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No 12

**The anatomy of the wider
benefits of VET in the
workplace**



The anatomy of the wider benefits of VET in the workplace

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Foreword

To emerge from the recent economic and financial crisis stronger and more cohesive, the Europe 2020 strategy for smart, sustainable, and inclusive growth aims at ambitious targets.

There is a consensus that skill levels must be raised to improve competitiveness, to encourage economic growth, to provide attractive job prospects, and to promote social inclusion. Vocational education and training (VET) systems must contribute substantially to this process. VET is instrumental in creating the skills needed. Raising skills levels will have obvious impacts on productivity levels and competitiveness. However, investments in education also pay off in the form of social benefits (e.g. reduced crime levels and improved health conditions).

Cedefop has gathered empirical evidence on the economic and social benefits of VET to support policy-makers and other stakeholders in designing effective policies.

Firms play a crucial role in raising skill levels through training; one element guiding their investments is the (expected) rate of return in the form of increased productivity. Training also has an impact on job satisfaction, which may stimulate cooperation between workers and have important (positive) effects on productivity, for example in solving bottleneck problems. Firms also reap benefit from the social returns on investments.

The case studies in this report indicate that employers benefit from training if it is well integrated with a wider set of continuous learning.

The message of this publication is simple and powerful: firms will benefit from training provision which allows employees to understand how they can access training to develop their careers. A long-term view of training benefits, coherently embedded in human resource practices, needs to be adopted.

Training gives employees opportunities to develop their abilities. Using those abilities, employees will give their work more meaning and they will be much more likely to regard their work, their place of work, and everything associated with it, positively. Many employers already recognise this, but there are many more who would do well to learn the lesson.

I trust this research paper and Cedefop's work on VET benefits at the workplace will help policy-makers in continuing to make the case for training in the workplace as a crucial pillar of European strategies for increasing competitiveness.

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Acting Director

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Executive Summary

VET, worker motivation and job satisfaction

Until recently, the treatment of vocational education and training (VET) in labour economics was limited to its impact on several tangible benefits to which it was possible to attach a monetary value. Organisational psychology has been interested in the relationship between various dimensions of job quality and organisational performance, and how employees come to share organisational values, but has shown less interest in training and the generation of human capital in the workplace.

This study bridges economics and organisational psychology by assessing the way in which employer investments are mediated through the effects on job quality. This is partly addressed in the burgeoning research on high performance work organisations, but much of this research adopts a labour economics approach and is less concerned with the processes by which VET inputs are turned into improvements in work quality.

The study

The overall objective of the research is to assess the wider or social benefits of VET which accrue in the workplace. The quantitative evidence – though limited by the availability of data at micro level which adequately captures the full relationship between VET and the wider, social benefits of training – demonstrates a positive relationship between training and measures of job satisfaction across the EU. Employer-funded training has a positive impact on employee satisfaction with working conditions: the opposite is true of employee-funded training. This might be interpreted as employees being unhappy at having to fund their own training; equally, the causation might be that employees who have low levels of work satisfaction are more likely to fund their own training to increase their chances of finding new and better employment.

There are also variables that represent the opportunity for individuals to continue learning and developing within the enterprise. Individuals value their ability both to learn and to apply new ideas; they appear less keen on problem solving, at least insofar as this involves some form of ‘fire-fighting’ activity. Jobs

that make intellectual demands on employees tend to lead to higher levels of satisfaction, although the relationship between the demands placed on the individual and satisfaction with working conditions appears potentially quite complex.

Individuals whose skills best match those most needed in their job tend to be most satisfied. Those who have higher skill levels than needed in their jobs tend to have somewhat lower satisfaction from their work than those whose skills are matched, but higher than those who have fewer skills than needed for their work.

The impact of training on job satisfaction remains both positive and significant when wage levels are controlled for; wages themselves have a significant, positive effect on job satisfaction. This is consistent with the view that remuneration is only one source of an employee's satisfaction or dissatisfaction with their job.

The qualitative data – drawn from several employer case studies – reveals that training can affect employee work situations in several ways:

- (a) through improving job content (via job enrichment);
- (b) by providing employees with the skills to manage conflict in the workplace (e.g. working across departmental barriers) which might otherwise be a source of dissatisfaction with work;
- (c) by sending a signal to the employee that the employer is investing in them (an especially important signal in those workplaces facing difficult trading conditions);
- (d) by providing a social context in which employees can share their experiences with other employees from different parts of the business – simply by bringing employees together to consider various aspects of their performance in the organisation – such that problems and solutions can be shared.

Employers obtain the full benefits of the training where it is integrated with a wider set of human resource practices which recognise that employees need some form of continuous development.

From a theoretical perspective, a conceptual model has been developed which draws on both economics and organisational psychology to show that there are increased benefits to be derived by both employers and employees if the benefits of training are shared. From the case studies, it shows that the concept of sharing – from a non-material perspective – is frequently incorporated into the design of training through:

- (a) increasing employee interest in the job;
- (b) providing employees with more responsibility and autonomy for their part of the production process.

Maximising the social benefits of VET

How management gain the acceptance of the workforce of training goals is of core interest to this study. Several features are observable from the employer case studies:

- (a) a degree of trust needs to be established between employees and employers (management) so that there is belief on both sides that training is being introduced for the benefit of everyone;
- (b) trust is established by creating shared values. These values appear to be more readily shared where each side is seen to gain from their observance;
- (c) training is one of the ways in which values are shared. Training is regarded by employees as a good with non-material value (e.g. a recognition of the employee's value to the organisation);
- (d) access to continuing training and development is often one of the shared values of employers and employees;
- (e) training is often a means of instilling the values of the organisation in the individual employee, but these will tend to be reinforced only where other human resource practices are consistent with those values;
- (f) there needs to be an element of inclusiveness so that all employees potentially have access to training and development. In this way, groups within the workforce are not excluded and so are not a source of potential conflict.

