

Chapter 4

Behind innovation: employer and employee trade-offs

This chapter focuses on the issues faced by organisations that are willing to encourage innovative work behaviours and organisational learning processes. The trade-offs that employers face when they decide to make new strategic decisions implying some changes in work methods, organisational structure, products or processes are first described. Then what happens on the employee side is considered.

Chapter 1 provided a definition of a learning organisation. Using the European Working Conditions survey, Chapter 2 assessed the spread of the learning model of work organisation across Europe, its relation to learning culture and HRM practices, and its links with innovation and with labour market institutions. Chapter 3 has identified a trend of decreasing work complexity between 1995 and 2005 and proposed alternative explanations. This empirical analysis has pointed to the existence of a significant heterogeneity across European nations in the way learning and knowledge enter production processes. It thus seems necessary to revisit the relationships between the diffusion of ICT, organisational models and innovation and to identify the trade-offs that employers and employees face in these relationships. This will allow to better understand why organisations opt for different types of arrangements, sometimes translated into national models according to institutional settings at the national level.

The learning organisation literature highlights that innovation is not only produced by structures and people doing scientific and technological work. In this chapter, we focus on the issues faced by organisations that are willing to encourage innovative work behaviours and organisational learning processes. We will first focus on the trade-offs that employers face when they decide to make new strategic decisions implying some changes in work methods, organisational structure, products or processes. We will then consider what happens on the employee side.

Designing adaptive or learning organisational structures

A new business generally starts with a new idea, new equipment, a new management concept or the identification of a non satisfied customer need. This critical resource is made out of knowledge, and it is the source of the entrepreneurial rent. Thus, the entrepreneur is facing a main problem which is how to enlist the co-operation of workers who will contribute to creating value out of this critical resource, without ceding to them too much of the surplus that the new activity will generate (Rajan and Zingales, 2001). Organisational design and more precisely, the design of the structure of the organisation and of some core HRM practices is a response to this problem.

Rajan and Zingales (2001) propose a simple model to explore the implications of this founder primary trade-off. They explore two possible organisational structures, vertical and horizontal hierarchies and formalise three mechanisms that may tie workers to the firm's critical resource: access which is the ability to use or work with it, specialisation which is the acquisition of knowledge about the resource and learning about how to work with their superior (firm specific assets) or ownership of the resource. In the vertical hierarchy, the entrepreneur controls access to the critical resource so

as to favour specialisation and then uses specialised employees to control the action of new employees, who have a position of subordinate; in the horizontal hierarchy, where all employees are directly connected to the entrepreneur, access to the resource is limited and incentives to specialisation are given on the ground that ownership may be granted in a subsequent period (tactic of divide and conquer). They show that, because in human capital intensive industry it is easier to get hold of an entrepreneur's critical resource, flat organisational structures, like in law or consulting firms, will be more prevalent, with up or out promotion systems. By contrast, in physical capital intensive industries where property rights are more easily protected from expropriation, large and steep hierarchy with seniority based promotion will be more frequent, where promotion is simply a way of filling sensitive position with employees that proved loyal.

As the firm grows, the initial critical resource expands through learning by doing. Managers and employees develop informal communication channels for talking about the tasks that are performed, the precise equipment and production arrangements used and sharing tacit knowledge. Informal work routines, technical jargon and specific vocabulary patterns are developed which progressively build up into the firm's own language as new projects are undertaken and valuable experience is gained. Chowdhry and Garmaise (2003) argue that the richness of a firm's language, measured by the breadth of the set of tasks covered by its communication channels, is the essential component of its organisational capital. They show that HRM practices will have a crucial influence on the evolution of organisational capital. In particular employee retention and insider managerial succession are two important features for the accumulation of organisational capital.

