

# COMPETING THROUGH PEOPLE

## THE WORK INNOVATION NETWORK SYNTHESIS REPORT





## Executive Summary

EEF has been working with a group of academics and its own members over the last six months to undertake an exploratory study on high-performance work practices in UK manufacturing. The focus of the project is to understand the barriers to introducing high-performance work practices and to identify future research and interventions that might increase the speed of adoption.

A review of the research in the area found that these practices are not widely used in the UK despite consistent evidence that they can lead to up to 30 per cent increases in comparative productivity. The effectiveness of these practices can be explained by reference to two conceptual frameworks. The first argues that employees will ‘go the extra mile’ at work if work practices deliver three inter-linked employee needs: (1) to increase their abilities, (2) to create a motivational environment in which to apply these abilities and (3) to provide them with the opportunity to use these abilities. The other framework, which underlines the recent report by MacLeod on Employee Engagement,<sup>1</sup> anchors performance in the development of mutual respect, trust and fairness between employees and their organisations. Both of these frameworks can help us understand why high-performance work practices are important in today’s manufacturing environment.

What is less clear is how firms introduce such practices and integrate them with their operational management strategies. Our research review pointed to growing evidence that, where firms achieved greater synergies between lean operations and high-performance work practices, considerable productivity gains could be achieved.

The implication is that senior managers need to think more systemically about how they integrate the technical and human sides of their organisations to ensure that they are mutually reinforcing.

Senior managers also need to be aware of the range of potential barriers to introducing high-performance work practices and how they can be overcome. Our review has identified a number of important barriers:

- Product market strategies fail to provide the context for high-performance work practices to embed
- Front-line managers do not understand and cannot introduce these practices in a sustainable way
- Senior managers do not have an ‘investment philosophy’ and see people as a cost rather than an investment, consequently restricting the adoption of new practices
- Poor-quality employee relations contexts create low-trust environments which militate against innovation-in-work practices
- The perceived payback period on the investment costs of adopting new practices is too long (typically three to five years)

Our review also identified large gaps in our knowledge about how organisations can build high-performance workplaces. Most of the current research has been successful in demonstrating the link between the use of these practices and performance outcomes. There is little research that explores how firms can adopt these practices successfully.

Our aim is to work with firms in the sector to develop a collaborative academic–management research programme that will address these important gaps in our knowledge.

### *Background*

There is widespread recognition that if the UK economy is to prosper in the future then innovation is vital. A number of different bodies are working to develop knowledge on how to build innovative capacity in the UK economy. They understand that innovation is not only about science-based technological innovation but also involves innovation in systems, processes, business models and working practices. Key bodies working to promote innovation include National Endowment for Science, Technology and the Arts (NESTA), Technology Strategy Board (TSB), Economic and Social Research Council (ESRC), Engineering and Physical Science Research Council (EPSRC) and central government itself through the Department for Business, Innovation and Skills (BIS), amongst others.

<sup>1</sup>Engaging for success - enhancing performance through employee engagement – David McLeod and Nita Clarke

Whilst the development of technology-based innovation is extensively funded, innovation in management practices is poorly funded. This is despite a growing and significant body of evidence that demonstrates that investing in management innovations such as high-performance work practices can yield impressive productivity gains. So why is more attention not paid to this subject, and why are such practices so slow to be adopted across UK manufacturing?

This report summarises the output of a six-month, exploratory project that brought together an interdisciplinary network of leading academics and EEF member companies to address the question: **‘What are the barriers to the adoption of high-performance work practices in manufacturing firms and how can they be overcome?’**

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## Context: the need for high-performance work practices

In the manufacturing sector, a wide range of local, national and international factors are coalescing to increase pressure on firms to renew their work systems. Cost pressures are by far the most significant driver and across many sectors the OEMs and large first- and second-tier suppliers are exerting considerable pressure in increasingly global supply chains for cost reductions.

These pressures are leading firms to consolidate and look for economies of scale and scope. In consequence, there has been a drive to offer solutions rather than products to customers as a way of moving up the value chain. These pressures to reduce costs, offer complete solutions and take on more risk over the investment cycle mean that many manufacturing firms need to improve their processes continuously.

Consequently, the knowledge, skills and abilities of their workforces, at all levels, are becoming an ever more important source of competitive advantage. The importance of people skills needs to be seen in the context of a sector with an ageing workforce, growing skills shortages and increasing competition from higher-paid areas such as professional services, IT consultancy, banking and finance. Together, these pressures mean that the human resource will become an ever more important competitive issue in the years ahead.

In manufacturing organisations, labour costs can vary from 20 to 40 per cent of total operating costs compared to the service sector where 60 to 75 per cent tends to be the typical range. Given the significant investment in capital equipment in manufacturing, often in high-reliability environments (e.g. aerospace, cars, pharmaceuticals), the performance of human resources is critical to capitalise fully on this investment. When complex equipment and the changing nature and demands of customers interact, firms need to ensure that their workforces are flexible and adaptable in terms of both work skills and attitudes.

But how can companies manage people effectively to enhance productivity and at the same time control costs? There is a growing body of theoretical and empirical research that demonstrates how the better management of people can improve overall organisational performance. In reviewing this literature and its implications, we will start with the theoretical arguments because it is important to have a clear understanding of why and how investing in

innovations in work practices can lead to performance improvement. With this in our minds, we are in a much better position not only to review the growing empirical evidence but also to consider the implications for management practices.

So what do we mean when we talk about high-performance work practices?

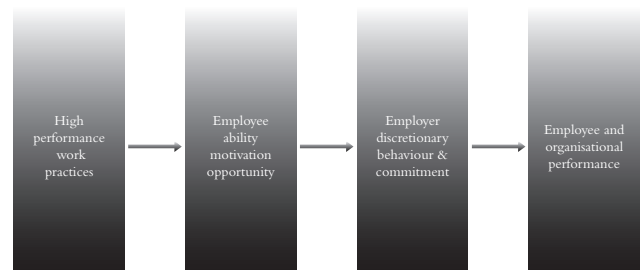
## What are high-performance work practices and why do they work?

Why should systems of high-performance work practices generate much better comparative levels of productivity? One answer is rooted in psychological theories of worker performance. The so-called AMO model (Ability, Motivation and Opportunity) is based on many years of psychological research on employee motivation and performance.<sup>2</sup> In brief, it contends that work practices are effective because they address three critical dimensions of employee performance. Firstly, high-performance work practices can provide workers with ‘ability’ (i.e. develop their knowledge, skills and abilities); secondly, they can create a context in which there are high levels of ‘motivation’ and, finally, work practices give workers the ‘opportunity’ to use their skills and knowledge.

