and buddying;
- appraisal and performance management processes, including formal or informal one-to-one discussions between each employee and a line manager or supervisor and a regular more formal review of performance, which may or may not be linked to pay increases;

- practices that provide opportunities for employees to participate in and influence decision-making through direct or indirect methods – these include a wide range of activities, for example individual working groups to improve quality or solve workplace problems; indirect representation through workplace committees or other representative groups as part of social dialogue; informal and formal dialogue and face-to-face communication between managers and employees; team, departmental or whole-company briefings, employee attitude surveys; knowledge-sharing activities; and knowledge management systems including those based on intranets;
- practices that provide rewards for performance, for example profit-sharing; employee share ownership; individual performance-related pay (IPRP); employee benefits that may be financial or non-financial, including access to sources of support for health and well-being; and career progression opportunities through vertical or lateral promotion.

After careful analysis of the literature, HPWPs or work organisation innovations of interest are defined here as deliberate changes that can affect how employees undertake their job and their broader experience of work, and refer to any element of people management. The term ‘work organisation’ is usually understood as a narrower, specific subset of HR practices, commonly interpreted as whether employees work individually or in teams, and may also include work scheduling and working time. The terms ‘high commitment’, ‘high performance’ or ‘high involvement’ work practices are commonly used to describe innovations in work organisation of the kind of interest to this study. The differences in emphasis on commitment, performance and involvement usually reflect particular interests or focus on the study’s outcomes; they do not necessarily imply different practices are used to achieve them.

The HPWPs included those with the following characteristics.

- Practices that offered sustainable improvements for organisational performance. Assessing whether performance outcomes were sustainable involved a qualitative judgement as to whether the organisational benefits were being achieved in the short-term at the expense of employees in the long-term, since some literature has identified that certain combinations or application of HPWPs can lead to work intensification and adverse health and well-being outcomes for staff.
- Practices that benefited workers through improving job quality, satisfaction or well-being.
- For this report on Ireland, a specific focus was adopted on practices driven by social partners who were employees heavily involved in their design and implementation, because these have been less well explored in the literature and constituted an ideal focus on ‘participatory innovation’.

Role of employee representation

The involvement of employees through formal representation structures could clearly have a major role to play in implementing these innovations. Social dialogue and social partnership are the major concepts that underpin the working of these arrangements. The former refers to the practices involved in maintaining the formal working relationship between employee representatives and employers, and is described by the European Commission as ‘discussions, consultations, negotiations and joint actions involving organisations representing the two sides of industry (employers and workers)’.¹ This may include formal consultation processes, co-determination, collective bargaining and indirect representation of employees through joint working parties. Social dialogue forms the ‘voice’ of employees in an

¹ See <http://ec.europa.eu/social/main.jsp?catId=329&langId=en>

organisation and expression of this ‘voice’ can be through employees providing ideas to improve work processes and ensure that employees’ views are taken into account in decision-making (Wood and Wall, 2007). Social dialogue has a role in supporting innovations in HPWPs by contributing to the creation of a mutually supportive, high-trust culture that provides positive conditions for changes in how employees are managed and treated.

Social partnership is more difficult to define and has been subject to a long and thorny debate (Johnstone et al, 2009). It is based on the idea of closer cooperation between union and management representatives at company level for mutual gains, where innovations should benefit all stakeholders. Core characteristics are trust and the management of issues in a partnership rather than adversarial approach. The exact practices and processes involved in any partnership arrangements are more fluid, but all include representative participation of employees and may include statements of formal vision or mission, collaborative problem-solving approaches to handling workplace issues, a formal partnership body and a commitment to organisational competitiveness and job security, among others. An evidence review suggests that institutionalised partnership arrangements, bolstered by collective bargaining, may be more successful than arrangements put in place without partnership (Johnstone et al, 2009). Within Ireland, ‘enterprise partnerships’ were promoted for a number of years within the national social partnership model and were characterised by joint approaches to problem-solving at company level.

There is some debate about whether HPWPs and social partnership are wholly desirable, especially from the perspective of employees and trade unions. Innovative HR practices have sometimes been shown to benefit organisations at the expense of employees (Ramsay et al, 2000). This consists of a ‘labour process’ view of the impact of new forms of work organisation on worker outcomes:

... to the extent that employees enjoy benefits, these take the form of minor gains in discretion, granted as a means to gain compliance with managerial aims, which are far outweighed by work intensification, insecurity and stress.

(Ramsay et al, 2000)

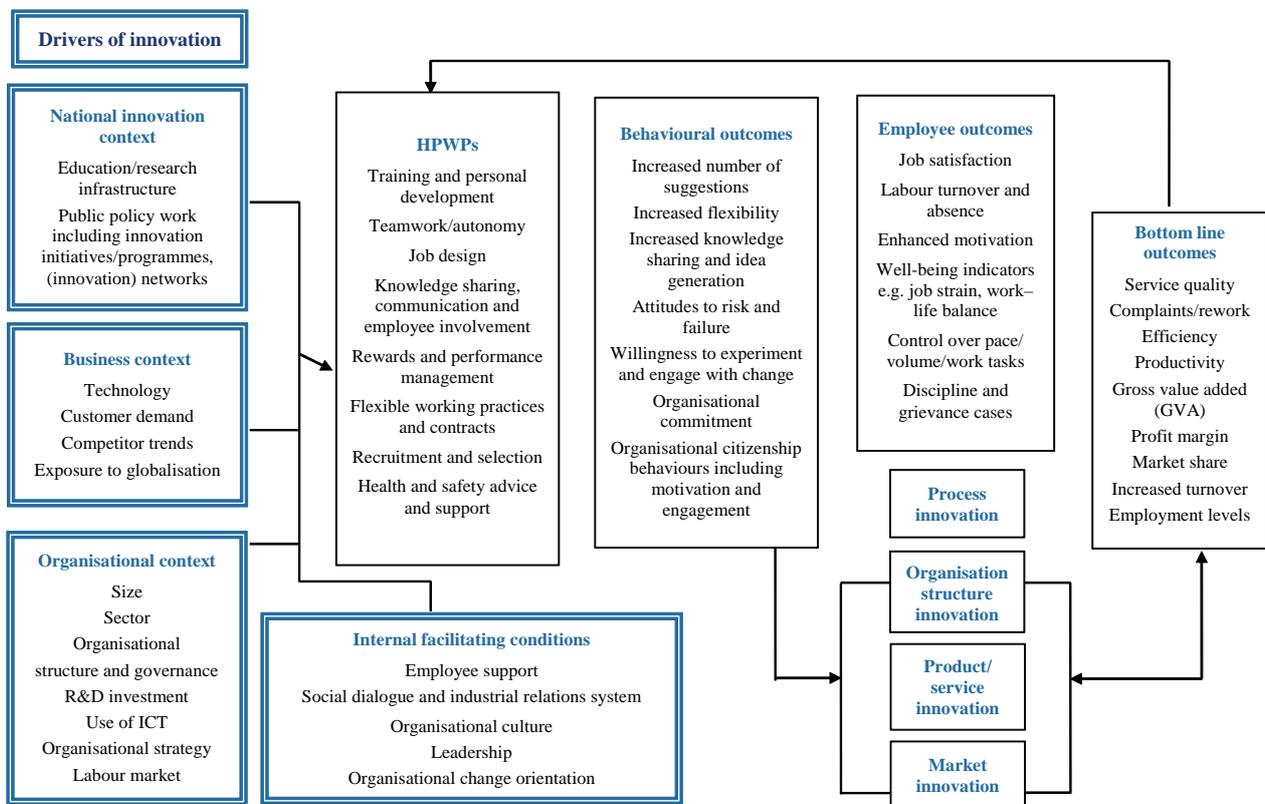
Boxall and Macky (2009, p. 268) also note that high-involvement work practices that increase employee autonomy, develop employee skills and produce greater financial rewards for employees increase job satisfaction, but that the intensification of work and weight of greater responsibilities in leaner organisations can ultimately cause stresses and strains. Nishii et al (2008) also comment that the perceived motivations for introducing HPWPs can affect employee job satisfaction. Where employees perceive the purpose as one of improving quality or employee well-being, this had a positive impact on job satisfaction. Where the perception is of cost-cutting or increased control over employees, this has a negative effect on job satisfaction.