Garicano (2000) provides another model of communication in organisations. His starting point is that production requires physical resources and knowledge about how to combine them. If communication is available, workers do not need to acquire all the knowledge involved in production activities. When matching problems with those who know how to solve them is costly, knowledge tasks can be divided between production workers and specialised problem solvers. Production workers acquire knowledge about the most common or easiest problems they are bound to face in their every day work and specialised problem solvers deal with more complex problems. They derive optimal knowledge hierarchies characterised by a number of layers, the problem solving ability of workers, reflecting the discretion they have and the proportion of problem solvers assigned to each layer. The key trade-off for the organisation occurs between communication and knowledge acquisition costs. Garicano (2000) then suggests that the different waves of ICT had different cost implications. First, expert systems and codification allowed by computers have cut the cost of acquiring

knowledge, leading to flattened hierarchies and empowerment of production workers. Second, email and network technology has reduced the cost of transmitting knowledge, and this could also result in flatter hierarchies but with a smaller range of expertise or less empowerment for production workers.

Bloom *et al.* (2008) test this theoretic result using a British international employer survey of management practices matched with a private technology database giving information at the establishment level on ICT uses. They find a positive relationship between some software use (ERP and CAD/CAM), employee discretion and management span of control, and a negative one between network technology and employee discretion. Spagnolo (1999) adds social relations to the analysis of communication and knowledge building. He shows that some value is generated from linking social and production relations. In other words, employing members of the same community in teams or encouraging social interactions between employees facilitate co-operation in production. A central reason is that it generates transfers of trust securing resource exchanges within teams, which are so critical for innovation (Tsai and Ghoshal, 1998).

Knowledge about the organisation's activity is a critical asset and the reviewed models identify some important trade-offs linked to the setting up of a business, to knowledge accumulation over time and to the organisation of its efficient use in production. Here, we further elaborate on what organisational designs are conducive to a high capacity to adapt and to compete through learning.

Dessein and Santos (2006) provide an answer to this question. Their team theory model of "adaptive organisation" is interesting from two standpoints: it pinpoints a key trade-off for organisations willing to adapt to their environment and it links it to the use of ICT. Adaptation needs an intensive use of information, but this information is local, dispersed among employees. Some organisational design options contribute to fixing how "adaptive" or "information intensive" an organisation will be: the number of tasks assigned to an employee (task bundling), how much an employee can tailor his primary action to his local information (discretion) and the communication intensity between employees. The choice of an organisational design has to deal with a central trade-off between specialisation and adaptation. There is a positive return to specialisation, but co-ordination is more costly when specialised employees adapt to local information. Thus specialisation is limited by how adaptive or information intensive the organisation is. Improved ICT has an ambiguous effect: on one hand, for a given level of employee discretion cheaper technology makes it easier to co-ordinate specialised activities; on the other hand, organisation can take advantage of improved ICT to become more adaptive, increasing the need

for task bundling. However, when the firm chooses its communication intensity, for a wide variety of communication technologies, intensive communication, broad task assignment and employee discretion are complementary organisational features. Thus, organisations tend to be of two very distinct types: either routine, specialised and with limited communication or adaptive, with broad task assignments and intensive communication.

In “adaptive organisation”, the employee is given the discretion to adapt continuously production to local conditions. This kind of adaptation regime does not repeatedly put into question organisational design parameters. But what about repeated organisational innovation, is it sustainable?

Is it reasonable to think that an organisation could keep on changing its strategy and structure? According to Hannan and Freeman (1984), the process of selection among businesses tends to favour the stability of the system at the cost of a high level of inertia. Thus companies that initiate major organisational change to cope with environmental threats face a higher risk of failure or mortality. Evolutionist approaches stress the importance of the timing of changes. Three factors are fundamental: the temporal pattern of changes in the organisation’s environment, the speed of learning mechanisms and the responsiveness of the structure to designed changes. Organisational structures will have a high degree of inertia “when the speed of *re-organisation* is much lower than the rate at which the environmental conditions change” (p. 151). When new sets of opportunities appear in the market, another key factor is the speed with which an entrepreneur can begin a new organisation. Hannan and Freeman (1984) also identify a trade-off between the reliability and accountability of modern organisations and the ability to respond quickly to new opportunities. As the modern world favours organisations that perform reliably and can account rationally for their actions, this trade-off generates structural inertia in a population ecology perspective. It does not mean, however, that inertia pressures are uniform among populations of firms; they vary with age, size and complexity of organisations.