The link between the AMO model and high-performance work practices delivers better productivity according to the following logic. In order to develop employees’ knowledge, skills and abilities, HR procedures such as sophisticated recruitment and selection practices can bring a higher level of these skills and abilities into the firm. These can be further developed through practices such as training, job design and rewards linked to skill development. HR policies such as incentive compensation, performance appraisal and internal promotion are thought to provide incentives that can encourage motivation. Other work practices such as flexible working arrangements, employment security, procedures for airing grievances and high overall compensation can also increase motivation by increasing employee commitment to the organisation.

Finally, even knowledgeable, skilled and motivated employees will not perform at their highest level unless their jobs are designed to utilise fully their knowledge, skills and abilities and to enable high levels of discretionary behaviour. ‘Going the extra mile’ can be the critical difference between average and high-performing workplaces. Consequently, practices such as self-managed teams, employee involvement programmes, job rotation, broad job grades and information sharing can support higher levels of discretionary behaviour. The AMO model and how it is linked to HR practices and performance is illustrated in the figure below:

AMO Model of High Performance Work Practices



In a development of the AMO model, a number of researchers have argued that HR practices are important for performance because they have a significant impact on firms’ internal social structures.<sup>3</sup> These practices enhance the ‘social capital’ of the firm. The argument is that the quality and breadth of social relations in the firm improves and this enables faster problem-solving, better knowledge transfer and higher levels of trust and commitment. This idea is based on another important theory – social exchange theory. In brief, this perspective argues that, where there are high levels of exchange between individuals, this builds norms of reciprocity (i.e. ‘you scratch my back, I’ll scratch yours’) which underpin higher levels of cooperation, problem-solving and organisational flexibility. Social exchange theory is at the root of a series of studies that have examined the impact of work practices on employee attitudes, often now called ‘employee engagement surveys’.

Several writers<sup>4</sup> have used what is called ‘psychological contract’ theory to understand this dimension. The basic argument is that HR practices play an important role in creating a positive psychological contract in the organisation. This contract is based on employees believing that their work effort and inputs are reciprocated by the firm which in return offers them rewards that they value (training, career development, good pay, recognition and so on). Where there is a mismatch between what an individual perceives they have offered and what the organisation offers in return, a poor psychological contract can develop. This has been linked to low comparative levels of commitment, discretionary behaviour and employee performance. Organisations can create more positive psychological

<sup>2</sup> See Applebaum et al (2000) ‘Manufacturing Advantage’, for a review. This model is also central to the recent work, ‘People and Performance’ conducted by Purcell et al (2007) for the CIPD.

<sup>3</sup> Gant et al (2002)

<sup>4</sup> See Guest (2002), Thompson (2005)

contracts by being clear about their employment proposition, communicating it well and ensuring it is delivered in a fair and consistent manner. Developing a winning employment proposition often means that firms need to develop high-performance work practices.

This idea of mutual respect, trust, fairness and commitment underpins the notion of employee engagement. The recently published MacLeod Review on Employee Engagement builds on this approach and presents a broad range of evidence that points to the productivity and performance impact of creating a high-performance workplace. Drawing on a number of case study organisations, including several from manufacturing, the study concluded that ‘the way employee engagement operates can take many forms ... and the best models are those that have been custom-developed for the institution’ (p4). This implies that senior managers must take an active role in developing organisations that meet the criteria which underpin employee engagement, and high-performance work practices are one important route to this.

In summary, high-performance work practices improve organisational performance through two interlinked and overlapping processes. Firstly, they give employees the knowledge, skills and abilities to perform their jobs in addition to the motivation and opportunity to do so. Secondly, these practices can improve the internal social structure within organisations and this in turn facilitates cooperation and communication between employees, ensuring higher levels of knowledge sharing and innovation. It is argued that together these processes enable much improved levels of job satisfaction, decision making and productivity. These in turn tend to reduce employee turnover and improve overall organisational performance.

### *The importance of ‘bundles’ of practices*

There are differences in opinion about how high-performance work practices influence employee and organisational performance. Three distinctive modes of thinking can be delineated:

- A **universalistic** perspective states that a fixed set of HR practices can impact performance regardless of the context in which they are applied. This is a ‘best practice’ model.

- A **contingency** perspective argues that the effectiveness of these practices is dependent on getting the right fit between the HR practices and the strategic and operational context. For example, a firm with a cost-minimisation strategy will select a different set of practices from one pursuing an innovation strategy. This perspective is also known as ‘vertical fit’.
- A **configurational** perspective argues that performance can be accounted for by the internal coherence of a set of HR practices. In other words, HR practices need to be considered as ‘bundles’ of reinforcing and aligned practices. If they are not aligned, this can result in ‘deadly combinations’ of practices that cancel each other out and add nothing to performance, or even work against performance improvement.

There is evidence to support all three different modes of thinking to obtain improved performance outcomes. However, in a recent, detailed, large-scale review of 65 studies, it was found that ‘bundles’ of HR practices accounted for much higher levels of performance improvement.<sup>5</sup> The key takeaway from this review is that firms can benefit significantly from investing in synergistic combinations of HR practices. Most importantly of all, the study suggests that firms do not need to introduce many new practices to obtain these impacts. The focus is on alignment so that the practices reinforce each other and complement core manufacturing strategies such as operational excellence. Building complementarities into organisational systems and processes is at the heart of the modern firm and is increasingly recognised by economists and policymakers as critical to future competitiveness.<sup>6</sup>

The challenge arising from this research for senior managers is to think about their organisation in a more holistic way by considering how different types of practices can fit together to produce synergies. The trick is not necessarily in adopting the newest practices or fads but to think long and hard about how practices can align to support employee abilities, motivation and opportunities. This calls for strategic thinking in the ‘people space’ in manufacturing firms and there would appear to

<sup>5</sup> Subramony, M (2009) A meta-analytic investigation of the relationship between HRM bundles and firm performance, *Human Resource Management*, Vol.48, No. 5

<sup>6</sup> See Roberts, J (2007) *The Modern Firm*. Oxford University Press.

be lots of opportunities in this domain, given the low penetration of high-performance work practices in the sector. Several years on from EEF's 'Catching up with Uncle Sam' report, which emphasised the role of innovations in management and work practices for comparative productivity advantages of US manufacturing, the UK sector has still some way to go to close the gap.

We now turn to review more of the evidence on the impact of high-performance work practices.

## The research evidence

In the last 15 years, nearly 100 research publications have explored the relationship between HR practices and organisational performance. These studies have been undertaken across a range of sectors but the majority have been in manufacturing contexts. Instead of discussing in detail the most important studies in the manufacturing context, we will do two things. Firstly, we will draw upon a recent comprehensive review of these studies that has estimated the main effect of HR practices on performance.<sup>7</sup> By 'main effect' we mean the estimate of the magnitude of the effect of these practices on performance. Secondly, we will look at the growing evidence base on the links between high-performance work practices and lean production.