Social partnership carries risks for unions of no longer being able to represent members adequately as a result of closer cooperation with managers, as well as the possibility that managers may withdraw at any time from partnership agreements, which have no legal status (Johnstone et al, 2009). This can lead to unions becoming both ‘incorporated’ and emasculated, leading critics to argue against partnership models of employee representation. This reflects very different notions of partnership in different EU Member States, partly dependent on how rooted partnership concepts are within established views of the roles of social partners and how far the national frameworks of employment law uphold the rights of unions.

Conceptual framework

Figure 1 below shows the conceptual framework for the project derived from analysis of the relevant literature. This report draws on it to identify the nature of HR innovations, to help analyse the contextual factors that influence their introduction, to identify the impacts for employees and organisational performance, and to help explain the mechanisms by which they achieve their effects.

Figure 1: Conceptual framework



Data collection methods

The case studies involved face-to-face interviews with a range of employer and employee representatives.

- Interviews were conducted with three managers each at Kirchhoff, Medtronic and SAICA to provide an organisational perspective on initiatives and what influences them in terms of organisational policy, leadership and climate.
- Interviews were conducted with a trade union representative at each of the three case sites to explore worker involvement in innovation processes connected to work organisation.
- A focus group of between four and eight employees was held at each site to capture the impact that work organisation innovation has had on the attitudes and behaviours of employees and to understand their views about the innovation, and their involvement in the process in the manufacturing case.

The managerial interviews included one or two managers responsible for HR or industrial relations issues, a senior manager who could comment on the implementation and impact of the innovations on the wider organisation where relevant, and possibly a ‘champion’ or individual responsible for the innovation process.

Following the fieldwork, a comparative analysis was made of the findings from each written case study, and this was drawn on to compile the report.

Innovations in work organisation: 2

Three case studies

Profile of case study organisations

Having illustrated the range of possible HPWPs that could be considered for the study, the range of innovations that were adopted by the case study sites are presented, combined with some background information on the characteristics of each organisation in Table 1 below.

Table 1: *Case study characteristics*

Case study organisation	Kirchhoff	Medtronic	SAICA
Year established	Plant established in 1981, bought by Kirchhoff in 1993.	Company established in 1949, Irish sites set up in 1999.	Plant set up in 1981.
Number of sites	Headquarters in Germany; 29 sites worldwide.	Headquarters in USA; Irish sites in Galway and Dublin.	Headquarters in Zaragoza, Spain; a number of plants around Europe including Ireland.
Main products/service	Automotive components	Medical equipment manufacturer	Food packaging manufacturer
Number of employees	97 at Irish site.	45,000 globally, 2,000 at Galway site.	92 at Irish site.
Trade union status	Collective bargaining covers all staff except managers by SIPTU in a 'closed shop' system.	Collective bargaining via SIPTU covers 1,300 semi-skilled production workers in a 'closed shop' system for permanent staff; joint consultation groups; a plant representative on the EWC.	Two trade union representatives from SIPTU and TEEU in the plant responsible for collective bargaining negotiations, and joint union management committee established as part of innovation.
Type of innovation	Works improvement committee and lean production methods, annual bonus linked to organisational performance.	Lean management and cellular manufacturing using teamworking, pay linked to organisational performance.	Problem-solving approach to tackling poor plant performance involving empowerment and autonomy of workers to solve production blockages, new project management methodology, improved communications, workforce training.

These case studies share some common characteristics in that all are manufacturing plants owned by multinational firms, with the parent company located overseas, and illustrate the significant foreign direct investment in Ireland that has taken place in recent years. The innovations all involve a fundamental review of work organisation with a focus on efficiency and productivity, driven by closer collaboration in problem-solving techniques between managers, trade union representatives and employees as part of the change processes (discussed below). Extensive training interventions have supported the innovations, and closer links have also been made between pay and performance of workers. Perhaps most notably, all the organisations began these innovations from a position of challenging financial circumstances, as discussed in more detail below.

Main reasons for introducing HPWPs

In understanding the potential for diffusion of HPWPs, it is necessary to identify the motivations and triggers that lead organisations to adopt these innovations. Triggers for change are related to individual market positions, business strategies and HR strategies being adopted by the case sites and how these have influenced choices about work organisation innovations.

Within the three case studies, it is notable that each was facing significant performance challenges around quality and price. These provided an important key motivator or 'burning platform' that inspired change. SAICA had a poor

industrial relations climate and was plagued by low productivity, weak management and accounting systems, late delivery, poor quality standards and loss of major clients. Medtronic was aware that relatively high labour costs were placing the plant under scrutiny from its parent company in relation to sites in other countries and was seeking to improve efficiency and reduce waste. Kirchoff was experiencing quality problems for one of its major customers and pressures to reduce costs due to the downturn in the automotive sector. These problems reflected challenging market conditions for the manufacturing sector more widely during the past five years, linked to intensified global competition and reduced consumer demand. The common business strategies being adopted by the sites were focused on quality enhancement and cost reduction. The sites did not generally explicitly articulate HR strategies at the point where change was identified as necessary, illustrating the central importance of people in achieving organisational goals and the risks created by neglecting to make links between business and operational strategies and HR strategies.

Role of trade unions and social partnerships in implementation

Much of the change in management adopted by the workplaces was achieved through joint union–management working groups, but their evolution varied slightly across the case studies. The approach shares some similarities with the features of enterprise partnerships (Teague, 2004) in the creation of specialist working groups alongside collective bargaining, accompanied by the introduction of HPWPs and direct employee participation in projects to implement new forms of work organisation. However, the arrangements were not subject to a formal social partnership agreement.

Each of the case study sites recognised trade unions for collective bargaining purposes. In each case, however, these were the only plants within the company group to do so, and therefore collective bargaining processes were relatively low key and took place between up to two senior managers and two trade union representatives at each plant. Collective bargaining had a primary role in establishing the foundations on which the innovations could be implemented. First, both SAICA and Medtronic negotiated with their union representatives to reduce labour costs, which helped to improve competitiveness. SAICA implemented direct wage reductions for indirect staff and indirect wage reductions for production staff by extending three shifts per week by half an hour each. Medtronic implemented a pay freeze in return for permanent contracts being offered to fixed-term staff. These changes to terms and conditions were predicated on enhanced future job security through improved plant performance. They were instrumental in achieving some financial stability as a platform from which investments in innovation were approved by the parent organisations.

At SAICA and Kirchoff, a main feature of the innovation process was the direct representation of the shop stewards on the working groups set up to implement the innovations, while at Medtronic, negotiation of the changes took place through existing collective bargaining processes. Here, staff noted that trade union representatives acted as guardians and protectors of employee rights and well-being, so that employees could raise queries about the impact of any changes with them.

At SAICA and Kirchoff, parallel representation structures to those of collective bargaining were created, but with a tighter focus on the innovations under discussion rather than broader workplace issues. In practice, it is not easy to delineate the role of regular trade union meetings and the role of specialist working groups in negotiating the terms of the innovation at these sites, in part because the same individuals were involved in both. In this way, issues that may have been referred to a formal union–management committee in larger organisations were usually handled by direct discussion between the trade union representative and the senior manager, reflecting the lack of a ‘neat and tidy boundary’ that Teague notes in the operation of enterprise partnerships (2004, p. 22). This also illustrates that while formal employment relations structures are important, constructive personal relationships, in particular between the most senior individuals representing employees and the organisation, were essential in facilitating change. Managers and trade union representatives at each case site noted that robust relationships in which they could trust each other and have direct and open conversations were important to the success of implementing new working arrangements.