These issues echo our previous discussion of the trade-off between standardisation and mutual adjustment. They have been further discussed in empirical work focusing on the effect of prior change on the likelihood of further change. A positive and significant relationship would imply that the process of change itself can be routinised. Nelson and Winter (1982) suggest that the opposition between routinisation and innovation may be overcome when the organisation innovates through new combinations of existing and reliable routines. Change routines and confidence in executing a certain organisational change develop with the accumulated experience of change, with a drawback, labelled as “competency” trap, where a change may be applied whether or not it actually solves problems. A consensus on the self-reinforcing nature of the process of change (“repetitive momentum hypothesis”)

has emerged: in the long term, the inertia of an organisation tends to increase, but the occurrence of a change makes it temporarily more flexible. Once the inertia forces have been surmounted, change may gain momentum but deceleration occurs with the age of the organisation and elapsed time since the last change (Amburgey, Kelly and Barnett, 1993). A more recent empirical study shows however that when controlling for unobserved heterogeneity, the opposite result shows up : the observed repetitive momentum effect comes from structural differences in organisational change propensities, linked to the fact that some organisations face more turbulent environments (Beck and Brüderl, 2008).

In total, from an employer point of view, some organisational design parameters are going to be critical for the long term perspective of the organisation. Its initial organisational structure is a core decision for an entrepreneur who sets foundations for a new business. By fixing how employees have access to the organisation's critical resources and knowledge, it sets the basis of a psychological contract between the employer and the employees. As the initial critical knowledge resource expands through collective learning by doing, HRM practices become another key feature. The structuring of the information system is another important area of organisational design: how are knowledge tasks divided between direct producers and specialised problem solvers? How do ICT contribute to information processing and communication? How are social relationships articulated with production relationships? Employers appear to be confronted with a central trade-off between standardisation/routine and mutual adjustment/innovation when making decisions in these areas. Designing a stable organisational structure with some dynamic properties is a key issue behind this trade-off. Another way to express it is that the changes or innovations induced by "adaptive" or "learning" forms of organisations have to be sustainable. Changes or innovation have to be in a range that do not put the structure into question or that preserve inertia forces. The point of view of employees is going to be critical in building this thin line between disruptive and sustainable change.

Organisational change, innovation and employee outcomes

By focusing on learning organisations, this report explores one option for organisations to become more innovative, which is to encourage their employees to develop innovative work behaviours. But why would an employee contribute to the development of organisational capital by giving his good new ideas about how to improve the technology or reduce the cost of production?

Carmichael and MacLeod (2000) address this issue of worker co-operation by considering the incentive system. If the output produced by the employee is observable, a simple solution is to pay a fixed piece rate: as increased output would then directly be reflected in their own salaries, workers should co-operate with technical changes. However, this is not what seems to have generally happened in the history of Western manufacturing: it is very seldom that innovative firms commit to a constant piece rate, leading to the “ratchet effect” and to a bad outcome where workers prefer to keep their good ideas to themselves. The authors argue that the leakage of knowledge to other firms is the main reason why a fixed piece rate is not sustainable for the employer. This is the same type of motive as the one stressed by Rajan in Zingales (2001) for employers in human capital-intensive industries where it is difficult to protect critical knowledge resources. If piece rates are not optimal to obtain co-operation when firms face competition on their market, the employee’s involvement in the organisational learning should respond to compensation systems. MacLeod and Parent (1998) propose a theoretical framework linking job characteristics and compensation forms and question the diffusion of performance pay (piece rate, bonus or commissions) in the United States without being able to analyse it jointly with trends in job characteristics.

However, research on intrinsic motivation challenges this view by showing that environments which emphasise more on extrinsic rewards like performance pay may crowd out motivation derived from internal values and preferences (Frey, 1997). In particular, it is sometime argued that workers will be most creative when they feel motivated primarily by the interest, enjoyment, satisfaction, and challenge of the work itself, like in artistic occupations, and not by external pressures or inducements. Further research is thus needed to establish whether employers should combine or set apart practices that favour extrinsic and intrinsic dimensions of motivation in a perspective of knowledge sharing and innovation. Galia (2007), using employer level data, makes a first step in this direction.