The comprehensive review draws upon statistical analysis of 92 studies and finds that 20% of the variation in performance outcomes across the research studies analysed were accounted for by HR practices. This might not seem like a great deal but it means that increasing the use of HR practices by one standard deviation increases performance by .20 of a standard deviation. In other words, firms can achieve on average a 20% higher return on assets if they increase their investment in HR practices. This 20% return was a reasonably stable figure across a basket of performance measures that were used in the 92 studies. For example, some used profitability, others ROI, others productivity or value added. Whatever measure was used, the performance impact tended to be in the order of 20%.

The other strong message from this research is that high-performance work practices tend to be more widely used in manufacturing environments. This may be partly because this is where the majority of

empirical research has been conducted, but it may also be due to the nature of the manufacturing environment. In the manufacturing context there is more capital equipment, there are higher levels of complexity in tasks which tend to be interdependent, work flow is more constant and the customer has much less of a direct influence on the transformation process. More importantly, when the performance effects of HR practices in the manufacturing and services sector are compared, the evidence shows that they are almost twice as large in manufacturing (typically 30% compared to 17%).

In summary, many UK manufacturing firms have the opportunity to seize significant performance gains of up to 30 per cent on their competitors by investing in high-performance work practices. We now turn to review briefly the emerging research on lean production and high-performance work systems.

<sup>7</sup> James Combs et al (2006)



## Research evidence: high-performance work systems and lean production

Lean production can be defined in both narrow and broad terms. In the former, the focus might be on specific practices (e.g. kanban, kaizen, standard operating procedures, single piece flow) whereas a broader definition encompasses not only a wide range of lean operational practices but also work design and a mindset or philosophy about how the organisation should be configured and managed. Lean can also apply beyond the manufacturing area to other activities such as product development, procurement and distribution.<sup>8</sup>

Regardless of the breadth of definition used, the move to a lean, high-performing organisation requires changes in wider organisational working practices, behaviours and attitudes. However, most firms tend to focus on the technical aspects of lean implementation while under-attending to the social dimensions of change. A number of studies have shown that it is the balanced treatment of both the technical and social dimensions of change that provide the best platform for sustainable business performance.<sup>9</sup>

Lean has also been questioned for its applicability to high-variety, low-volume production environments (such as aerospace). It is argued that standardised operations and lean processes are better suited to a high-volume, low-variety contexts. However, other writers have argued that lean should be seen more as a philosophy than a specific set of techniques or practices that should be applied in any context. In reaction to concerns about the extent to which lean practices can be effective in high-variety, low-volume environments, a number of new production models are beginning to emerge, such as 'agile' manufacturing or 'leagile', both of which can be seen as hybrid models of the Toyota Production System.

Regardless of the debate on how to characterise or describe lean systems, most modern production systems are likely to call for much higher levels of knowledge and adaptive/learning behaviours from employees. In the traditional lean system, much greater fragility is introduced by building in stretch and more contingencies. Furthermore, the drive for continuous improvement and waste reduction means that the knowledge, behaviours and learning capabilities of the workforce become more important strategic assets. As such, firms need to pay

greater attention to the human element in production, and this means focusing on work practices and culture.

A study of high-performance work practices in the world automobile industry in the mid-1990s found that higher levels of organisational performance came from a combination of these practices and lean production techniques.<sup>10</sup> Specifically it found that practices such as job rotation, semi-autonomous teams, high levels of training investment and selective hiring practices, when combined with lean practices, predicted higher levels of organisational performance (measured as labour productivity and quality).

A study of the UK aerospace industry found that organisations adopting lean manufacturing processes were more likely to have introduced complementary HR practices and that these predicted higher levels of performance (value added per employee).<sup>11</sup> Typically, lean manufacturing was associated with greater use of:

- provision of information to front-line workers
- job rotation within and between teams
- semi-autonomous team working

The impact of lean practices on employees is also a matter of contention in literature, with a growing body of UK and European evidence<sup>12</sup> finding that lean is associated with higher stress levels, more accidents and absenteeism and increased employee turnover. Claims of greater levels of employee empowerment appear not to have been met in practice according to the bulk of published research. These results are in line with other studies conducted at the organisational level that have concluded that not attending to the social dimension of change in implementing lean practices can lead to lower than expected gains in performance.

Where lean practices and new work practices tend to have greater success is in Greenfield sites<sup>13</sup> or 'retro-fits' (where a plant has been closed down, bought by

<sup>10</sup> MacDuffie (1995)

<sup>11</sup> Thompson (2002)

<sup>12</sup> Gill (2003), Landbergis and Cahill (1999), European Foundation (2001)

<sup>13</sup> Gant, Ichniowski and Shaw (2002)

<sup>8</sup> 3M has even used 6 Sigma on its strategy development processes

<sup>9</sup> See Niepce and Molleman (1998), or Parker (2003)

new owners and invested in). In a study of lean practices in the UK aerospace industry, it was found that these were more likely to be introduced where there had been much higher comparative levels of investment in new capital equipment.<sup>14</sup>

The other important point to consider is that of sequencing. There is evidence that firms introducing high-performance work practices can be much better placed to adopt lean manufacturing practices. Research based on a longitudinal panel of establishments in aerospace found that those with a higher level of high-performance practices in 1997 or 1999 tended to have introduced more lean practices by 2002.<sup>15</sup> In other words, the introduction of high-performance work practices can provide a much better context for wider innovation in the production system. A recently published study using 24 years of data in UK manufacturing also found that firms that integrate lean and high-performance work practices experience higher comparative productivity over time. Those that attend to the integration issues much earlier show marked productivity differences with those that started the process later.<sup>16</sup>

In summary, the introduction of lean practices needs to be considered from a holistic perspective and, in particular, needs to take account of the important interface between technical and social dimensions in the workplace. A systemic view of the production space entailing these aspects as well wider issues such as physical environment and new capital equipment should lead to much higher performing workplaces.

<sup>14</sup> Thompson (2002) High Performance Work Organisation in UK Aerospace. SBAC/DTI.

<sup>15</sup> Thompson (2002) Ibid.

<sup>16</sup> de Menezes, Wood and Gelade (2010) The integration of human resource and operation management practices and its links with performance: A longitudinal latent class study, *Journal of Operations Management*

## Barriers to high-performance work systems

If organisations can benefit so much from introducing high-performance work practices in a way that aligns with the wider operational system of the firm, why are more not investing in such practices?

The research evidence points to a number of potential constraints to the adoption of high-performance work practices. Firstly, product market strategies may be positioned at the low-value-added/low-quality end of the spectrum.<sup>17</sup> One consequence of this is that firms manufacturing such products are unlikely to design jobs and work practices that require high-level skills. The decline of the UK manufacturing base can then be attributed to one of two things: firstly, organisations have not been able to develop high-value-added product market strategies due to poor strategic management skills or, secondly, they have been forced to design their product market strategies based on the low level of skills available in the marketplace. One argument assumes that the problem is due to demand while the other sees the issue as due to supply. In reality, inadequacies in both domains are probably to blame.