SAICA established a joint union–management steering team to support an ambitious business plan aimed at securing the future of the plant. This involved six managers, two union representatives and four shop floor workers, who meet every three to four weeks and focus on achieving the business transformation required to achieve plant performance goals. Medtronic set up a works improvement committee with union representatives as members. This met over a period of several months to design and implement the new cellular production system. Kirchhoff’s dissatisfaction with transaction costs involved in annual negotiations of terms and conditions and solving individual grievances coincided with an interest in lean methodologies and partnership working in 2006 and began with a monthly and subsequently fortnightly meeting between managers and worker representatives to discuss HR issues. More challenging economic conditions in 2009 inspired the creation of a works improvement committee, involving two management representatives and five employee representatives, who volunteered for the roles. This meets once a week to identify problems and make suggestions to improve the production process. In addition, another group was set up to implement lean production across the factory.

SAICA and Kirchhoff also acquired inspiration from the Institute for the Development of Employees Advancement Services (Ideas Institute) established by SIPTU (the Services, Industrial, Professional and Technical Union). This delivers consultancy and training support to firms seeking to improve performance and solve operational problems by adopting partnership-based approaches to change.

These joint management–union teams were critical in establishing a shared view of organisational challenges and consensus on the need for change. Union representatives acknowledging the need for change may have had a positive benefit in allaying staff concerns or swaying those who were undecided. However, much of the communication and persuasion about the need for change was undertaken by managers who shared information about business plans and site finances with staff and through presentations created or edited by the working groups at SAICA and Kirchhoff. At Medtronic, managers reported that the main role of the union was in not opposing the innovation, suggesting that passive support may have been as important as active promotion of change. The position at Kirchhoff was rather different in that trade union representatives, as well as managers, had become frustrated by time-consuming cases concerning individual members, from which the inspiration for the joint working group to consider any non-pay HR and operational issues emerged. This does not mean that employee mobilisation is unimportant; rather, the adverse financial context facing the sites in their product markets may mean that the case for change was more compelling than in more prosperous times.

Common characteristics of implementation

Having identified areas of business performance for improvement, a number of other common features were evident in the implementation process.

Training

All three case study sites offered extensive training to staff to help them adapt to the new ways of working. At Medtronic this included sending team leaders to the USA to learn about a new product and lean production methods. Training at Kirchhoff initially consisted of courses for employee representatives in personal counselling to help support employees with domestic problems. When the joint steering committee was introduced, training was provided in response to specific issues identified. This included a basic IT training course for all workers to help them use a new IT system and teamworking training. The specific methodology of lean production was also cascaded through initial training of the production manager and then across the workforce.

Six days’ training was given to all plant workers on teamworking and problem-solving at SAICA, provided by SIPTU’s Ideas Institute, and the workplace’s joint steering team was the first group to undertake this. In addition, as a result of the focus on problem-solving and root cause analysis techniques adopted, further training on operating machinery and safety has been provided for staff and a training plan for the entire workforce has been developed.

Communication

Each case study firm also made considerable effort to improve communication and sharing of information. At Kirchhoff, this has included a quarterly presentation on problem-solving activities and daily discussions with team managers to help solve production problems. At Medtronic, employees now have access to real-time information on daily performance through electronic displays; information on the performance of each machine is also displayed at SAICA. The plant manager at SAICA makes a quarterly presentation on plant performance and future business plans, and its content is reviewed in advance by the joint union–management steering team. Daily meetings reviewing and planning activity take place for each machine area involving the team manager and all staff. Minutes of the joint steering team meetings are displayed around the factory.

Cultural change

Underpinning the visible changes connected to layout of production and work spaces have been accompanying shifts in management style and organisational culture. These have gradually emerged over time, and have sometimes been more challenging to achieve. Across each firm, there has been a focus on much greater employee involvement and collective sharing of responsibility for addressing production problems, requiring a shift in management philosophy and style. At SAICA, it is recognised that management capability requires improvement as part of a shift from a command and control approach to one that empowers and encourages employees to help solve production problems as equal members of the team. Ongoing work is taking place to help managers make this shift, and interviewees reported a major change towards a more open and less hierarchical culture. Managers at Medtronic are aware of the need to devolve responsibility for decision-making to employees. At Kirchhoff, senior staff recognised a need to make more effort to engage middle managers in the change process, as some had seen similar initiatives introduced and fail in the past, and were therefore reluctant adopters of the new style of working. Kirchhoff was intending to produce a ‘culture statement’ of expected behaviours, to overcome any cultural and behavioural resistance to change and to spell out the attitudes required, including mutual respect and openness.

Continuous improvement

A number of interviewees in each site stressed that the process of change has been gradual and the innovations have developed incrementally over time. ‘Big bang’ approaches such as the adoption of lean production at Kirchhoff and cellular manufacturing at Medtronic physically changed the configuration of job content and work space, but these have been accompanied by ongoing refinements to production processes. The overall focus on improving plant performance has been the guiding principle, but the open problem-solving approaches used often mean that changes made were not predicted at the start of the processes. All the sites had plans to make further improvements, including further training of staff to increase efficiency of machine operation and maintenance at SAICA, extending lean production methods to the support services department at Medtronic, and further embedding lean systems as part of a 20-year plan at Kirchhoff. This illustrates a common philosophy of continuous improvement, one that acknowledges that introducing work organisation innovations does not always lead to a clear-cut endpoint, especially in manufacturing organisations facing intense global competition where ongoing efficiency improvements are essential to survival.

Employee responses and impact on staff

Given the scale of fundamental change involved in some of the innovations and the backdrop of financial uncertainty, it is unsurprising that employees sometimes had initial reservations about the proposed changes. At Medtronic, workers’ primary concern was about the requirement to stand at production cells all day instead of sitting down. Rest breaks and the provision of specialist equipment to offer musculoskeletal protection alleviated their fears. Initial scepticism at SAICA about the benefits of training was reduced once workers appreciated that the course was being delivered by a trade union. Employees were also concerned that work might be intensified without any accompanying higher pay, and overall there was some scepticism that it was feasible to achieve the new production targets. At Kirchhoff, there was

some initial suspicion among workers about why trade union representatives were spending so much time with managers, which reduced once benefits became apparent.

Some of the less positive responses often came from managerial staff. It is well documented that this group can often feel threatened by workplace change that devolves more responsibility to production workers, due to the consequent erosion of their power and status. Some middle managers at Kirchhoff perceived twin pressures to meet targets and ensure employees responded positively to change, and there were some examples where managers who were used to hierarchical decision-making found it difficult to accept employees challenging their views on established ways of working. At SAICA, some managers left the organisation. Medtronic recognised that coaching and mentoring were important skills that were required of managers under their new manufacturing system and therefore included these in their recruitment and promotions criteria.

The overview report argued that in analysing the outcomes of HPWPs, it is important to consider both managers' and employees' perceptions as being of equal importance, since new HR practices have sometimes been shown to benefit organisations at the expense of employees (Eurofound, 2012). As noted in Chapter 1, it has been found that while HPWPs can increase job satisfaction, they may entail drawbacks such as an intensification of work and increased responsibilities; or they may entail relatively minor gains for employees. Employers may also face some trade-offs when implementing practices such as devolved decision-making or information sharing. Uncertainty and principal-agent problems of aligning the interests of all staff may be created by decentralisation, and additional time and infrastructure costs arise from information-sharing, which need to be recouped through greater overall organisational efficiency, productivity or other performance measures (Zoghi et al, 2010). This raises the question of how HPWPs can be selected and introduced in a way that creates 'mutual gains' for employees and organisations alike.