In their discussion of organisational change, Hannan and Freeman (1984) stress that the diversity of interest among members of the organisation generates loose coupling between the intentions of rational leaders and organisational outcomes. In this case, organisational outcomes depend on internal politics and on the balance of power among the stakeholders. The economic literature on employee resistance to change identify vested interest of different stakeholders in organisation as potentially disruptive for technological and organisational changes. When innovation generates productivity shocks on employees’ relative productivity, some jobs may become threatened. If employees anticipate the future and adapt strategies accordingly, the group of employees with growing job insecurity may start

lobbying against innovation. As a result, when employers decide to change the strategy or structure of their organisation, they have to deal with an employee participation constraint: changes must be such that employees are willing to support it.

What are the factors generating support or resistance to change and innovation? In the economic literature, a classic determinant is *employee representation* or *union presence*. Unions are in the position to influence the adjustment costs of change and they can choose to oppose or support change, according to its consequences, through negotiation. Dowrick and Spencer (1994) refer to the Luddite revolts in England and try to identify when it is rational for trade unions to oppose labour saving innovation. They show that union opposition tends to occur when union value jobs rather than wage increases and when labour demand is relatively inelastic. Two interesting predictions also derive from the model: first, unemployment insurance, whether provided by the union or by government, is likely to reduce union concern about the threat of job loss and to generate more support for innovation. Second, as noted by Carmichael and McLeod (1993), multiskilling could mitigate resistance to innovation as an employee whose task is hit by labour-saving innovation can migrate to his other task without additional cost. Japanese firms would be better armed against asymmetric productivity shocks as those stemming from process innovation because they favour multiskilling. Van Reenen and Menezes-Filho (2003) survey the economic literature on the impact of trade unions on innovation and find no consensus, but a different pattern shows up between North American and European studies, the latter giving evidence of a more positive impact of unions. An interpretation of this pattern would be that European unions place a higher weight on jobs than on wages in their preferences (or utility function).

Canton, de Groot and Nahuis (2002) and Bellettini and Ottaviano (2005) explore the assumption that *age groups* may have diverging vested interest. Age directly creates differences in time horizon. Canton, de Groot and Nahuis (2002) investigate how these differences impact innovation. Their theoretical model, with three overlapping generations show how the demographic structure of a country may influence its growth. Bellettini and Ottaviano (2005) assume that junior and senior employees do not value likewise different forms of innovation. The former prefer radical innovation, the latter incremental innovation (learning by doing) on the existing production process. This structure of preferences derives from differences in skill obsolescence induced by the two types of innovation for the two generations. Junior employees will encourage new routines whereas senior employees prefer not to challenge the organisational legitimacy. Hence, employees' anticipation about the benefits and costs of innovation will

contribute to the setting up of barriers against innovative projects or conversely to collective support and appropriation of innovation. Only very few empirical studies on the determinants of innovation investigate factors that could influence employee support. Using a German innovation survey in the service sector, Zwick (2002) analyses the determinants of an indicator of employee resistance to innovation declared by employers. He shows that employees oppose innovations that endanger employment, intensify work or imply large adoption costs. Diaye *et al.* (2006) analyse the determinants of the adoption of ICT and new organisational practices in French manufacturing firms. They find that age pyramids where junior employees are the most numerous are the most favourable to the adoption of technological and organisational changes. They also show that the employment instability of young workers relative to workers of intermediate age have a negative impact on changes.

More recent literature on the outcomes of innovation for employees allows going deeper into the factors that facilitate or inhibit innovation from an employee and group level perspective. Janssen, Van de Vliert and West (2004) propose a psycho-sociological analytical frame to identify the factors that regulate positive and negative outcomes of innovation for individuals and groups when they take the risk to engage in innovative activities.

First, innovative work behaviour is demanding. It requires a broad variety of cognitive and socio-political efforts and investments which may lead to success or failure, high or low performance in the main task, conflict of cohesion with co-workers, positive or negative job attitudes and high or low levels of well being. The *characteristics of the innovative idea* are a first factor that moderates the outcome of innovative work behaviour. Radical innovation, directed to the core of the primary tasks of employees and with repercussions for the whole organisation should be more costly in terms of effort and more uncertain in terms of outcome than incremental innovation, directed to the periphery of primary tasks and limited to the work domain of the employee.