Where training is provided to meet a specific need in the workplace and is, in essence, a one-off training episode, the wider social benefits of training are unlikely to be realised to the same extent as where training is an integral part of human resource policies designed to bring about mutually reinforcing improvements to both the work situation and material improvements in organisational performance.

The way the model is formulated also suggests that employers tend to gain from the training they provide. It is less clear whether training provided by other employers will provide the same type of wider social benefits because it cannot, by definition, be part of the psychological contract with the current employer.

Recommendations

Using the findings from this study, what can policy-makers and social partners learn from the findings? Several recommendations present themselves:

- (a) employers – and social partners more generally – need to take a holistic view of training within the workplace. Training needs to be an integral part of wider human resource development policies which seek to encourage continuing development of the workforce;
- (b) a transparent training infrastructure needs to be in place which allows employees to see how they can access training to develop their careers;
- (c) all groups in the workforce need to have access to training opportunities to avoid creating ‘in-groups’ and ‘out-groups’ with respect to training;
- (d) the design of training in the workplace needs to consider its likely impact on job content. This can be a source of both job satisfaction and dissatisfaction depending upon how training affects the content of jobs;
- (e) a long-term view of training benefits needs to be adopted. One-off training episodes will not create the shared sense of benefits at the core of the wider social benefits model;
- (f) the role of IVET appears to be of critical importance; employers suggest shared values are more readily established between employee and employer where the employee was formerly a trainee or an apprentice with the organisation.

CHAPTER 1

Introduction

Until recently, labour economics was primarily concerned with the impact of vocational education and training (VET) on several tangible benefits to which it was possible to attach a monetary value. From the perspective of the individual the interest was in the impact of, for instance, educational attainment upon either the probability of being in employment or upon wage levels; for the employer the interest was on the impact of workforce skills (however measured) upon measures of organisational performance (e.g. productivity and profitability).

Two further features of the existing literature are notable:

- (a) to date there has not been much interest in how, for example, the qualifications of the individuals were acquired or who funded their acquisition. They may have been obtained in the compulsory school system, through the initial VET (IVET) system, or through continuing VET (CVET) provided by the employer. From the perspective of the employer, little is known about the net costs and benefits of VET (i.e. what is the net return for employers' from their investments in either IVET or CVET?);
- (b) from the employer's perspective, the means by which human capital is converted into outputs, such as improved productivity, has been treated as a black box. There is no guarantee that employers will utilise equally the stocks of human capital available to them in the workplace, so there is a need to consider the relative effectiveness of how employers deploy skills.

This study is concerned with the relationship between the provision of VET – either IVET or CVET – by employers and the social benefits or wider benefits it confers on the workplace. The social or wider benefits can have as proxy the overall level of job satisfaction in the workplace. Organisational psychology, dating back to the early years of the 1900s, has had a long-standing interest in understanding how the organisation of work, worker involvement in decision-making, and the physical work environment affect organisational performance through their influence on employees' attitudes and motivation to work. Studies dating back to the early years of the last century demonstrated how worker fatigue was responsible for mistakes being made and output being lost (see the work of the Industrial Fatigue Research board, 1918-29, e.g. Florence, 1925). Studies from the middle part of that century revealed how involving workers in decisions about the organisation of their work and their physical environment all affected worker motivation and efficiency (Coch and French, 1948;

Roethlisberger and Dickson, 1939; Blumberg, 1968). At work, employees are members of an organisation – or groups, depending on how the workplace is organised – in which they undertake roles and abide by various behavioural norms associated with a given role; there is also likely to be a set of corporate values or higher level principles which guide all behaviour in the organisation (Haslam, 2004; Katz and Kahn, 1966). It is the fit between, or attachment to, the roles, norms, and values in the organisation by employees which will have some bearing on overall levels of job satisfaction in the workplace. The provision of VET by the employer has the capacity to affect, at the very least, roles and norms in the workplace. A hypothesis of interest is that the material returns on employer investments in training increase where there is improvement in the quality of work reflected in either job content (e.g. job enrichment) or in the working environment (e.g. less conflict). It is these types of gains which constitute the wider or social benefits in the workplace.

This report is structured as follows. Chapter 2 summarises the specific aims of the study and the methods used. Chapter 3 outlines what is already known about the social benefits conferred on those employers which deliver training and provides the basis for the new conceptual framework for analysing the social benefits specified in Chapter 4. Using the conceptual framework, quantitative estimates of the social benefits for employers (and employees) are provided in Chapter 5. A series of employer case studies conducted across the EU, analysed in Chapter 6, gives further insights into the types of social benefit employers derive from training and how they optimise these benefits. Finally, Chapter 7 sets out the conclusions from the study.

CHAPTER 2

Aims and methods

2.1. Objective of the research

The overall objective of this study is to assess the wider or social benefits of VET which accrue in the workplace, recognising that employers can draw advantage not only from their own investments in VET but also from the VET provision they have not financed: training activities directly financed by employees, possibly with a public subsidy, or in case of new employees, by former employers.