Reviewing the evidence, Eurofound found mixed results for the impact of innovative work organisation on employee outcomes, stating that the

conditions creating job satisfaction for workers, such as high levels of autonomy and involvement, increased responsibilities and task complexity, flexibility and added learning possibilities, are the same conditions creating strains (such as increased levels of stress and work pressure, greater workloads, job insecurity and poorer work-life balance).

(Eurofound, 2011b, p. 25)

Clearly, the method of implementation and assuring an appropriate balance between seeking organisational benefits and benefits for employees is critical to ensuring that mutually beneficial results are generated.

HPWPs may offer longer-term benefits for employees. New forms of work organisation have the potential to 'increase the employability of workers through multiskilling, and the acquisition of higher competencies in problem-solving, communication and teamworking will help labour market adaptation' (Eurofound, 2007, p. 5). Adoption of innovations in HR management have also been found to change the structure of desired qualifications, which favours qualified employees and increases the demand for skilled labour, due to greater use of multitasking and emphasis on 'initiative, creativity and social competencies' (Eurofound, 2011b, p. 24). This could potentially benefit workers through the additional positive effects of acquiring skills through lifelong learning as higher-qualified workers typically have better outcomes on a range of quality of life indicators including health, life expectancy and income. By contrast, HPWPs such as performance-related pay and target output measures can often result in greater work pressures, larger workloads, longer working hours, less job satisfaction and more conflict between work and home lives, particularly if 'performance pressures are internalised as their own' by workers (BIBB, 2010; cited in Eurofound, 2011b, p. 23).

Table 2 provides a summary of the major impacts of work organisation innovations on workers at each of the case study organisations.

Table 2: *Impact of work organisation innovations on employees*

	Kirchhoff	Medtronic	SAICA
Labour turnover/staff numbers	Reduced through natural wastage as plant efficiency increased.	No change.	Some turnover among managers.
Staff absence	No impact.	Reported as decreasing by workers, but not confirmed by managers.	No evidence of impact.
Motivation	No evidence of impact.	No evidence of impact.	Managers reported increase.
Job satisfaction	Managers believe job satisfaction increased.	Workers reported this improved as monotony reduced.	No evidence of impact.
Job strain	Reduced through improving access to equipment according to managers and trade union representative.	Workers reported some reduction as more autonomy available.	No evidence of impact.
Work control	No change reported by managers and employees.	Workers reported this increased.	Increased influence over problem-solving reported by managers.
Work-life balance/well-being	No change reported by workers.	Workers reported improved energy levels outside work as job no longer sedentary.	Slight increase in working hours.
Discipline/grievances	Managers and trade union representative reported reductions through training of union representatives to provide employee counselling about domestic problems.	No change.	No evidence of change.
Physical environment	Improved canteen, changing room and toilets arising from suggestions, but no other changes.	No change.	Improved safety as a result of problem-solving work.
Training/qualifications/skill levels	IT training and qualifications, skills developed in teamworking and problem-solving reported by managers and employees.	Promotion and training opportunities for those wishing to become team leaders reported by managers and trade union representative.	Extensive training opportunities, new skills in teamworking and problem-solving.
Pay	Increased employee pay through plant bonus worth around €1,000 per year.	Increased by about 5% through organisational performance-related pay for all employees and 10% increase in wages for new team leaders.	Increased through productivity bonuses for all employees.

The common features of change across the three plants centre on an increased proportion of pay linked to organisational performance and increased skill levels gained from participating in a range of training opportunities, sometimes with certified qualifications. In each case, the rewards for workers contributing to improved plant performance were negotiated by the trade unions as part of the collective bargaining process. Employee representatives were concerned to strike a ‘fair deal’ for any increased effort and cooperation with the change process. Union representatives did not generally have a clear outline of what this would look like at the start of negotiations but portrayed it as receiving ‘something for something’ to ensure that their members were not exploited. In practice, ensuring that perceptions of a fair exchange were established helped to produce mutually beneficial outcomes for managers and staff. This illustrates the important role that established institutional processes played in laying the groundwork for change and also seem to have avoided the disadvantages of increased work pressure, which have sometimes been associated with performance pay in the literature. It also illustrates the increasing significance of plant-level bargaining following the collapse of the

national framework agreement. Under the previous system, pay levels would be guided by the outcomes of national-level bargaining, but in the absence of the national scheme, individual sites were negotiating their own deals.

Extensive training provision was initially driven by technological change, but organisations increasingly came to recognise the need for training in social skills to ensure effective collaboration between colleagues in work processes that demanded much greater teamwork. At SAICA in particular, continuous improvement to work processes and machine maintenance led to identification of ongoing training needs. Improvements to working conditions and safety derived from adopting problem-solving approaches to known production glitches that impeded efficiency and also helped to address health and safety risks. Acquiring recognised IT qualifications at Kirchhoff may have some potential benefits, namely increasing worker IT literacy and improving future employability.

Mixed evidence of the impact on job strain and work control was linked to differences in the features of the innovation and how they were implemented. For example, while it was possible to control workflow at Medtronic in the event of defective parts to prevent queues, under normal circumstances work pace was fixed by the pace of the machines, so there was no effect on job strain from change to pace of work. At Kirchhoff, seemingly small changes, such as proper labelling and storing of tools, had an important influence on making work easier for staff. While the nature of work did not necessarily change, being able to report problems more easily and find solutions have improved the experience of the job as a whole at Medtronic. Overall, the experience of work generally improved, even if satisfaction with the nature of the job remained variable.

Further impacts from work organisation innovations are evident in terms of employee behaviours; these are summarised in Table 3.

Table 3: *Impact of work organisation innovation on employee behaviours*

	Kirchhoff	Medtronic	SAICA
Increased suggestions	Enhanced through provision of problem-solving opportunities and employee involvement mechanisms.	Employees contributed suggestions, which were implemented in setting up new cells.	Much greater employee involvement in solving machine-related problems.
Increased flexibility	No impact evident.	Yes, from cross-skilling reported by employees.	Some increase likely resulting from extensive training participation, but impact not clear.
Increased knowledge-sharing/idea generation	Enhanced through employee involvement in problem-solving reported by managers and trade union representative.	No evidence of major impact.	Much greater, through management and worker communication, reported by managers.
Organisational commitment	Remained high, as reported by managers and trade union representative.	Continued in response to likely improved job security.	No evidence of impact.
Organisational citizenship behaviours (OCBs)	Greater altruism and conscientiousness.	Greater altruism and conscientiousness.	Increased workforce pride reported by plant visitors and conscientiousness reported by managers.

The major effects on employee behaviours were evident in increased suggestions being put forward and implemented as a result of considerable efforts to involve employees in both the change process of the innovations and as an outcome of new ways of working. This was also linked to changes in organisational citizenship behaviours. As managers gave more responsibility to employees, staff became more conscientiousness about quality standards and more engaged with fixing problems. Organisational commitment was generally high at the case sites as staff had often worked in the organisations for a long period of time, and the threat of financial difficulties served to reinforce attachment to the firms that provided

their income. Changes in levels of flexibility related to whether or not this was an explicit objective of the innovations, which was more important at Medtronic than the other firms. Establishing problem-solving meetings at Kirchoff and SAICA was instrumental in facilitating knowledge exchange between managers and different groups of staff.

Explaining the impacts of HPWPs on employee behaviour

Much research that seeks to model connections between innovations in HRM practices and outcomes for employees and organisations encompasses two elements (Teece et al, 1997; Leede and Looise, 2005, p. 114).