The outcome is quite simply that product market offerings are not sophisticated enough to demand the skills and work practices associated with the high-performance model. In other words, to have high-performance work practices you need a high-value-added product market strategy.

A second constraint is the quality of line managers. A growing body of evidence<sup>18</sup> points to the critical role of line managers in ‘bringing HR practices alive’. Line managers are the critical interface between organisational policies/practices and employees. They interpret, embed and help enact the practices that the firm has identified as important in the delivery of strategy. Where the knowledge, skills and abilities of line managers are poor, it is likely that high-performance practices will not be implemented effectively and employees will not be engaged. There is evidence that employees’ trust and confidence in managers weakens when they show low levels of competence in addressing production problems. Why should employees work hard when managers are failing to deliver? The implication of this argument is that firms need to invest heavily in

developing the people-management capabilities of line managers to ensure that their investments in high-performance practices pay dividends. Unfortunately, such investment is often not prioritised.

Research in the UK aerospace industry found a strong correlation between investment in people-management skills and higher levels of organisational performance.<sup>19</sup> This has implications for the selection and recruitment of managers – identifying individual managers with the appropriate competencies to support a high-performance work context is equally as important as training. However, most firms’ investment in management capability tends to be focused on senior levels with little significant investment in the middle where resistance to change has been identified as a real constraint.

Thirdly, and also linked to management, is the importance of values or a management philosophy. Some writers<sup>20</sup> have underlined the importance of the ‘big idea’ – a motivating vision of the company that can engage employees and harness their motivation. Others have stressed the importance of an ‘investment philosophy’ amongst the senior management team with regard to employee training and development.<sup>21</sup> In practical terms, this means continuing financial commitment to on- and off-the-job learning and development.

A fourth potential constraint is the employee relations context. Several studies<sup>22</sup> have shown that union presence is often associated with wider use of high-performance work practices (even after controlling for size of firm). However, others have indicated that union presence is neutral. What seems to be important is the quality of the relationship between management and unions at the workplace. Where relations are constructive and both managers and employees benefit from the introduction of new working practices (so called ‘mutual gains bargaining’), higher uptake of practices is found.

<sup>19</sup> Thompson (2002) Ibid

<sup>20</sup> Purcell et al (2003), Collins and Porras (2001)

<sup>21</sup> Firms with sustained superior ... performances typically are characterised by a strong set of core managerial values that define the ways they conduct business. It is these core values (about how to treat employees, customers, suppliers and others) that foster innovativeness and flexibility in firms. Barney (1986)

<sup>22</sup> Bryson et al (2005)

<sup>17</sup> See various reports from the ESRC Research Centre on Skills, Organisation and Performance (SKOPE).

<sup>18</sup> Purcell et al (2003), Currie and Proctor, (2001) Thompson and Heron (2005), Thompson (2006)

Unions are also seen to have a shock effect on management and can encourage firms to manage much more effectively, which may explain the strong correlation between union presence and the high-performance work practices found in some studies. However, it is also the case that managers can abrogate responsibility in the context of strong unions at the workplace and fail to redesign work practices as these are seen to be ‘out of bounds’. Outside of a unionised environment there is evidence that organisations that create greater opportunities for employee voices to be heard, for example through works councils or other such participatory mechanisms, can also be more successful in reforming work practices.

Evidence on the restructuring of the US airlines industry<sup>23</sup> showed that improvements in service quality and financial performance were strongly linked to the quality of labour relations. The study made a distinction between structural factors around labour relations such as levels of unionisation, shared governance and wage levels and factors to do with the quality of the labour relations environment such as conflict and workplace culture. The main conclusion of this study was that long-term financial performance is achieved by focusing management attention on reducing conflict and improving the quality of relations with unions.

One factor that emerges as consistently important across a wide range of studies is the level of employee trust in the organisation. Clearly this is structured by the relationship between managers and their employees and also the wider context of the union–management relationship. However, trust is a fragile asset, created over many years, which means that the historical legacy in any establishment can be important in shaping trust levels. A bitter dispute, a period of redundancies, a senior manager whose behaviour was seen to be autocratic or distant can all create low trust levels and a legacy within which future managers and employees have to operate. Building consent to change where trust levels are low can be a significant problem and many managers are poorly equipped to do this, or fail to see it as a priority.

Few, if any, studies have systematically addressed a critical sixth area – the costs involved in firms moving to a high-performance work system. In practice, these are likely to be among the greatest

constraints on their adoption. From a simple economic perspective, the productivity gains from introducing high-performance practices should more than offset any costs associated with their implementation. Several studies<sup>24</sup> have argued that there is a lag effect of some three to five years between the introduction of practices and their impact on the business. This is largely because behavioural and attitudinal change is slow. As a consequence, firms may need to consider amortising these costs over a longer period than would be normal for other types of investment.

What types of costs need to be considered? There is evidence that high-performance practices can lead to increased labour costs but that this is balanced out by increases in productivity, and in some cases value-added returns are higher. Other studies have argued that such work systems can raise costs through self-selection mechanisms. In other words, employees leave the organisation because they are not happy with the new work practices. While this certainly increases costs by higher turnover, these exits might be beneficial in the long run as the firm creates a better fit between its employees and its work practices. A negative cost situation can arise when practices are seen to increase workloads and employee stress which can lead to higher levels of absenteeism and eventually turnover.

Other costs that may occur are:

- increased payroll costs when performance-related pay is introduced, or new job design leading to higher pay levels
- the costs of hiring a HR manager to support the introduction of new practices
- the costs of HR outsourcing (i.e. transactional activities) if a new model of HR is developed to support migration to a high-performance work system
- increased training costs for both employees and managers to address skills and knowledge deficiencies
- potential costs associated with managing the union–management relationship to support new practices

<sup>23</sup> Gittell et al,(2003)

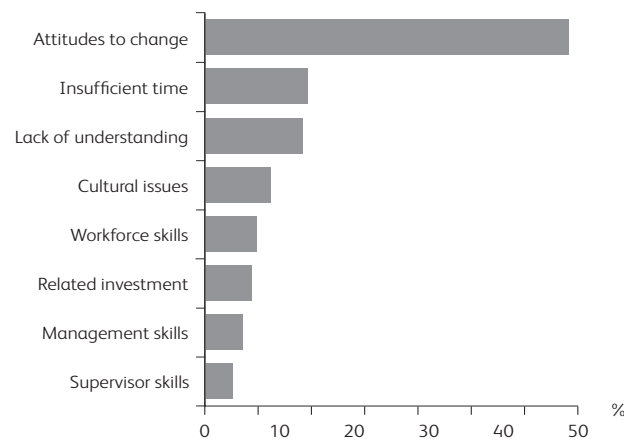
<sup>24</sup> Huselid et al (1996), Gerhart et al (1999)

## EEF members' views on barriers to high-performance work practices

In EEF's 'Catching up with Uncle Sam' study which was conducted in 2001 and showed significant total shareholder returns to investing in high-performance work practices, a survey was also conducted of EEF members' perspectives on barriers to change. The primary factor identified in this survey (see figure below) was 'attitudes to change'. As part of the current exploratory research nearly a decade later, EEF has conducted a survey and a number of focus groups with different levels of its members to explore these issues.