This study has the following elements:

- (a) a review, analysis and synthesis of relevant research literature on the social benefits of VET at the workplace level (Chapter 3);
- (b) the development of a new conceptual framework, drawing on appropriate theory from economics and organisational psychology (Chapter 4);
- (c) a quantitative assessment of the of the wider or social benefits arising in the workplace from the provision of training (Chapter 5);
- (d) a series of employer case studies that shed further light on the processes through which employers obtain social benefits of different types, to complement the quantitative assessment (Chapter 6).

The empirical research – both quantitative and qualitative – has been driven by what is already known from the extensive literature on the benefits of training and by the conceptual model developed as part of this study. The study has also been designed to provide, wherever possible, results applicable at European level. Much of the quantitative analysis is EU-wide and the employer case studies, though confined to specific countries and industrial sectors, were selected to be as generally applicable as possible.

2.2. Definition issues

2.2.1. Different types of training

The study is mainly concerned with IVET and CVET, but recognises that informal and non-formal learning can also be important sources of learning which can have an impact on behaviour in the workplace. Wherever possible, the study has

adhered to definitions of training and learning provided in Cedefop's *Terminology of European education and training policy: a selection of 100 key terms*, Cedefop, 2010).

VET is defined as: 'Education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market.' Within this definition, the study is interested in both initial and continuing forms of VET. Cedefop defines initial vocational training and education as that 'carried out in the initial education system, usually before entering working life.' Continuing training and education is defined as: 'Education or training after initial education and training – or after entry into working life aimed at helping individuals to: improve or update their knowledge and/or skills; acquire new skills for a career move or retraining; continue their personal or professional development.' The interest here is solely in the vocational form of education and training.

The study is also interested in formal learning, informal learning, and non-formal learning. Formal learning is defined as: 'Learning that occurs in an organised and structured environment (e.g. in an education or training institution or on the job) and is explicitly designated as learning (in terms of objectives, time or resources). Formal learning is intentional from the learner's point of view. It typically leads to validation and certification.' Informal learning is defined as: 'Learning resulting from daily activities related to work, family or leisure. It is not organised or structured in terms of objectives, time or learning support. Informal learning is in most cases unintentional from the learner's perspective.' And non-formal learning is defined as: 'Learning which is embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support). Non-formal learning is intentional from the learner's point of view.'

2.2.2. Defining the wider or social benefits

The definition of social benefits is not limited to the strict economic or accounting definition of a social or public return on an investment. The aim is to assess how a range of social benefits accrue to the employer (or workplace) as a result of the training they undertake. These benefits are conferred on the workplace through improvements in the quality of work or work environment experienced by employees. For the employer these may well result in improved performance in the workplace through, for instance, lower absenteeism, labour turnover, and machine downtime: these have the potential to have a material impact on organisational performance. The wider or social benefits, therefore, are referred

to as those benefits which represent an improvement in working conditions which potentially have the capacity to improve organisational performance ⁽¹⁾.

2.3. Literature review and development of a conceptual model

Literature on the returns on training from several perspectives is reviewed in Chapter 3. While economics provides much information about the pecuniary returns – especially the impact of training on wages – it has less to say about the impact on other benefits apart from labour retention, outflows from unemployment, and labour mobility. Because the study is concerned with how the cost-benefit rationale, which guides the decision to invest in training, meshes with a range of human resource practices which ensure that the outputs of training are effectively deployed in the workplace, the review also considers research conducted in organisational behaviour and psychology. The search terms used in the review are listed in Annex 1.

The literature review provides the basis for developing a conceptual model which explains the role of social benefits in optimising the returns from training. The general concept underlying the model – derived from Akerlof's idea of a gift exchange – is that, for returns to be maximised from the employer's perspective, there needs to be in place a degree of trust between employer and employees whereby the benefits of training are shared not just in financial terms (i.e. wage increases) but in a general improvement in the quality of work. Chapter 4 provides details of this theoretical approach to understanding the role of social benefits within the organisation.

2.4. Quantitative analysis

The present study is concerned with the social benefits of VET which accrue to the employer. Increasingly, there is recognition that the process by which VET affects organisational performance (the private return for the employer engaging in VET) is mediated through several factors (such as worker motivation or job

⁽¹⁾ The definition of social benefits is based on that used by Cedefop (Cedefop, 2009).

satisfaction) which, at face value, it may be difficult to attribute a monetary cost or benefit.

Research which has concentrated on the benefits of VET for employers and economic sectors faces several challenges:

- (a) identifying appropriate measures of VET (e.g. by cost, duration, type, etc.);
- (b) establishing who has funded or organised the training (the individual employee, the employer, the State, etc.);
- (c) identifying causal effects of VET on measures of performance.

Cedefop has its own taxonomy of VET (e.g. formal, informal and non-formal, described above) which, while of conceptual interest, does not conform closely with the measures collected in quantitative surveys.

To simplify the research, the study is concerned with the provision of VET by the employer. This does not necessarily mean that the employer funds the training, but that the VET is delivered via the employer. By using this definition it is possible to capture employer provision of training through surveys such as the continuing vocational training surveys (CVTS), and the European working conditions surveys (EWCS). In general, however, micro data are somewhat limited given the purposes of the study. Surveys such as EWCS and the European work-life balance survey (EWLBS) provide detailed information on working conditions but relatively little information on training; CVTS provides detailed information on employer training activities but little on the organisation of work. For quantitative analysis, relevant variables from the various data sources are aggregated into a comprehensive data set. Since data cannot be matched at individual level (different firms approached and interviewed in the CVTS and in the EWLBS, while the unit of analysis in the EWCS is the worker) the aggregation is carried out at sectoral level. This allows construction of a data set containing nearly all required data. The aim here, however, is to concentrate on the workplace level. Annex 2 provides further information on the survey data sets. Annex 3 contains an in-depth description of the economic model in Chapter 4. Annex 4 provides supplementary data relating to the quantitative analysis provided in Chapter 5.