- Formal structures or processes constitute practices that are core to enabling innovation to take place (for example, teamworking). Within the conceptual framework, these are the HPWPs.
- *Principles* are both formally and informally embedded within the organisation related to the management of change, approaches to risk, organisational leadership and organisational culture. These constitute the internal facilitating conditions embedded within the conceptual framework.

These two elements are necessary, as possessing a human capital advantage through high-quality and talented staff alone is not sufficient to enable firms to attain higher levels of performance. Staff talents need to be mobilised to release their discretionary effort, and this requires embedding practices to support the complex process of performance improvement through managerial support. The mechanisms by which HR management practices lead to these higher levels of performance for organisations and better quality and experience of work for employees are best explained by models that lend themselves to explaining individual behaviour in the workplace.

The discussion below summarises some of the main theoretical principles used to link HR practices to changes in employee attitudes and behaviour that may benefit them and their employer and which underpin the causal connections implied in the conceptual framework. It is then used to analyse the reasons why HPWPs resulted in the employee behaviour changes reported in each case study.

Models of employee behaviour

Four main theoretical perspectives are selected, all of which have merit in explaining why changes in HR practices might affect organisational performance. These are primarily based on psychological models of employee behaviour that are most suitable for explaining effects on individuals in a workplace context. The models are:

- the ability, motivation, opportunities (AMO) model;
- the organisational citizenship behaviours (OCB) model;
- the job characteristics (JCM) model;
- the job demands and control (JDC) model.

AMO model

HPWPs have commonly been explained through the AMO model, first developed by Bailey (1993). This model proposes that HPWPs increase the discretionary effort of employees through increasing employees' *ability* to do their job, *motivation* to go beyond their job descriptions and the *opportunities* to exert discretionary effort. The ability dimension of the model ensures that employees have the appropriate skill levels to make use of the opportunity to use their discretionary effort through participatory work practices. Employees also need the motivation to use the discretionary effort, and opportunity refers to involvement in the decision-making process of the firm (Appelbaum et al, 2000).

OCB model

The OCB model also links employee discretionary behaviour and the impact of this to organisational performance. Organisational citizenship behaviours are:

- discretionary – the employee can choose whether or not to demonstrate a behaviour; it is ‘extra-role’ behaviour;
- not an enforceable requirement of the role or the job description;
- not directly or explicitly recognised by the formal reward system;
- promotes the effective functioning of the organisation (Organ, 1988, p. 4, cited in Coyle-Shapiro et al, 2004).

There are five specific dimensions of OCBs.

- Altruism: behaviours such as volunteering to do some of a colleague’s work.
- Courtesy: behaviours that reduce work-related conflicts. These could include simple acts like making coffee for colleagues but also include acts such as warning colleagues of changes to deadlines.
- Conscientiousness: behaviours that ensure work quality and productivity are improved or maintained, for example checking work for errors or getting up early to avoid being late at work during bad weather.
- Civic virtue: taking an active interest in and contributing to non-essential aspects of work, for example attending non-essential meetings. This can also mean defending the organisation’s reputation if criticised by outsiders.
- Sportsmanship: tolerating adverse working conditions without complaint, for example dirty working conditions or high work volumes.

Not all of these behaviours necessarily benefit employees and their organisation equally. For example, sportsmanship might legitimately inhibit employees from raising concerns about quality of working life. However, altruism, courtesy and conscientiousness may have the potential to make working life collectively easier and offset other negative outcomes of these behaviours for workers. For the organisation, conscientiousness is likely to improve the quality of work outputs, and civic virtue may directly support improved decision-making and innovation through employees making suggestions for rectifying existing problems and taking on additional tasks such as taking part in an exploratory project for a new product or service.

OCBs are founded in psychological contracting theory (for example, see Rousseau, 1995). This suggests that OCBs can be fostered and encouraged if organisations adopt particular HR management principles and practices that are rooted in social exchange and reciprocity as the underlying explanations for why employees engage in OCB. In essence, this means that employees will demonstrate OCBs if they are treated well by their employer and have their expectations and employer promises about job content, aspirations and working conditions met (Coyle-Shapiro, 2002). This would include provision of positive organisational support, an umbrella term that covers a number of behaviours usually demonstrated by supervisors, line managers and colleagues, including concern for an individual employee’s welfare, provision of guidance, feedback on performance and personal development opportunities. Such positive organisational support activities could be reinforced through HR practices and processes, including training and development, performance management and reward systems.

JCM model

The third relevant model to explain why and how HPWPs might affect employee attitudes, behaviours and outcomes is Hackman and Oldham's (1976) job characteristics model (JCM). This recognises how job characteristics contribute to different psychological states, and that the strength of employees' need for growth (that is, challenges and personal development) has a significant moderating effect (Garg and Rastogi, 2006). The model identifies five core job characteristics (skill variety, task identity, task significance, autonomy and feedback) that affect three critical psychological states (experienced meaningfulness, experienced responsibility and knowledge of results). These in turn are accountable for producing increased work satisfaction, internal work motivation, improved performance, reduced absence and reduced employee turnover. In broader terms, the model emphasises the importance of communication, problem-solving and learning as processes that can be fostered through application of appropriate HR practices. Notably this means that the processes by which outcomes are achieved can be complicated rather than unidimensional. Making these innovations 'is not seen as a linear process, but as involving a system of interactions between different functions and different players whose experience, knowledge and know-how is mutually reinforcing and cumulative' (Ramstad, 2008, p. 20).

JDC model

The fourth model seeks to explain levels of stress experienced by staff with reference to the level of demand imposed by the work tasks and how much control or choice the worker has over their tasks (Karasek, 1979). This contributes usefully to the conceptual framework because it focuses directly on a key measure of employee well-being as an outcome of the model.

Job demands include factors such as how often workers are interrupted; time pressures; incidence of conflicting demands; reaction time required; pace of work; proportion of work performed under pressure; amount of work; degree of concentration required; and dependency on other inputs for work speed.

Control refers to how much discretion employees have over the tasks they perform and how they undertake them. It has two sub-dimensions of skill discretion and decision authority. Skill discretion encompasses task variety, level of repetitiveness, and opportunities for creativity and to learn new skills. Decision authority refers to how far employees can make choices about their work, and how far they can influence their own work team and more general company policies.

Analysing the possible combinations of the characteristics of the model yields four types of jobs:

- low-demand, low-control;
- low-demand, high-control;
- high-demand, high-control;
- high-demand, low-control.

Critics have noted that much attention is often given to the negative health effects of high-demand, high-control jobs such as those of senior managers, but the evidence base overall finds that the last category of high-demand, low-control jobs, typically occupied by staff in lower grades, has the worst health outcomes (Sisson, 2009). It is evident, however, that the application of HPWPs may have great potential to avoid or ameliorate the negative effects of poor-quality jobs.

Analysis of case studies using theoretical models

In seeking to understand the impact of work organisation innovations on employees, this study can make a contribution by exploring the reasons why employees are motivated to comply with, support or resist organisational change. Table 4 draws on data from discussions with employees and managers within the case studies, where explanations for their responses to innovations are categorised against each of the four theoretical frameworks of the AMO, OCB, JCM and JDC models. It is important to note that the frameworks are not necessarily mutually exclusive in their motivational assumptions but they do differ in focus and emphasis. This offers the potential to capture the mechanisms by which highly diverse work organisations seeking to realise differing objectives achieve particular results.