### *The barriers to the introduction of workplace initiatives*

% of respondents



Source: EEF/NOP Productivity Survey

### *Survey highlights*

The responses to the survey are given in the Appendix. In this section we draw out the most important themes to emerge. It should be emphasised that these findings are indicative and exploratory rather than representative, given the size of response and the small number of focus groups undertaken.

The results show that around two-thirds of respondents are considering introducing changes in working practices in the next 12 months. The study asked respondents which of the following were the most important barriers or enablers for workplace change:

- availability of external experience
- access to ideas from external networks
- recommendations from external consultants
- the organisation's previous experience
- union support
- employee support
- HR support
- operational team support
- strategic management team support
- CEO/MD support
- Board support

The first three factors are capturing external knowledge and experience, and the remaining factors are tapping internal skills, capabilities and commitment. Overall, internal organisation factors are more significant than external factors both in terms of decision making and implementation of changes in work practices.

Firms that have implemented significant changes in work practices in the past tend to be more likely to introduce changes in the next year. The implication seems to be that the best way of learning how to be innovative in work practices is to try and implement something new. This may be an important way to learn and develop change capabilities.

However, when it comes to past and future change in work practices, there is also a consistent message. Innovations in work practices will only come about if there is strong employee support. This points to the importance of engaging employees in the change process. As David Yeandle, EEF, was quoted in the recent MacLeod review on Employee Engagement, 'it will be hard to get through the recession without engaging your workforce'.

### *Focus groups and interviews*

Two focus groups were conducted – one with a group of operations managers and the second with a group of HR managers. Telephone interviews were then carried out with a small cross section of MDs and CEOs. The purpose of these discussions was to capture insights into the enablers and barriers to high-performance work practices.

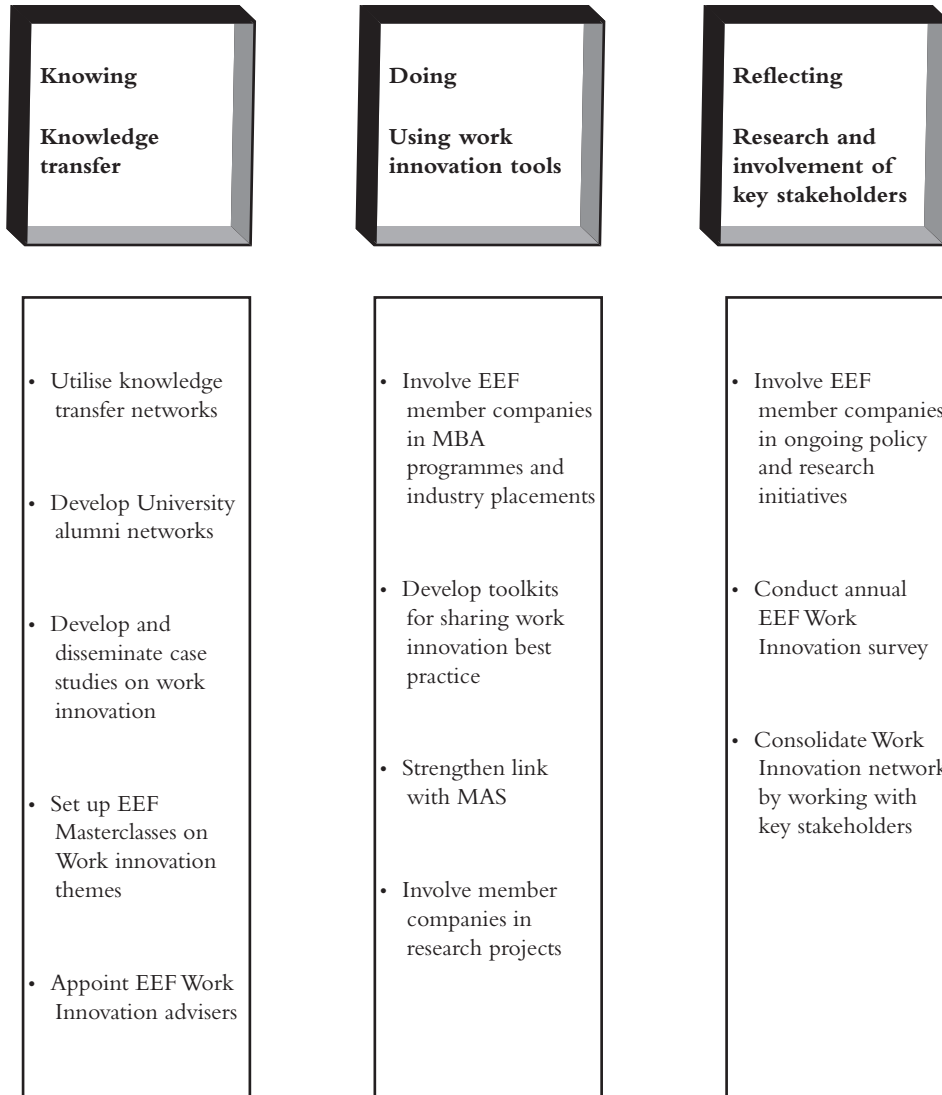
These themes broadly mirrored those of the survey, with the emphasis on internal factors, but there were some differences between groups. The group of HR managers emphasised the need to build constructive relations with trade union representatives in order to enable change. They also felt that earlier involvement of the HR director in strategic conversations (preferably with a presence on the Board) helped with aligning HR practices with business strategy and bringing the people perspective to strategic discussions. Lack of regular and meaningful dialogue between senior managers and employees was also seen as a barrier to change, often undermining commitment to change.

For the operations managers, there was an emphasis on communication and involvement. The enablers for change were strong senior management commitment to the change, high involvement of employees and investment in training and communication. Change was often seen as problematic when these conditions were not met or where there was insufficient time given to introducing and bedding down changes.

For the CEOs and MDs, the idea was to probe more deeply into some of the survey responses relevant to this group. Many talked about leadership as an important enabler and this was characterised as being passionate about the change, communicating the rationale clearly and facilitating the wider managers tasked with the change process. This group also stressed the important knowledge and experience that new senior managers can bring to a business. Strategic changes were often led by recent appointments who were chosen for their expertise. Interestingly, few respondents were drawing on consultants or external change agents, preferring to leverage their personal networks.