2.5. Qualitative analysis

Twenty-five employer case studies have been conducted across selected countries to illustrate the interplay of economic, psychological, and institutional factors in bringing about social returns. The case studies build on both what is already known from literature and the findings from the quantitative analysis. The

case studies were designed to find out the extent to which the workplace has achieved a range of wider benefits for its employees and then to ascertain whether the learning and training provided by the workplace has contributed to achieving these benefits. The principal management respondent in the case studies was the most senior person responsible for training and human resource management.

The case studies were conducted across four sectors which provided a mix of high and low skill sectors and a mix of manufacturing and service sectors: automotive manufacturing; food and drink manufacturing; hospitality; and accountancy. Countries were selected according to:

- (a) the prominence of the market (e.g. the neo-liberal model versus the social market model) in determining skill provision (Cedefop, 2009);
- (b) collectivised versus individualised employment relations.

Countries in which the case studies were conducted are: Czech Republic, Germany, Ireland, Spain, France, Poland, Portugal and the UK.

Annex 5 provides further details about the case studies.

2.6. Conclusion

The study is based on the analysis of both quantitative and qualitative data. Relatively little is known about the net return for employers investing in training (compared with the data available which analyses the wage returns for individuals gaining additional qualifications or remaining longer in education), so the analysis is, in many ways, explorative and, in relation to the case study data, indicative rather than definitive. Nevertheless, the design of the study is such that it can elicit information about the social benefits of training and provide a basis for further studies.

CHAPTER 3

Wider benefits of VET in the workplace: a review

3.1. Introduction

There are different approaches to understanding the social or wider benefits which derive from employer training decisions. From an economic perspective, the focus is very much on the impact of training, however defined, upon wages and productivity. Considerable work has gone into estimating the benefits employers derive from training activities. Much of the research, however, is concerned with individual educational attainment and qualification levels rather than skills per se, though it provides a consistent evidence base which reveals that levels of educational attainment are positively related to wage levels and productivity. Much less is known about the impact of skills training provided by employers on either wage levels or productivity and the evidence that exists tends to provide a rather uneven picture; the impact of employer provided training on, for example, productivity reveals widely differing estimates (Hogarth et al., 2009). Until recently, economics literature tended to treat the details of the relationship between skill levels and organisational performance as a black box and has not looked at the effect of training on a range of intermediate level indicators – such as absenteeism, worker motivation, job satisfaction – through which the effect of skills on performance may be mediated.

While employers' decisions on providing VET for their employees may be partly influenced by concerns about costs relative to benefits, in many respects the relative size of any benefits will be determined by the content of the training provided, the extent to which employees acquire the new skills the training is designed to deliver, and the effective deployment of those skills in the workplace. This is where organisational psychology supplements the economic approach to understanding employers' human resource development decisions. In psychology the concept of organisational performance tended to be explained largely in relation to those practices which motivate employees or increase their commitment to the goals of the organisation (Rose, 1985; Haslam, 2004). The provision of VET in this context has not been extensively explored but, a priori, several issues arise, including:

- (a) the signal VET sends to the employee about their value to the organisation;

- (b) the capacity of VET to alter job content (e.g., by bringing about job enrichment);
- (c) the intrinsic satisfaction employees may obtain from the act of participating in training;
- (d) the virtuous circle of VET improving performance and thereby generating further human resource investment by the employer;
- (e) the interdependence between human resource practices and organisational learning.

This last point is important. There is also a branch of literature that deals with the issue of organisational learning which is interdisciplinary in nature (Cohen and Sproul, 1995), but lies mainly on the border of psychology and management (for a brief review see Bosworth, 2005, Chapter 12). This literature deals with various forms of learning within the organisation, but particularly informal learning, which lies largely outside of the main body of work on training. The structure, processes and culture that characterise an organisation are important determinants of individual and organisational learning. However, the structure, process and culture are not fixed; according to Simon '[...] an understanding of the mechanisms that can be used to enable an organisation to deviate from the culture [technology, line of business, etc.] in which it is embedded' (Simon, 1995, p. 180) is a 'major topic' in organisational learning (Bosworth, 2005, p. 297).

VET interventions cannot be seen in isolation from other human resource practices in the workplace which may affect an employee's perceptions of work and employer. Nevertheless, the provision of VET has the capacity to alter orientations towards work through its impact on material factors, such as wages, and a wider set of benefits relating to levels of job satisfaction in the workplace and the degree to which there are a set of shared values about the goals of the organisation in which people are employed. This short review summarises the evidence in relation to wider benefits of training in the workplace drawing principally upon research conducted in economics and organisational psychology.

3.2. Historical evolution of interest in the wider benefits of training in the workplace

There is little empirical evidence on the social ⁽²⁾ and wider returns from training. The traditional focus in empirical economics literature is the return for individuals who undergo training; returns for employers feature less. There is relatively little literature on the social returns, although there is much more on the social and wider benefits of education and learning (see, e.g., Blaug, 1965; Wolfe and Zuvekas, 1997; Cedefop, 2009), whose focus largely precludes the effects of training. Formal education is typically very different from training, particularly employer-provided training, and so drawing inferences from this literature may not be appropriate.