Table 4: *Explaining impact of work organisation innovations on employees*

	Kirchhoff	Medtronic	SAICA
AMO model	Steering committee provided opportunity for employees to make suggestions and training was provided to support implementation, resulting in employee engagement.	Provision of skills development and career progression opportunities, employee involvement in work re-design.	Provision of skills development, opportunities to get involved in problem-solving and make suggestions, increased sense of responsibility.
OCB model	Improved facilities provided for employees, and union acted as source of recourse for problems; extensive training provided. Led to perceptions of ‘fair deal’.	Expectation that managers would provide coaching and mentoring support. Organisational support evident in design of work routines, and equipment provision alleviated concerns about more physically demanding work. Union provided source of support.	Organisational support for employees evident in greater attention to safety equipment and extensive training provided, leading to enhanced employee pride in work and organisation. Union negotiated ‘fair deal’ on terms and conditions.
JCM model	Improved feedback and information flow contributed to knowledge of performance outcome, but no major change to job content.	Skill variety, task significance and autonomy enhanced through cellular manufacturing system. Improved information flow gives feedback on performance. Overall improves experience of responsibility and knowledge of results.	Much greater autonomy, skill variety and feedback offered through problem-solving activities, leading to greater perceived responsibility.
JDC model	Control over equipment and information needed to do job improved, so demands perceived to decrease.	Job demands increased through cross-skilling but control was also enhanced through greater team autonomy increasing satisfaction.	Improved control over workflow blockages and production errors made demands of job easier.

The results of the analysis against the four theoretical models illustrate the major role that enhanced autonomy, opportunities for problem-solving and provision of performance information have in affecting employee attitudes and behaviours. These are common across the frameworks. Perceived organisational support was derived not solely from managerial intervention but also from union activity to agree terms and conditions and provide additional assistance if required. Building autonomy into work re-organisation was central to the innovations at SAICA and Medtronic.

Organisational impact of work organisation innovations

The overview report provided a review of the major literature on links between HPWPs and organisational performance indicators (Eurofound, 2012). Research evidence has illustrated the impact of HPWPs on a variety of organisational performance indicators, including financial outcomes (such as profits, sales, market share, accounting measures) and operational performance outcomes (for example, output measures such as productivity, quality and efficiency) (Boselie et al, 2005).

Recent evidence from analysis of Eurofound’s European Company Survey (ECS) 2009 showed that HPWPs such as profit-sharing, autonomous teamworking and the take-up of flexible working opportunities by at least one-fifth of the workforce are associated with lower employee absence levels and fewer problems with staff motivation. Employee

retention problems were lower where autonomous teamworking and formal employee representation were used (Eurofound, 2011a). These HR-related outcomes are important due to the influence employee behaviours can have on organisational outcomes (Purcell, 1999; Wood, 1999; Paauwe, 2009). Analysis of the ECS shows that HPWPs such as training, performance-related pay, teamworking and flexible working practices have been associated with ‘above average’ company productivity. It was also found that training, pay and teamworking practices have ‘beneficial’ links to a ‘good economic situation for the firm’. The ECS shows that the effects of HPWPs on organisational performance can be achieved through improving employee performance, rather than having a direct effect on ‘operational and organisational outcomes’ (Eurofound, 2011a).

Meta-analyses and reviews of large numbers of HPWPs and performance studies have also found links between HPWPs and performance (Boselie et al, 2005; Wood, 1999). More broadly, Combs et al (2006) examined the relationship between HR and organisational performance through a meta-analysis of 92 recent studies of this relationship and found that an increase of one standard deviation in the use of HPWPs is associated with a 4.6% increase in return on assets, and with a 4.4 percentage point decrease in turnover. Similar conclusions are reached by other reviews, including that of Wood and Wall (2007) which found that 19 of 25 studies examined reported some statistically significant positive relationships between HR practices and performance, albeit with small effect sizes. Combinations of practices including flexible job design, employee involvement, skill development and relating rewards to performance were related to improved productivity in a survey of 398 manufacturing firms in Finland (Pot, 2011). Improvements in workplace organisation and adoption of non-technical innovations have been linked to improved productivity and financial performance in the Netherlands (Pot, 2011). These studies are generally cross-sectional rather than longitudinal, which makes attributing causality to innovations in work organisation impossible. However, the aggregation of results in large-scale surveys from many different organisations may actually diminish the apparent impact that such innovations have in individual organisations, and therefore underestimate the potential benefits to individual firms of implementing HPWPs.

The literature also suggests that improved financial performance resulting from the adoption of HPWPs may also enable organisational expansion. The Employee Direct Participation in Organisational Change (EPOC) survey found that companies using participatory forms of work organisation reported increased employment rates; 34% of workplaces involved in direct participation measures had seen an increase in employment rates over the previous three years, compared to 24% among firms that did not use these measures. ‘Non-participatory’ firms were also more likely to report a fall in employment rates; 35% had reduced numbers, compared to 27% among participatory workplaces (Eurofound, 1999). Overall, increased opportunities for participation and teamworking within European firms may lead to short-term pain for long-term gain in terms of job creation. On balance, longer-term employment prospects are likely to be better in those firms that make changes than in those that do not (Sisson, 2009).

Impact of individual HPWPs

Some evidence of positive impacts on organisational outcomes have also been found in analysis of specific HPWPs. Evidence from Sweden, in a study that examined how companies organise work for innovation and growth, showed that organisational success was positively correlated to organisational conditions that promote job satisfaction and work innovation such as job enrichment, job enlargement, participation and autonomy (Eurofound, 2011b, p. 19).

Teamworking

Other evidence shows that teamworking has a positive impact on financial performance and productivity. Analysis of the ECS shows a positive link between adoption of teamworking and management perceptions of financial performance and productivity (Eurofound, 2011a). Analysis of the Workplace Employment Relations Survey (WERS) shows that 59.6% of companies that organised work in teams believed their productivity was above average compared to other establishments in the same industry, specifically, 46.6% of firms using other forms of work organisation (Procter and

Burrige, 2008). On financial performance, 65.4% of organisations using teamworking scored themselves above average, compared to 51% of firms that did not engage in the practice. Devaro (2006) also uses survey data on firms' assessment of their financial performance to measure the impact of teamworking. He finds the predicted benefit of team production for the median establishment is considerable, with an 8.7 percentage point increase in the probability that financial performance is a lot better than the industry average.

The evidence around the impact of greater autonomy in teamworking is more ambiguous. Proctor and Burrige (2008) find that allowing teams to be semi-autonomous produces an additional positive impact on productivity and work quality, but not on financial performance, while Devaro (2006) finds no such effect for autonomous teams. This highlights the importance of the definition and level of autonomy adopted. Devaro defines autonomous teams as those who have control over how they perform their work, whereas Proctor and Burrige define semi-autonomous teams as those where members work together and are given responsibility for specific products or services and can jointly determine how the work is performed.

Training

Links have also been found between training and improved individual performance, for example in the semi-conductor industry where investment in training improved the problem-solving skills of machine operators and was found to reduce the number of production defects (Hatch and Dyer, 2004). The same study showed that training can have a strong positive effect on productivity. Company productivity was measured using a production function to estimate the value added per employee, designed to measure productivity rather than profitability to discount impacts beyond firms' control. They found the effect of extensive training was both statistically and substantively significant, representing a gain of over 6% in value added per employee. Similarly, analysis of the ECS showed that provision of training had links to improved productivity and self-reported perceptions of organisational financial performance (Eurofound, 2011a).

More specifically, studies have shown that training plays a significant role in developing innovation, and organisations that provide training benefit from enhanced knowledge and skills and 'innovative capability' in performing work tasks (Chen and Huang, 2009). Therefore, it is through training that firms develop the 'organisational expertise in terms of demand and content for the innovation' (Weisberg, 2006 cited in Chen and Huang, 2009, p. 106). Training investment increases employees' skills across all levels of the organisation, and this can help grow a 'source of ideas for further innovation' (Torraco and Swanson, 1995, cited in Chen and Huang, 2009). This is supported by further evidence showing the importance of developing workforce skills in order to be able to reap the benefits of HPWPs. The EPOC survey found that managers believed a well-trained workforce was vital to securing the effectiveness of participatory workplaces; the proportion of workplaces using direct participation methods requiring highly trained staff was double that of those who did not use such techniques. Furthermore, the numbers of managers reporting direct participation measures had been a complete success was more than double among those with a highly skilled workforce than those with low-skilled employees (Eurofound, 1997, p. 171).