## What we plan to do

The forward strategy of the network will have three core themes:





## *KNOWING – knowledge transfer*

This strand of the strategy is designed to help firms gain access to knowledge and understanding of the subject area to help them formulate their ideas on what they need to do. It will include a number of mechanisms:

- Knowledge transfer network. We will seek funding to set up a Knowledge Transfer Network to support the ongoing network activity. This would include financial support to enable five EEF advisors to act as translators and facilitators to build direct links between EEF members and academic members of the network. It should also include funding for the academic partners to deliver advanced masterclasses and participate in ongoing network activities.
- University alumni networks. Participation in these networks will facilitate the exchange of knowledge between companies and studies in high-performance working practices.
- Development and dissemination of case studies. Part of the KTN funding would be used to create and disseminate case studies that show how collaboration with a university can benefit firms. An example is the way in which firms have worked with Bath University international MBA students.
- Masterclasses. All the university partners deliver commercial, high-quality development experiences for senior executives. The challenge for SMEs is that this material is far beyond their ability or willingness to pay, typically costing £14–£25K per day. We would wish to use part of the KTN funding to trial SME versions of this material to be able to create a case study and assess the economic impact on the firms. Masterclasses would focus on subjects identified as important by member firms.
- Work innovation advisors. With the support of KTN funding we will put in place a team of five regional innovation advisors to act as the bridge between universities and members. In addition to encouraging members to access the support available from the universities, such as student placements and MBA projects,

the advisors will also promote research projects that the universities wish to undertake to secure member support and participation.

- Thought leadership. We envisage the sharing of current research project findings in networks of best practice. This can take the format of conferences, web tools and/or network seminars.

## *DOING – using work innovation tools*

This strand is about providing support to firms to help them implement innovation in work organisation practices. This will primarily be achieved through existing mechanisms already available through the universities although we also plan to seek funding to set up a number of cluster-based action research projects. The elements of this strand will include:

- MBA programmes. All the university partners have a collaborative element within their MBA programmes and require industrial projects for student groups to work on. The work innovation advisors will help facilitate firms to access these support mechanisms. These projects will provide a platform from which we can transfer knowledge on innovative projects and embed them in practice. This includes live case studies where member companies can benefit from engaging in problem solving with MBA students.
- Research projects. Working with the universities and our members, we will facilitate our university partners to seek research funding to carry out action-based research to look at issues that are common to several firms.
- Toolkit development. Again working with the academic partners, we will support them in creating research applications to develop new understanding into high performance working practices that will lead to the creation of new tools and standards for manufacturing companies.



- 
- Manufacturing Advisory Service (MAS). We will work with MAS to share knowledge and encourage the expansion of the MAS offering to include a people-management element of their innovation offering.

### *REFLECTING – research and involvement of key stakeholders*

This strand of the strategy will focus on the broader creation of insights into high performance working practices and policy development support that the network can provide. This will include the following activities:

- Research initiatives. Involving EEF members in ongoing policy research and acting as a route to disseminate information and policy consultation information produced by the government to EEF members.
- Future work innovation surveys. Conducting an annual members' survey, linked to the WERS themes but directed by the academic partners of EEF members.
- Networking. Building strong links with business and research support organisations, such as BIS and ESRC, to contribute insight developed by the Work Innovation network project and to act as a facilitator to disseminate the information they generate.

### *Masterclass themes*

The Masterclasses for 2010 should include:

- A Board product that focuses on leading and facilitating organisational change
- A senior manager programme focused on employee engagement and communication

In addition, a first line manager mentoring programme should be included, to give them the necessary practical skills and support to execute their management role successfully.

## Building a future research agenda with UK manufacturing

This review of extant research and initial exploration with a small cross section of organisations from across the UK manufacturing sector has indicated a number of potential areas for future research. We recognise that this agenda is emergent and it is important to collaborate with industry to shape a research programme that is on the one hand practically relevant but on the other theoretically rigorous. It is only by paying attention to these twin demands that we can produce high-quality research which impacts on practice.

At our conference in May we will begin the process of engaging with interested organisations to shape these research priorities. For the moment, we outline some of the promising areas for future collaborative research:

### 1. Understanding the dynamics of innovation in work practices inside the manufacturing firm

The bulk of the research on high-performance work practices has focused on demonstrating the links between the use of such practices and various measures of performance. While this has been valuable, it fails to capture the complex processes and mechanisms through which high-performance work practices are adopted and diffused across the organisation. It also tends to underplay the importance of organisational context and how this shapes investment priorities and implementation strategies in the high-performance work system domain. This proposed research theme will work closely with a cross section of firms to understand the context, process and outcomes of adopting high-performance work practices. The outcome will be rich insights into how firms manage this transition and the key factors they need to attend to in making this journey.

### 2. The diffusion of knowledge on innovative work practices across networks of firms in manufacturing

Manufacturing firms increasingly produce value in constellations or networks, and alliances or joint ventures are becoming widespread. The growth of alliances and partnering is seen as a way of combining technical knowledge to compete for higher value-added spaces ('blue water'). However, we know very little either about the extent to which knowledge about high-performance work practices diffuses across

these networks or the extent to which such practices enable more effective collaboration. The research will look at high-performance work practices from a knowledge perspective and work with firms in networks to understand how this knowledge diffuses and with what consequences.

### 3. Understanding the integration of lean production and high-performance work practices

Current research suggests that manufacturing firms can gain considerable benefits from the synergies between lean and high-performance work practices. Most of this research has been undertaken in the US, is largely survey based and tends to ignore the processes and mechanisms through which successful firms are integrating these two domains at an organisational level. This research would undertake detailed case study work with a cross section of firms, working closely with them to explore and understand the benefits of complementary production and social systems.

### 4. Innovative work practices and employee engagement

Employees in firms are not homogeneous but rather are differentiated by professional knowledge, skills and capabilities. This raises important challenges for how firms develop and implement innovative work practices. Which practices are going to be most important for enabling high-performance working amongst R&D engineering staff compared to front-line production employees? How do firms shape practices for different groups and how do these employees engage with these practices? This research would work with a cross section of organisations with different profiles of employees to understand these issues and how innovative work practices are enacted by these employees, and to what effect.

The first phase of the research will be to take these outline themes and begin academic-industry collaborations to flesh them out in more detail. This will lead to a series of more detailed proposals under these themes that will identify appropriate sources of funding. It is envisaged that the research programme will run for up to five years.

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## Conclusions

This report is the result of a six-month joint exploratory project between EEF and a number of academics to understand innovation in work practices in UK manufacturing. The project has combined reviews of current literature relevant to manufacturing, several workshops with EEF staff to explore joint perspectives on the topic, a survey of members and a number of focus groups and interviews with EEF member firms.

The review shows that there are considerable productivity and performance gains from introducing high-performance work practices, particularly if they are integrated in a mutually reinforcing way (i.e. 'bundles') which supports the production system. Studies consistently show productivity gains of some 30% in manufacturing when these practices are introduced in bundles.

However, the adoption of these practices is still very low in the UK manufacturing sector, despite increasing international competitive pressures. The risk is that, despite the current favourable outlook for manufacturing with sterling very competitive against the euro and dollar, firms will not bring forward their investment in these practices to ensure that they remain competitive in the long run.