The social benefits that derive from VET relate to the debate on the quality of work. The social benefits which accrue within the workplace (e.g. a more satisfied and motivated workforce) are often factors associated with a high quality working environment (however that might be defined). Research on high performance work practices (HPWP) emphasises the bundling together of human resource practices which relate to increasing the capacity of individuals to develop their full potential within an organisation, alongside measures to improve the stock of human capital.

There is a distinguished body of work – some of it initially developed in response to Taylorist views of the world of work – which has sought to demonstrate that improvements in the quality of work and organisational performance are interlinked. The studies tend to fall into four eras:

- (a) studies in industrial psychology in the early part of the 20th century, which scientifically demonstrated the link between fatigue and falling output in factories;
- (b) studies from the mid-20th century, which began to explore the links between the organisation of work (rather than its duration) with participative management, the physical work environment, and the content of work;
- (c) the latter-end of the 20th century, when debates about social equity and justice gathered pace, and the role of flexible work practices and work-life balance became prominent;

⁽²⁾ Some care is needed with regard to the social returns. In the present context, the term 'social returns' does not have the same meaning as that used by economists when distinguishing private and social returns (see Chapter 2).

- (d) the commencement of a nascent fifth era at the beginning of this century, with attention given to HPWP, which has made the first explicit mention of VET in the debate about the quality of work and its relationship to organisational performance.

3.3. Economics of training

3.3.1. Background to economics literature

The economics of training is a well-trodden path and the intention is not to go over too much old ground here. The starting point is the theory of human capital initially expounded by Mincer (1962) and Becker (1962). The human capital of an individual comprises the stock of skills and knowledge acquired to carry out tasks which generate an economic value – ‘all activities that influence future real income through the embedding of resources in people’ (Becker, 1962). This includes knowledge, attitudes, skills, aptitudes and other acquired characteristics which contribute to production (Goode, 1959), which may be acquired through formal schooling, on- and off-the-job training, and informal learning (Lynch, 1991).

The inclusiveness suggested by Goode (1959) indicates that, even at this early stage, economists appreciated the crucial role of some of the factors that emerge more strongly among other disciplines, such as attitudes and aptitudes. It is in finding a framework to operationalise their models that economists diverge from other disciplines. According to theory, individuals invest in their human capital in response to the signals they receive about expected future financial returns from education and training.

As human capital can be seen as a means of production, additional investment yields additional output. Two main types of costs can be distinguished: direct education costs (e.g. tuition fees); and earnings foregone during schooling or reduced wages during training (Becker, 1962). The determinants of human capital investments are the expected rates of return in terms of increased future earnings. This narrow economic approach has been extended to incorporate the effects of education on employment probabilities. This enables something to be said about opportunities, social status and job quality (e.g. Bloch and Smith, 1977; 1979), although the main rationale for doing so is that those in employment earn more than those in unemployment or inactivity.

A critical issue in economics literature is who pays for the investment in human capital and who appropriates the returns. While there is an increasing

body of knowledge suggesting that employers are able to appropriate some of the returns from their investments in training, the results are often presented in gross terms and do not include the cost to the employer of providing training. There is often little indication of the process whereby the employer benefits from training, insofar as little attention is paid to the conditions required in the workplace for returns to be realised. This is an issue that is dealt with more thoroughly by other disciplines outside of economics and, in particular, by the high performance working (HPW) literature (e.g. Section 3.5). First, however, evidence is provided about who should pay for training and the types of benefit which flow from the training which takes place; these are areas where economics has made an important contribution.

3.3.2. General and employer-specific human capital

According to Becker's definition, investments in firm-specific (or, more accurately, employer-specific) human capital increase the productivity of the current employer, whereas general human capital benefits both current and other potential employers (Becker, 1962). In empirical literature, however, there is evidence that firms invest in both kinds of training – specific and general – perhaps because it can be difficult to distinguish between the two kinds of training in practice, but also reflecting some weaknesses in the simple, dichotomous, Becker model. Loewenstein and Spletzer (1999), for example, conclude that most firm-sponsored training improves the general human capital of employees. But they also point out that skills which can be used elsewhere may not necessarily prove to be general because '[...] asymmetric information can mean that training that would otherwise be general is in effect specific'. The distinction is also weakened by the fact that other employers recognise that employer-specific training provided by a previous employer still has the capacity to raise the individual's productivity because of positive externalities attached to all forms of learning and training (Loewenstein and Spletzer, 1999, p. 730).

3.3.3. Cost and benefits of general human capital

It is necessary to distinguish between perfect and imperfect labour markets when considering the costs and benefits of human capital. In perfect labour markets employees receive wages equal to the value of their marginal product. Firms cannot benefit from investing in general skills, as they bear the risk that the employee will leave the company and another party (the worker or another employer) will appropriate the return. According to standard economic theory, firms will choose not to fund general training (Fleischhauer, 2008). As, in practice, workers are the sole beneficiaries of their enhanced productivity

resulting from the acquisition of general skills (in their current or future job), it is the employee who will invest in general human capital. This may be funded through paying directly for training or accepting a wage lower than the value of their marginal product during training.

The fact that employers invest in both general and firm-specific training shows that assumptions about the operation of perfectly competitive labour markets are unrealistic in practice. Literature suggests that, in most labour markets, job separation is costly for both the employer and the worker (Loewenstein and Spletzer, 1999, p. 731); employees often stay with their current employer even when their general skills would be more highly rewarded elsewhere, making it possible for the current employer to recoup investments in general training (Bosworth, 2005). Also, the costs of separation for the employee are not entirely monetary but include such factors as no longer working with long-standing colleagues (Daniel, 1969).