Employee involvement, knowledge-sharing and communication practices

Studies of employee involvement, knowledge-sharing and communication practices show that they have a generally positive effect on productivity. Black and Lynch (2004) used data from US manufacturing firms to estimate that workplace innovation practices contributed 1.4% per year to firm productivity (measured as output per hour). This would mean that, at the most generous estimate, innovative workplace practices accounted for approximately 30% of output growth in manufacturing over the period 1993–1996, or 89% of multifactor productivity. Other studies have found specific links to innovation including reducing recruitment, improving retention and reducing absenteeism through improving the dialogue between management and employees (European Work and Technology Consortium, 1998).

The role of less formal and non-institutionalised communication and consultation techniques can also be helpful. According to analysis of the ECS, use of 'ad hoc consultation in the absence of formal employee representation' has a positive effect on organisational productivity (Eurofound, 2011a). Similarly, open and transparent communication practices that support employee involvement are also found to have a positive influence in promoting creativity and innovation (Martins and Terblanche, 2003, cited in Heffernan et al, 2009, p. 9).

As well as enhancing participation to improve business outcomes, studies have identified that employee involvement plays an important role in ensuring that innovation processes themselves function optimally and have noted the importance of involving as many workers as possible. High levels of employee participation in decision-making make it more likely that employees will work through the problems associated with introducing innovation (Janssen, 2004). For example, teams that meet regularly to exchange information and contribute to decision-making will more 'comprehensively process information and opinions about the innovation and the innovation process, and ensure a more effective outcome' (Janssen, 2004). Similarly, empirical studies emphasise the importance of involving employees in the implementation of innovative working practices (Black and Lynch, 2004). In their studies on labour productivity in US manufacturing firms, they found that what mattered was not the adoption of a particular practice, but how practices were implemented. For example, they state that 'simply adopting a Total Quality Management system has an insignificant or negative impact on productivity unless the proportion of workers involved in regular decision-making within the plant is also high' (2004, p. 9).

Reward systems

Evidence on the performance effects of reward systems tends to be more positive about group-based systems rather than individual performance-based systems. Group-based or company-performance-based pay systems achieve their effects through stimulating employees to make suggestions for organisational improvements and innovations because they will stand to gain a share in rewards accruing as a result (Kessler, 2010; OECD, 2010). These pay practices are also more likely to be effective if employee interest is represented in the operation or design of the system (OECD, 2010). Additional performance benefits of motivated staff are that they are less likely to be absent from work, which has been illustrated for a number of group-based pay systems including profit-sharing (Eurofound, 2011a), and may be less likely to leave their job, although this may be due to 'lock in' effects while employees wait for shares to vest rather than genuine commitment to the organisation. Nevertheless, such schemes may be important to foster higher levels of effort including innovation because of the requirement to take risks to attempt to innovate. This is easier in a high-trust environment, which is more likely to be fostered among colleagues with longstanding working relationships.

It is also important for new reward systems to be implemented together with other HPWPs in complementary systems of practices, rather than as individual innovations. For example, Kandel and Lazear (1992, cited in Black and Lynch, 2004) show that introducing a profit-sharing plan for all workers in a firm may have little or no impact on productivity unless it is linked with other practices that address the inherent free rider problem associated with company-wide profit-sharing plans. Profit-sharing and employee involvement in decision-making are often complementary (Pot, 2011). Overall, much of the literature shows that the processes of allocating rewards and providing constructive feedback on performance are likely to have stronger psychological effects than extrinsic rewards themselves (Blinder, 1990; Folger and Konovsky, 1989; Folger and Cropanzano, 1998). This places greater emphasis on the role of associated appraisal and performance review processes, not merely as a means of delivering a decision on pay but as having an important independent function.

Impact on case study organisational performance

Table 5 illustrates the findings about impact of work organisation innovations on organisational performance indicators.

Table 5: *Organisational impacts of work organisation innovations*

	Kirchhoff	Medtronic	SAICA
Quality	Costs of redoing faulty work are reduced.	Impact measure not available.	Impact measure not available.
Productivity	Manufacturing capacity has grown significantly due to efficiency improvements, so there is now surplus production capacity.	Increased considerably, estimates that it has doubled.	Improved machine output ranging from 10%–50% improvement. Maintenance downtime also reduced.
Stock levels/inventory	Less stock held due to increased efficiency, so working capital levels higher.	Impact measure not available.	Stock levels/inventory reduced as production more efficient.
Delivery	Impact measure not available.	Impact measure not available.	Much improved from around 65% to over 95%, resulting in better cash flow as clients paid promptly.
Employment levels	Reductions may be needed due to improved efficiency and market conditions.	Reductions planned due to improved efficiency and market conditions.	Initial reduction but no current impact.

While the measures of organisational performance used vary between organisations and Medtronic did not monitor as many indicators as the other two firms, the findings tell a common story of enhanced productivity through greater efficiency and involvement of staff in ensuring quality standards are met. Improved productivity and efficiency also contributed to enhanced production capacity, and, at SAICA, better cash flow. These results are broadly consistent with the findings from previous studies, which are mostly based on research in similar manufacturing environments. Teamworking, training to enhance employee skills, increased information-sharing and opportunities for employees to make suggestions, all backed up with a share in the rewards of improved performance, combined to enhance ability and provide opportunity and motivation to make a difference to organisational outcomes. While much of the literature is based on cross-sectional data, and within these three case studies, no explicit before and after performance data was available, it is clear that SAICA and Medtronic were experiencing some financial pressure before the innovations were implemented, and that these reduced as a result of the changes made.

Overall, performance indicators in terms of sales or profits were not expressly available, although the SAICA plant was reported to have returned to profit, but it is notable that performance was sufficiently improved at each case site for all employees to receive relatively substantial performance bonuses on the basis of plant performance. However, it is also evident that the long-term impacts on employment levels in these types of manufacturing plants may not be positive, although this is not entirely due to increased plant efficiency. Intensified global competition and downturns in some product markets such as automotive manufacturing mean that even highly efficient operations may face difficult conditions and decisions about staffing.

Key facilitating conditions for change 3 and lessons learnt

Four main sets of factors were identified as important for successful introduction of HPWPs. These are:

- leadership to build personal relationships and trust, which may be critical to championing and sustaining participatory innovations;
- challenging financial circumstances, which made it more likely that employees would accept change;
- employee support mechanisms to enable employees to cope with change and to implement some of the practices;
- social dialogue and industrial relations systems.

Leadership from senior managers often appeared to be instrumental in driving change; one example is the new managing director at SAICA. Management determination to change organisational cultures to match the requirements of new ways of working and persistence in embedding change so that managers and employees accepted that innovations were ‘here to stay’ were essential to make change stick. Leaders were also critical to promoting intensive communications at all levels of the organisation from strategic issues, to day-to-day operational matters to make sure that employees were informed and consulted about change.

Linked to this, personal relationships between management and trade union representatives were important, and the effort that both sides put into building these mattered. At Kirchhoff, managers promoted from shop floor level and staff were long serving, enabling the creation of high levels of trust. High levels of trust between managers, trade unions and staff at Medtronic enabled full involvement of employee representatives in implementing the new cellular manufacturing system.

Challenging financial circumstances established a context in which employees were more likely to accept the need for change. Plant transformations took place in a context of concern about job security, which is well known to make staff more willing to adopt new working practices. Therefore, employees at Kirchhoff and Medtronic in particular were prepared to accept the innovations because they saw the potential benefits that these might yield in terms of future plant stability. Leadership capability in sharing performance information openly with staff to illustrate the business situations of the case studies supported the case for change. Unfavourable financial circumstances also made employees more willing to accept changes to terms and conditions.