Skills and attitudes of the innovative employee are a second factor. Cognitive and interpersonal skills, willingness to discuss and resolve disagreements will facilitate innovation and lower the incidence of conflict. Highly job-involved innovators for whom innovative performance is identity relevant will produce greater inter personal conflict in cases where innovation meets the resistance to change other actors.

Group processes in the team of co-workers are a third factor. Innovation is very seldom the result of the activity of one individual alone. Teamwork and co-operation are essential. Appropriate team knowledge, skills and abilities will affect group processes. They include conflict resolution skills,

collaborative problem solving skills, communication skills, goal setting and performance assessment skills. Group effectiveness will be enhanced by clarity and commitment to shared team objectives and participation in decision making. Group diversity and team tenure are two characteristics of teams that should favour positive innovation outcomes.

The *leadership style of employee supervisors* is a fourth factor. Close monitoring of employees creates a negative climate for innovation. Innovators need some autonomy from organisational rules and procedure. Participation and direct support stimulate innovative work behaviour: a participative leadership implies consultation and delegation, and support relates to recognition and providing resources for innovation. Innovative employees are also likely to gain more from innovation if their supervisors approach and manage their innovative ideas from a mastery orientation rather than a performance orientation.

The *organisational context* is a fifth factor influencing the outcome of innovative work behaviour. It can be thought of negatively, in terms of barriers to innovation or positively, in terms of promoting an adaptive or innovation culture. “Silo” mentality, blame culture, poor communication, short-term perspective, risk avoidance, bureaucracy are organisational traits that impede positive outcomes from innovative work behaviour and thus negatively impact innovation. Innovating in a mechanistic organisation, designed to protect established courses of action is more likely to provoke conflict than in a more organic organisation where employees are expected to co-ordinate through mutual adjustment. Support for change, customer focus and organisational learning are three characteristics of the organisational context that contribute to the promotion of an innovation culture. Support for change is decisive in the face of potential conflict emerging from innovation. Customer focus is interesting from two standpoints: on one hand customers are an important source of feedbacks, comments and suggestions on the organisations’ activities; on the other hand, changes initiated by customers’ feedback have a “natural” legitimacy and lower conflict potential than changes initiated from inside the organisation. This is particularly true in the public and service sectors where a large fraction of the labour force works in direct contact with the customer (whether client, citizen, pupil, patient, etc.). Finally, as has already been stressed earlier, organisational learning is critical because it brings together and consolidates individual knowledge dispersed throughout the organisation as well as regulates knowledge appropriation by individual employees.

Empirical research studies based on large-scale databases and linking information on organisational structure and practices or innovation with employee outcomes are not numerous. Anderson, de Dreu and Nijstad (2004) note that although research interest among organisational scientists into

innovation in the workplace has been growing with a strong development of empirical studies, it is very seldom that they study innovation as an independent variable, across countries and within a multilevel framework where the employee, group and organisational levels are distinguished. However, in the industrial relations field, the concern about employee level consequences of workplace innovation has contributed to a debate opening a stream of empirical research that has first exploited some employer level sources of information. This literature is more focused on organisational innovation than on other types of innovation. Workplace innovation generally designates the use or implementation of new organisational practices or work methods. Practices at stake are those that are core in the ‘learning’ or “lean” models described in Chapter 2: team work, job rotation, quality norms, incentive systems etc. Their implementation in an organisation could signal employer’s willingness to switch to a more ‘adaptive’ or “learning” type of organisation.

As summarised by Kalmi and Kauhanen (2008) empirical results on the impact of workplace innovations on employee outcomes have been somewhat conflicting in the field of industrial relations with a view arguing on mutual gains for employers and employees and another one, more critical.

The mutual gain literature emphasises the increase in discretion connected with workplace innovation and the resulting monetary and psychological benefits. Empirical studies mainly focus on well being, wages and employment stability. Ben-Ner *et al.* (2001), using an employer survey from a wide range of industries in the State of Minnesota, relate indicators of employee participation to decision making and financial returns with employer level indicators of performance and employee outcomes. They find mixed evidence where firms do not seem to benefit from their human resource practices and workers outcomes are only partly favoured. Employee participation is associated with higher wages, but lower employer performance and employment stability. Freeman and Kleiner (2000) show on United States data that employee involvement practices only have marginal productivity impacts, but they contribute to substantially increasing employee well being. Black, Lynch and Krivelyova (2004) show that self-managed teams, job rotation and profit sharing increase inequalities within establishments and that their effect on employment reductions are mixed, depending on the presence of trade unions within the establishment.