In certain labour markets, there may be an element of employers sharing the costs of general training. If all employers carry out general training, the movement of employees between firms does not create the same problems as when some employers provide training and some, who do not, then poach the trained workers (Bosworth, et al. 1996, Chapter 17; Bosworth and Stanfield, 2009). According to Acemoglu and Pischke (1998, 1999), employers also benefit from investing in general training where the wage structure is compressed, which results in the wage level increasing more slowly than the value of the employee's marginal product after training. Under such circumstances, firms are able to skim labour market rents depending on the amount of training provided and the degree of wage compression (Bassanini et al., 2005).

3.3.4. Costs and benefits of employer-specific human capital

In standard economic theory, the employer has to pay for firm-specific training (Bosworth et al., 1996, pp. 233-235). The training only makes the employee more productive within the firm providing the training and not among other potential employers. The employer providing the training does not have to offer an increase in wages above the pre-training level; the employee has no more incentive to leave the training firm after the training than before it.

In practice, the costs and returns from specific training need to be shared by the firm and the worker because both parties are reluctant to invest in it solely (Borjas, 2000, Chapter 7; Ericsson, 2005). The employer could pay for it and recoup the costs by not increasing the employee's wage in the post-training period but, if the employee leaves the firm too soon after the training, the firm would experience a financial loss. This is the reason why employers will not

invest solely in either specific or general human capital. However, employees are reluctant to invest in employer-specific human capital as their future earnings (at another company) would not increase, and they have no guarantee that their current employer will retain their services.

The way out of this dilemma is to share both the costs and returns (Bosworth et al., 1996); the level of the post-training wage is important as it can affect labour turnover. Employees will earn less than their marginal product partly to pay for specific training investments, but the employees' post-training wages need to be higher than their productivity elsewhere and lower than their productivity with their current employer. Thus, the employee has no incentive to leave their current employer and the company has no incentive to make employees redundant due to increased productivity ⁽³⁾.

3.4. Organisational psychology perspective

Economics provides a rigorous framework for analysing who should pay for training, who benefits, and whether the provision of training is at an optimal level. It also provides insights into the likely impact of training on several economic outcomes: wages, employment, and productivity. Economics is less able to identify how the outcomes of training might be maximised or understand the processes by which training inputs are turned into outputs valued by either the employer or the individual employee. Organisational behaviour and organisational psychology are much more adept at addressing such issues.

Much organisational psychology is a reaction to Taylor's theory of scientific management. This Taylorist scientific management is now regarded as something of curiosity and has been roundly condemned as a crude, ill-informed view of how organisations might most effectively function. At its core, Taylorism sees the organisation as nothing more than the sum of its individual employees who are incentivised to maximise their outputs in return for a wage. Organisational psychology questions both the emphasis on the individual and the primacy ascribed to the economic motive for people choosing to work in a given job.

⁽³⁾ The concept of specific training may also explain the 'last in/first out' rule where experienced employees may have accumulated more specific human capital during their comparatively longer tenure with the employer and will have a 'buffer' between their marginal product and their wage. This will protect them from redundancies and, accordingly, the employer will choose to fire newly hired employees first.

Organisational psychology regards an organisation as being more than the sum of its individual parts. There are several competing schools of thought which have been admirably summarised in Rose's (1985) *Organisational behaviour: theoretical development since Taylor* and Haslam's (2004) *Psychology in organisations*. The starting point is that within any enterprise or workplace people will be a member of one or more groups, depending upon how the organisation is structured. This might be the work-team in which employees spend much of their time while at work, that of the whole enterprise or workplace, or perhaps membership of a staff association or trade union. Often it is the work-team in which the individual employee spends most of their time which is the most salient group membership.

The attitudes prevailing in the particular groups will affect the attitudes of employees to their work. This has been explained with respect to an individual's orientation to work. Some employees may see work as a means to an end – that of earning a wage which will allow them to satisfy their needs outside of the workplace – whereas others may regard being at work as being of intrinsic interest in itself. Employers recognise that there is a need to harness the collective efforts of the workforce towards meeting the organisation's economic goals.

Haslam's theory of social identification provides many interesting insights into how employees come to belong to groups within the workplace, their attitudes to other groups in the workplace, and the extent to which this is likely to be conducive to the satisfaction of organisational goals given that group membership may be a source of conflict or consensus. Haslam identifies the following three dimensions to group membership.

- (a) Discrimination: this refers to the extent to which people think in terms of the group to which they belong. People think in terms of their group membership when the context in which they find themselves is defined along group-based lines. The more people's behaviour is defined in terms of the group to which they belong, the more they are likely to see the other salient group(s) as homogenous and react uniformly to it. If there are competing group memberships within a workplace this may be a source of dissatisfaction depending on relationships between groups;
- (b) belief structures: these refer to the extent to which group membership is seen as fixed and permanent or fluid and flexible. Where people see that there is an opportunity for progression - for example, they believe that promotion to the top of the organisation is possible - they will see their group membership as fluid and flexible. However, if they see their position as fixed at a certain level, membership of their existing group will be become

reinforced. This is particularly important in the present context because CVET is often a means of social mobility within an organisation which suggests that CVET may be a means of lowering boundaries between groups in the workplace;

- (c) social status and legitimacy: the extent to which social status is ascribed to a particular group, the extent to which that status is regarded as stable and legitimate, and the extent to which group membership is permeable. This is seen as important in the context of organisational change where individual social identities may become threatened. Where individuals see status relations between groups as irrelevant and group membership as permeable, this will provoke a different response from individuals who believe the opposite to be true. As will be seen in Chapter 6, many employers are engaged in a process of organisational change which requires groups within the workplace to be reorganised or merged.