Employee support mechanisms included extensive training focused on social as well as technical skills outlined in the discussion above about the process of implementing the innovation. In addition, where necessary, managers ensured use of new equipment including safety glasses at SAICA and ergonomic mats at Medtronic. At each organisation, trade union representation also functioned as a source of employee support by ensuring that innovations were introduced with due regard for employee rights, and the principles for change were negotiated as part of broader collective agreements. This led to employees feeling cushioned against any adverse effects of change, and that they would have recourse to an advocate for their point of view, should any elements of the innovations prove unfavourable or unfair.

Social dialogue and the industrial relations system played an important role. Specifically, trade union representatives facilitated employee acceptance of the innovations at all three case study companies and implementation of them. Notably, trade union sources also provided inspiration for some of the elements of joint partnership working and problem-solving through the work of SIPTU’s Ideas Institute at Kirchhoff and SAICA. At site level, trade union representatives were critical to obtaining a perceived ‘fair deal’ for employees through negotiating pay deals and changes to terms and conditions. This enabled the protection of workers’ rights, which was particularly important in gaining staff

commitment to some of the innovations. In this way, operational changes were made possible within an institutional framework that safeguarded or improved employee terms and conditions. Establishing and working within formal representation structures seems to have been particularly helpful in setting up and working in new team structures. This is because the principles of joint working, with the reduction in status hierarchies and the expectation of shared responsibilities, was useful in forging new cultural norms.

Lessons learnt

The lessons learnt are summarised here.

- Difficult financial circumstances can provide a favourable context for change, but it is still very important to communicate the benefits to employees and make sure that each person understands what they will get out of it. Ensuring that staff understand what practical difference innovations will make to their work on a daily basis is essential. Building understanding of shared goals and benefits is helpful in harnessing collective motivation to implement innovations and make them succeed. Continually updating employees on business performance during difficult economic conditions can build a sense of shared endeavour in improving performance.
- Joint working in small groups was helpful in overcoming the objections of individual managers or employees who were difficult to influence directly as collective influence over behavioural and attitudinal change could prove more powerful.
- Good quality communication between the workforce and management is essential and the specialist working groups at Kirchhoff and SAICA were particularly helpful in achieving this. Making absolutely sure that employees learn about change before it happens is critical to gaining their acceptance by ensuring they understand the reasons for the innovations.
- Delegating as much decision-making responsibility to employees as possible about how to go about making the innovations work will help maximise the benefits of work organisation innovations.
- Teamworking, within and between teams, was an important component to making the innovations successful, especially where these involved lean production and re-organisation of work. Extensive training was provided over a relatively long period of time and considerable investment was made in this at SAICA and Medtronic. At Kirchhoff, the concept of the 'team' was broadened beyond production workers to include support workers.
- It is unrealistic to expect that all staff and managers will support change and in some firms, those who were not willing to accept innovations left the case sites. Those affected may include both managers and staff and attitudes are not necessarily linked to grade or hierarchy, but to personal views and willingness to adapt.
- Innovations in work organisation take time to implement and 'stick' so persistence among managers and champions of change is essential. But after initial early gains, it can be harder to identify continuous improvements to be made over time.
- Celebrating success and recalling how much progress had been made was helpful in generating a sense of pride at SAICA and managers at Kirchhoff noted that they needed to undertake more of this.

It is also instructive to compare these case studies against those from the previous report on work organisation innovation (Eurofound, 2012) to examine what they tell us collectively about the role of social dialogue and partnership in contributing to the effectiveness of these processes of workplace change.

The evidence suggests that the presence of social dialogue and the involvement of worker representatives made a valuable and helpful contribution to the implementation of the innovations in the case study companies. The presence and active participation of worker representatives, whether in an official unionised capacity or not, was helpful in enabling both managers and employees to understand differing needs and priorities, to overcome any resistance to change on both sides through consultation and to resolve any initial problems or difficulties in implementing the innovation through well-established communication structures. Where there was unionised representation of staff, this enabled protection of workers' rights by referring any attempt to undermine these to previously negotiated agreements. There is mixed evidence on the role of trade unions in 'selling' innovations to their members. In the Irish case studies, this role does not appear to have been particularly prominent, partly because of the financial pressures facing the firms. In some of the other case studies, where lean production systems were introduced and created a possible threat to job security if they resulted in greater workplace efficiency, union representatives secured an agreement that enhanced productivity would not result in job loss in the short-term.

It is difficult to make definitive judgements about the role and impact of social dialogue more broadly across the whole set of case studies, and whether formal representation arrangements deliver 'better' outcomes for employees and organisations. This is partly because the case sites covered in this Irish special report, when considered alongside some of those with the strongest forms of social dialogue including co-determination and collective bargaining in the previous report, were facing some of the most challenging market conditions. Those with less challenging and more prosperous conditions were found in the private service sectors, which less commonly have formal representation arrangements for employees. These findings therefore reflect the sectors in which stronger forms of representation are found across the research sites, primarily covering various forms of manufacturing. In practice, evaluation of social dialogue practice needs to take account of the context in which innovations are being made, following the argument of Johnstone et al (2009), as this will colour the receptivity of employees to proposed changes and shape the ambitions of managers on the extent to which change can be pursued. Comparative 'in-sector' case studies within the same country are needed to answer this question. The economic climate and intensity of competition faced by the companies involved were beginning to raise questions about the sustainability of collectively bargained agreements in the medium term, but without the role of unions in providing an efficient channel of communication with employees, it is less certain that some of these workplaces would have survived to date (for example, SAICA). At the same time, it is evident that the models of social dialogue adopted were based on 'competitive solidarity' (Streeck, 1999) rather than beliefs about the intrinsic value of improving employees' working conditions. These reflect intensified global competition in some of the key industries where social dialogue is enshrined through sectoral tradition.

Some experts have argued that the quality of problem-solving approaches is a better measure of the efficacy of social dialogue and partnership than organisational outcomes in themselves, since it is the ability of management and employee representatives to work together to address challenges and tensions that these approaches are intended to foster.

Policy pointers

Recent reviews of the state of workplace innovations in Europe locate them as a major contributor to wider social innovation, which will support capacity building in European firms to contribute to the goals of the European Economic Strategy. These goals include the attainment of 'smart' growth through the development of higher-quality jobs in higher value-added industries and 'inclusive' growth, in which all citizens have access to high-quality employment opportunities. Innovations in work organisation may also foster capabilities in organisational change conducive to wider innovations in products and services, which may in turn lead to employment growth. Overall, workplace innovation is a greater determinant of the success of innovations in products and services than investment in ICT and R&D. It is clear that both policy stimuli to promote social partnership in Ireland and work over the past 10 years to promote work organisation innovations have had a positive legacy. Within the case study organisations reviewed here, the adoption of innovative practices has helped to secure and sustain employment and workplaces.

This leads to the following recommendations for action.

1. The Irish government should continue to promote high performance work practices (HPWPs) among employers within Ireland. The government should guide employers and social partners to sources of European funding that can help implement work organisation innovations to secure jobs and growth.
2. The Irish government can take the opportunity, following its Presidency of the Council of the European Union, to engage with its successor Presidencies to promote the diffusion of high performance work practices across European Member States and to showcase the innovations that have taken place within workplaces in Ireland to inspire employers in other Member States.
3. The Irish government can take the opportunity to link work organisation innovations to the scope of actions open to Irish firms within the Skillnets programme in line with the recommendations in the Forfás report *Making it in Ireland: Manufacturing 2020*.
4. Employers, employer associations and trade unions have an important role to play in continuing to raise awareness of benefits of work organisation innovations across Irish enterprises, which can provide win-win benefits for employers and workers.

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