One reason for this may be that they are not aware of the body of research evidence and need to become more familiar with the concepts and ideas. Clearly, there is an important role for EEF as a translator of work innovation for member companies and to ensure greater dissemination of this knowledge; hence our interest in establishing a Knowledge Transfer Network (KTN). Another reason may be that there is little research or guidance on how firms can make the transition to a high-performance work system. Our review of the research evidence identified this as an important knowledge gap. Consequently, a second important future priority is to develop academic-manager collaborative research projects that can understand the processes and mechanisms that can enable such a journey.

## Appendix – EEF Work Innovation survey

The online survey was sent to the membership base in December 2009. The survey covered a range of manufacturing companies in terms of both sector and size.

The survey elicited a 5% response rate which places limits on the conclusions that can be drawn from the data.

However, of those that responded, nearly seven in ten companies had introduced changes in work organisation practices in the past 12 months. Whilst this seems to contradict the 2009 CIPD survey, the reality probably is that only the more innovative, outward-looking firms completed the survey, hence it is not representative of manufacturing as a whole. Further consideration needs to be given to how to engage a broader spectrum of members.

The survey findings were based on responses to 14 questions involving factors covering what we have termed ‘internal factors’, namely Board support, CEO/MD support, strategic management team support, operational team support, HR support, TU support and company experience as well as ‘external factors’, namely recommendations from external consultants, access to ideas from external networks and availability of external funding. Participants were asked to rate whether each factor was important.

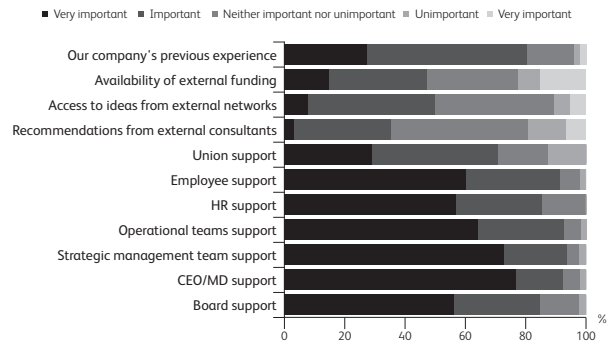
Questions 1 – 5 related to company specific data only e.g. name, address, email.

### Question 6: How important were the following in making the decision to implement changes in work organisation practices?

This question asked respondents to rate how important the internal and external factors were in making the decision to implement changes in work organisation practices. This question was answered by 70% of respondents.

### Question 6

How important were the following in making the decision to implement changes in work organisation practices?

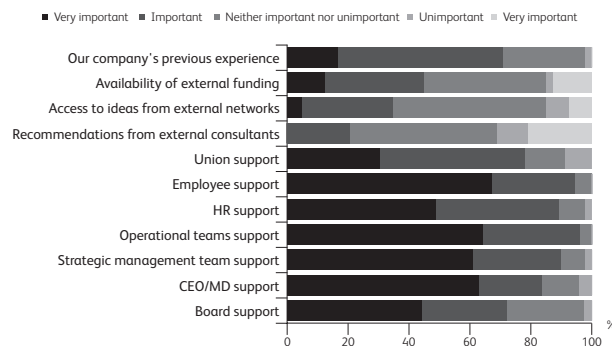


### Question 7: How important were the following in enabling changes in work organisation practices to be implemented?

This question asked respondents to rate the importance of the internal and external factors in enabling changes in work practices to be implemented. This question was answered by 70% of respondents.

### Question 7

How important were the following in enabling changes in work organisation practices to be implemented?

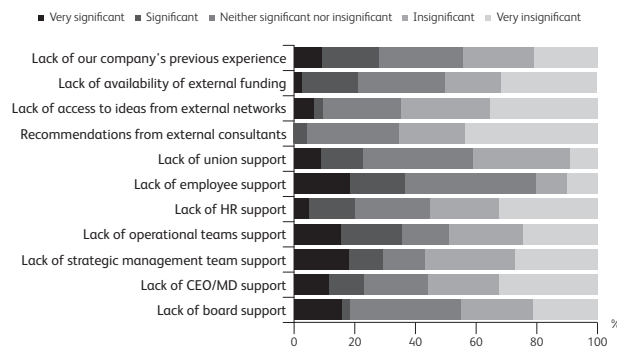


*Question 8: How much of a barrier were the following in implementing changes in work organisation practices?*

This question asked respondents to rate how much of a barrier both internal and external factors were in implementing changes in work organisation practices. Respondents were only asked this question if they answered yes to question 5 (Has your company introduced any changes in work organisation practices in the past 12 months?). This question was answered by 69% of companies.

*Question 8*

*How much of a barrier were the following in implementing changes in work organisation practices?*



*Question 9: How important were the following in making the decision not to introduce changes in work organisation practices?*

This question asked respondents how important the internal and external factors were in making the decision not to introduce changes in work organisation practices. This question was only asked to those who had 'considered but rejected' question 5. This question was answered by 7% of respondents.

*Question 10: Is your company considering any changes in work organisational practices in the next 12 months?*

This question asked respondents whether the company is considering any changes in work organisation practices in the next 12 months. These have been compared with those for the previous 12 months. Smaller companies (with fewer than 100 employees) were less likely to consider changes in work organisation practices.

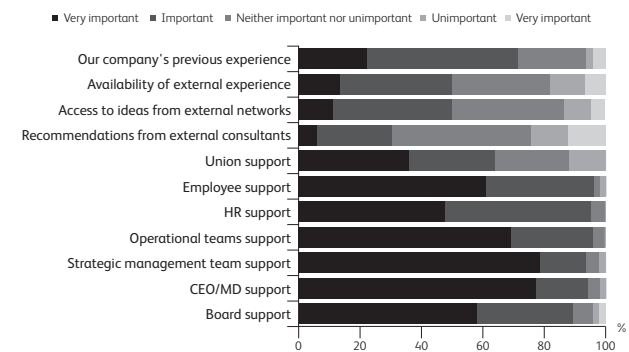
| Now     | last 12 months |
|---------|----------------|
| Yes 66% | 69%            |
| No 34%  | 31%            |

*Question 11: How important would each of the following be in your considerations to introduce changes in work organisation practices in the next 12 months?*

This question asked respondents to rate how important the internal and external factors were in their considerations to introduce changes in work organisation practices in the next 12 months. This question was answered by 66% of respondents.