This is simplified and crude interpretation of Haslam's elegant and sophisticated theory of social identity, but it serves to demonstrate how members of a group give meaning to their membership and how, in differing contexts, it shapes responses to other groups.

The theory has little to say about training or VET specifically but it has several observations to make about commitment, motivation, and productivity. Drawing on the research of Maslow's hierarchy of needs, it suggests that where a group becomes locked into a relatively low status position, the needs of that group will be those of attaining low order needs (Maslow, 1970). For example, this may result in a focus on relative wage levels rather than, say, job content.

It is with respect to job content that training might have the most significant impact on job satisfaction and commitment to the goals of the organisation. As Daniel and McIntosh succinctly put it: 'If there is one single lesson that can be learned from all the management innovations and basic research on people and their jobs over the last ten years, it is that the tasks employees are required to do in their work are of central importance in influencing their attitudes to both the job and the organisation for which they work [...] And, above all, if his job gives him no opportunities to use and develop his abilities in achieving a result that has some meaning for him and with which he can identify, then it is hardly surprising if he regards his work, his place of work and everything associated with it with hostility or resignation as an aspect of his life to be endured in order that he can begin to live outside work' (Daniel and McIntosh, 1972, p. 1).

Training potentially provides employees with skills but only in combination with working practices in which those skills are deployed will they have an impact on either overall levels of job satisfaction in the workplace or organisational

performance. To obtain the commitment of the workforce to organisational goals, there is a need to ensure that potential sources of dissatisfaction do not prevent this happening. Herzberg and his colleagues posed a simple question: what are the sources of dissatisfaction in the workplace and what are the sources of satisfaction? Their studies revealed that issues relating to relative wage levels and so on could be sources of job dissatisfaction (hygiene factors) which needed to be remedied before issues relating to job content (motivation factors) could be adequately addressed (Herzberg et al., 1959). The implication of this is that VET delivered into a workplace context of conflict between groups in the workplace (e.g. workers versus management) will be less effective than it might be unless it is able to tackle the sources of dissatisfaction or conflict in the workplace.

Group dynamics in the context of VET provision can be important in either reinforcing divisions between groups in the workplace (however those groups are defined or structured) or as a means of breaking them down and making group membership more permeable (see Chapter 6).

3.5. Empirical evidence for social benefits of CVET

What evidence is there that VET can have an impact on overall levels of satisfaction in the workplace? This section considers the impact of CVET on a range of measures which reflect different aspects of satisfaction with work. This relates partly to the purpose or the rationale which guides the provision of CVET and how this affects reported levels of job satisfaction in the workplaces, reflected in levels of labour retention, labour turnover, commitment and motivation, and reported levels of job satisfaction. The section which follows this one considers the impact of IVET.

3.5.1. Reasons for employer investments in training

Evidence suggests an employer's rationale for providing CVET tends to be multifaceted, including both direct effects on an employee's level of competence, but also less direct effects such as those that influence job satisfaction and worker motivation. A survey of 1 508 German enterprises identified the most important reasons why employers provided training: as shown in Table 1, the importance of improving job satisfaction and employee motivation ranked highly among the reasons, with 86% of employers reporting this as a reason. Hence employers would appear to recognise and value the importance of the potential wider benefits which training potentially confers upon a workplace.

Table 1. **Employers' reasons for providing training**

Reasons for continuing training	% employers
Adequate development of employees' competences	91.9
CVET increases the firm's performance	88.1
CVET improves the performance and productivity of employees	86.9
CVET increases the workers' motivation and job satisfaction	86.0
CVET ensures that the firm stays innovative	85.5
CVET improves employee retention	66.8

Source: Bellmann and Leber (2005).

Other research confirms that employers often have fairly broad aims with respect to the CVET they deliver. One aspect is the 'education for all' approach some organisations adhere to (Lindley and Hogarth, 1992), the aim being to bring about a learning culture within the organisation. To achieve this end, employees are encouraged to participate in VET with the employer meeting the costs of courses (though not necessarily giving the employee time-off to study). For the employer, this is seen as whetting the appetite of the workforce for more training and as well as potentially providing the business with several direct business benefits.

Employers increasingly appear to recognise the externalities or spillovers which occur from training. For example, when one employee benefits from the knowledge of another – e.g. through informal learning – there is a net gain to the entire workplace (Cahuc and Zylberberg, 2006; Battu et al., 2004). Other evidence suggests that CVET is an important part of the knowledge transfer process in organisations (European Commission, 2006), especially where there is a relatively ageing workforce and a need to bring about an inter-generational transfer of knowledge. Employers mostly want to retain these positive CVET spillovers within the organisation (CEREQ, 2005). Other evidence, however, suggests that spillovers appear to take place between firms (for a review see Solow, 1991). This may be of benefit to the employer providing the training if this aids transfer of knowledge within the supply chain but often it can take the form of employees leaving one company for a competitor. The issue of the wider benefits of training is critically important in its role of retaining people within an organisation.