In contrast, the critical view argues that the limited gains accruing to employees are outweighed by increased stress, intensification and work injury (Ramsay *et al.*, 2000; Godard, 2001; Green, 2005). For example, using an establishment level database linking the use of a set of organisational practices to the rate of cumulative trauma disorders, Brenner *et al.* (2004) find a significant and positive link for quality circles and just-in-time production

systems. This could reflect the loose coupling between employer and employee outcomes in the presence of a diversity of interest among members of the organisation or uncertainties about means–ends connections in a context of change (Hannan and Freeman, 1984).

Some steps forward have been made more recently by papers based either on employee level surveys or taking advantage of the development of new survey instruments linking employer and employee levels of information. Using an Italian employee survey on skills, Leoni and Gaj (2008) measure individual competences through self-assessments, with likert scales of the activities required and performed on the job (job requirement approach). They explain these indicators of competences by a set of dummy variables indicating whether employees participate in continuous improvement groups or quality circles, make improvement suggestions, are submitted to formal performance appraisals, receive constant information flows and are involved and consulted by the organisation. They find a positive relationship for these five organisational practice variables and show that it is robust to various specifications, confirming the influence of the organisational context on the elaboration of problem-solving and interacting skills at the employee level.

Mohr and Zoghi (2006) and Kalmi and Kauhanen (2008) look at outcomes other than skills, linking them with organisational practices. Mohr and Zoghi (2006) exploit the potential of the linked employer-employee Workplace and Employee Survey (WES) pooled over 1999-2001 to investigate whether job enrichment increased job satisfaction. They examine the participation of employees in several forms of job enrichment: suggestion programmes, information sharing, task teams and training, controlling for a large set of employee and employer level characteristics (including workplace organisation controls) and find that they increase job satisfaction and have no effect either on the probability of preferring shorter hours because of work-related stress or number of sick days taken. Using the 2003 Finnish Quality of Work Life Survey, Kalmi and Kauhanen (2008) conduct similar regressions using a larger set of employee outcome indicators and fewer controls at the employer level. As employee outcomes, they consider work intensity, task discretion, job security, stress and job satisfaction measured on multi-item scales as well as wages. These outcomes are related to participation in self-managed team, participation in traditional teams, information sharing about changes, employer provided training and incentive pay. Their findings show that practices do not have the same outcome profile, but globally they support the mutual gain view: information sharing has positive consequences whatever the outcome considered, self-managed teams and training are related to higher task discretion, wages, job satisfaction and job

security (training only), incentive pay is positively related to task discretion and wages.

Barth *et al.* (2009) and Østhus (2007) link indicators of change with employee outcomes. The study by Barth *et al.* (2009) exploits another linked employer-employee survey, the 2004 British Workplace and Employee Relations Survey (WERS). Measures of well being and job satisfactions at the employee level are related to three change indicators based on eight dummies of workplace level innovation over the two years prior to the survey: any kind of change, labour changes (working time arrangements, organisation of work, work techniques or procedures, initiatives to involve employees), capital change (upgrading of computers, upgrading of other types of new technology, introduction of technologically new or significantly improved product or service). They show that all types of workplace innovations are associated with lower average employee well being and job satisfaction. Collective bargaining agreement coverage and recognised union for pay bargaining at the workplace appear to mitigate the negative impact of innovation on employee well being. Østhus (2007) uses the 2003 Norwegian Survey of Living Conditions to investigate the consequences of workplace downsizing or reorganisation (declared by employees) on composite indicators of task discretion, work demands, job insecurity, work related health problem and job satisfaction. Workplace changes in Norway increase demands on employees to exert more effort, without any positive counterparts in terms of task discretion, job security or job satisfaction. The results further suggest negative effect on work related health problems which are stronger for internal reorganisations than for downsizing.