*Question 11*

*How important would each of the following be in your considerations to introduce changes in work organisation practices in the next 12 months?*

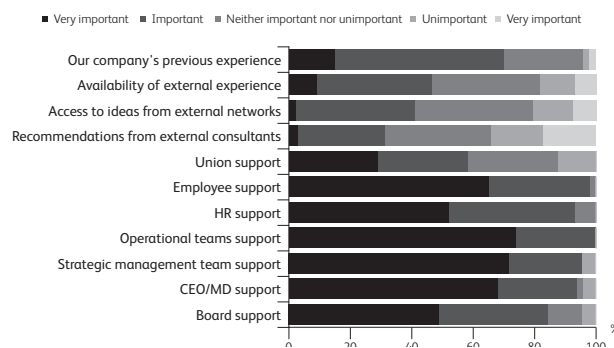


*Question 12: How important would each of the following be in enabling changes in work organisation practices to be implemented in the next 12 months?*

This question asked respondents how important each of the internal and external factors would be in enabling changes in work organisation practices to be implemented in the next 12 months. This question was answered by 66% of those surveyed.

**Question 12**

*How important would each of the following be in enabling changes in work organisation practices to be implemented in the next 12 months?*

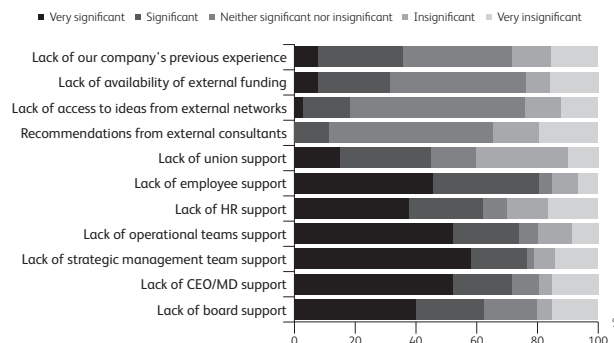


*Question 13: How much of a barrier would the following be in implementing changes in work organisation practices in the next 12 months?*

This question asked respondents to rate how much of a barrier the internal and external factors would be to implementing changes in work practices in the next 12 months. This question was answered by 66% of those surveyed.

**Question 13**

*Q13 How much of a barrier would the following be in implementing changes in work organisation practices in the next 12 months?*

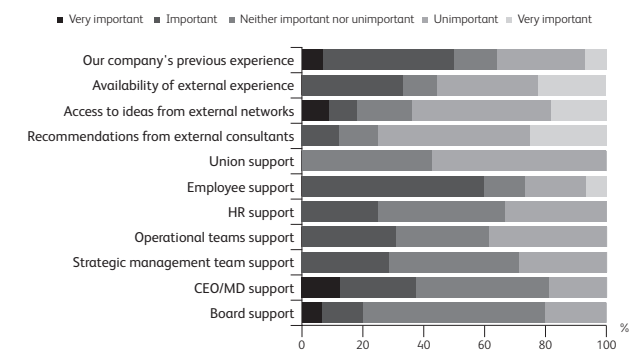


*Question 14: How important were the following in making the decision not to introduce any changes in work organisation practices in the next 12 months?*

This question asked respondents to rate the importance of the internal and external factors in making the decision not to introduce any changes in work organisation practices in the next 12 months. Respondents were only asked this question if they answered no to question 10 (Is your company considering any changes in work organisation practices in the next 12 months?). This question was answered by 34% of those surveyed.

**Question 14**

*How important were the following in making the decision not to introduce any changes in work organisation practices in the next 12 months?*



**Summary**

Overall, internal company factors were more significant than external factors in terms of both decision making and implementation of changes in work organisation practices.

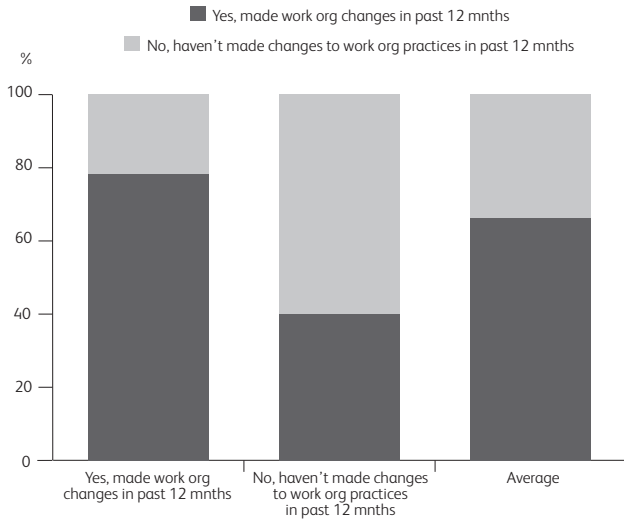
Company experience was seen as a key factor in terms of work organisation changes that had been implemented as well as those that were being considered in the next 12 months.

The strongest factor in decision making and implementation both now and in the next 12 months was employee support, followed closely by CEO/strategic team and operational support. There was a slight change in the importance of CEO support at the implementation stage.

Trade union support was not considered as important to decision making or implementation as the other internal factors.

### Chart 1

*Do past decisions influence future action?*



Of those companies that have made work organisation changes in the past 12 months, 78% are considering changes in the next 12 months. Of those companies that haven't made work organisation changes in the past 12 months, only 40% are considering changes in the next 12 months.

Therefore, those companies that have already made changes to work organisation practices are more likely to do this in the future. This may explain the importance given to previous company experience in decision making and implementation.



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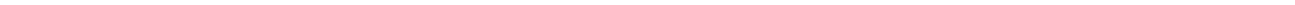


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## About us

EEF is dedicated to the future of manufacturing. Everything we do is designed to help manufacturing businesses evolve, innovate and compete in a fast-changing world. With our unique combination of business services, government representation and industry intelligence, no other organisation is better placed to provide the skills, knowledge and networks they need to thrive.

Around a quarter of the UK's manufacturing businesses are our members and many more use our services to help them work better, compete harder and innovate faster. Because we understand manufacturers so well, policy makers trust our advice and welcome our involvement in their deliberations. We work with them to create policies that are in the best interests

of manufacturing, that encourage a high growth industry and boost its ability to make a positive contribution to the UK's real economy.

Our policy work delivers real business value for our members, giving us a unique insight into the way changing legislation will affect their business. This insight, complemented by intelligence gathered through our ongoing member research and networking programmes, informs our broad portfolio of services; services that unlock business potential by creating highly productive workplaces in which innovation, creativity and competitiveness can thrive.

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## About UK IRC

The UK-IRC is a collaborative initiative for cutting-edge research and knowledge exchange activities on how innovation can make businesses more competitive, improve public services delivery and help the UK meet the social, environmental and economic challenges it faces.

The UK-IRC is co-funded by the Department for Business Innovation and Skills (BIS) [www.dius.gov.uk](http://www.dius.gov.uk), the Economic and Social Research Council (ESRC) [www.esrc.ac.uk/ESRCInfoCentre/index.aspx](http://www.esrc.ac.uk/ESRCInfoCentre/index.aspx), the National Endowment for Science, Technology and the Arts (NESTA) [www.nesta.org.uk](http://www.nesta.org.uk) and the Technology Strategy Board (TSB) [www.innovateuk.org](http://www.innovateuk.org).

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