Summary

This chapter has reviewed different strands in economic, industrial relations and socio-psychological literature that address organisational issues connected with innovation from the employer and employee points of view. One main organisational design challenge has been identified for employers: find ways of stimulating dynamic properties of organisations in a stable organisational structure. In dealing with this challenge, employers are confronted with a central trade-off between standardisation/routine and mutual adjustment/innovation. “Lean” and “learning” models described in Chapter 2 can be interpreted as two potential responses, the former incorporating more standardisation than the latter. From the point of view of organisation, innovation strategies also meet a challenge in the human resources area: employers willing to innovate have to deal with an employee participation constraint. If this participation constraint is not managed efficiently, conflicts between vested interests may arise that will constitute a strong barrier to innovation. In this context, human resources management practices are

essential tools: employer-provided continuing vocational training or multi-skilling policies contribute to alleviate skill obsolescence induced by innovation, formal systems of appraisals or evaluation interviews allow to address issues connected with the balance between effort and reward which can be upset by change; it also opens the path to some transparency in the incentives policy which is important to build in feelings of trust and fairness. The few available linked employer-employee surveys give some promising results on these issues. A linked employer-employee type of survey instrument covering more than one country with different institutional arrangements would allow going further in identifying best practices.

In Annex 4.A, multilevel learning organisation metrics are proposed based on the EU MEADOW project. They aim at capturing differences in the capacities of organisations to adapt and compete through learning across countries.

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Annex 4.A

Multilevel learning organisation metrics based on the European Union Meadow Project*

* The metrics are taken from the Meadow Project draft employer and employee-level questionnaires currently undergoing cognitive testing in eight EU member nations.
See www.meadow-project.eu/index.php.

Employer	Employee
Learning and knowledge use	
<p>Do employees in this establishment regularly update databases that document good work practices or lessons learned?</p> <p>Does this establishment dedicate resources to continuously monitor external technological developments, or ideas for new or improved products, processes or services?</p> <p>What percentage of the employees at this establishment works in teams where the members jointly decide how work is done?</p> <p>These are sometimes referred to as <i>autonomous teams</i> or <i>self-directed teams</i>.</p> <p>What percentage of the employees at this establishment involved in groups who meet regularly to think about improvements that could be made within this workplace, for example a <i>problem-solving</i> or <i>service-improvement</i> group or a <i>quality circle</i>?</p>	<p>What proportion of the time does your job involve learning new things?</p> <p>What proportion of the time does your job involve helping your co-workers to learn new things?</p> <p>Over the last 12 months have you:</p> <ol style="list-style-type: none"> Figured out solutions for improving areas of your own work? Thought up new or improved products or services for your employer? Tried to persuade your supervisor or manager to support new ideas? <p>How would you compare the level of skills needed for your job with the level needed when you started working for you current employer? Would you say it has increased, decreased, or stayed the same?</p>
Learning culture and HRM practices	
<p>What proportion of employees has been given time off from their work duties to undertake training in the past 12 months?</p> <p>What proportion of employees has received instruction or training whilst performing their normal job in order to improve their skills in the past 12 months?</p> <p>Approximately what percentage of employees has a performance appraisal or evaluation interview at least once a year?</p> <p>Are decisions about employee promotion linked to the outcome of their performance appraisal?</p> <p>Approximately what percentage of the employees at this establishment has some part of their pay directly determined by their performance, or the performance of a wider group, rather than just by the number of hours worked?</p> <p>Do you have meetings between line managers or supervisors and all the workers for whom they are responsible?</p>	<p>How much do you agree or disagree with the following statement?</p> <p>"In my current job I have enough opportunity to use the knowledge and skills that I have."</p> <p>To what extent do you agree or disagree with the following statements about working for your employer?</p> <ol style="list-style-type: none"> I share many of the values of my employer I do not feel loyal to my employer I am willing to work harder than I have to in order to help my employer. <p>Over the last 12 months, have you done any of these types of training or education connected with your <i>current</i> job?</p> <ol style="list-style-type: none"> Received instruction or training from someone which took you away from your normal job Received instruction whilst performing your normal job <p>Over the past 12 months have you participated in a performance appraisal or evaluation interview?</p>



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