3.5.2. Effects of training on labour retention

Becker (1962) points out that the promotion of employer-specific human capital reduces labour turnover because both employers and employees benefit from maintaining the employment relationship. Employers can recoup their training expenditure only if trained employees stay with them. Employees who invest in

firm-specific human capital have a lower incentive to search for a new job because they cannot apply the skills they have acquired via firm-specific training. Therefore, they take the decision to invest in the current workplace and, as a consequence, look to obtain a return from their current employer. According to Smith and Hayton (1999), training which increases the commitment of employees to employers reduces their likelihood of quitting and so reduces labour turnover (see also Section 3.5.3).

Early research by Parsons (1972) revealed that large investments in firm-specific human capital by the firm or the employee lower the level of labour turnover (including both redundancies and voluntary exits). This finding holds true across countries. It is confirmed by a study in the US (Veum, 1997) which showed that employer-sponsored training reduces employee job search activity (whereas non-employer financed training increased the probability of job search). a Swiss study (Zweimüller and Winter-Ebmer, 2000) demonstrated that employer-provided specific training reduces job search activities and job mobility, while general training significantly increases job search. And a study from Japan showed that investment in firm-specific human capital reduces the number of job leavers (Higashi, 2002). Similarly, Bougheas and Georgellis (2004), who analysed the labour market behaviour of apprentices after they had completed their training – using data from the German socio-economic panel – found that employers who provided general skills training to their employees, mainly larger firms, also paid higher wages and provided substantial amounts of company-specific training. It is this combination which increases the opportunity costs to the employee of looking for a change of job. Employers have an additional incentive to incur the costs of training as this will reduce labour turnover within the workforce (Munasinghe and O’Flaherty, 2005).

The key issue is whether employers and employees are able to agree to share the benefits of training. Economics literature emphasises that the internal efficiency of firms is important for optimal allocation of training investments: so long as employers and employees can resolve internal coordination problems, which means they maximise their joint expected income, the problem of labour turnover and poaching will not induce sub-optimal training outcomes. If employers and employees are unable to agree how to share the benefits of training, this can result in under-investment in training as a result of labour turnover (Moen and Rosén, 2002). How employers and employees interpret whether or not the benefits of training are shared is an interesting issue. Economics would tend to concentrate on the share of additional productivity paid in additional wages but, as in Section 3.4, employees might also regard the

benefit to have been shared if there are also non-material gains to the work situation.

3.5.3. Employee motivation and commitment

A wide range of research (e.g. Fevre et al., 1999; Haslam, 2004) has demonstrated that individuals are not rational egoists and are driven by group loyalties and obligations. Employers can capitalise on this in a way never envisaged in the human capital model of investments in training. Organisational commitment can be fostered in different ways through the provision of training, for example, as a recruitment tool, whereby employers who signal that they invest in employees can increase their image as an attractive employer; it can also be used to signal to employees how they can develop their careers within the organisation (Groot and Maassen van den Brink, 2000; Tannenbaum et al., 1991; Petty et al., 1984). The provision of training also meets employees' intrinsic motivation to learn (Noe and Wilk, 1993). Finally, in some companies several training courses are specifically designed with the direct objective of increasing commitment to the organisation (Green et al., 2000).

Alternatively, where the employee exhibits job dissatisfaction this not only manifests itself in higher leaving rates but, perhaps more damagingly for the employer, it can also result in misbehaviour in the workplace with people turning up late, being persistently absent, or not being fully committed to their work. Econometric studies have found a relationship between job dissatisfaction and higher levels of absenteeism and poor time keeping, as well as other aspects of poor behaviour (Akerlof and Yellen, 1986; Akerlof et al., 1988; Clegg, 1983; Kristensen and Westergard-Nielsen, 2004; Royalty, 1998; Sieben, 2007; Vroom, 1964). What is not clear from the research evidence is whether a lack of VET provision either causes job dissatisfaction or, where it is provided, is able to ameliorate feelings of dissatisfaction which might be extant in the workplace.

Raising employee commitment suggests that some form of exchange is taking place between the employer and the employee (e.g. Akerlof, 1982; see Chapter 4). The employer will provide several 'gifts' to the employee (e.g. training), which will result in the employee, in return, wanting to both stay with the employer and also commit themselves to the organisation with a view to meeting its business goals. Organisational behaviour literature suggests that, for this to take place, several conditions need to be satisfied (resolution of potential points of conflict in the workplace, such as wage setting) before employees will be willing to provide their loyalty and commitment to the employer and be willing to accept the 'gift' of training and to deploy the skills learnt fully to the benefit of the organisation; this points to the importance of fostering job satisfaction.

3.5.4. Training and job satisfaction

3.5.4.1. Job satisfaction and productivity

Over recent years job satisfaction has received increasing attention from economists and policymakers (European Commission, 2007). The focus on this variable is warranted for two reasons: it is recorded in many international databases and it is related to desired, productivity enhancing, behaviours in the workplace. The link is not straightforward, though, and it is related to the social nature of the organisation and to the incomplete nature of the labour contract.

Labour contracts are, by nature, incomplete: the specification of the legal consequences of every possible state of the world cannot be laid out. Parties cannot write complete contingent contracts, so the employment relationship tends to take the form of a social exchange.

Some organisations aspire to a market form of exchange whereby a set of well-defined benefits are promised for a well-defined set of performance criteria. The nature and the timing of what the parties exchange are operationally defined with some precision and no expectations exist for benefits or actions beyond those made explicit in the contract. However, most labour relationships are not of the type just described. Employers do not attempt to describe all possible contributions (tasks and behaviours); instead they offer to pay a premium above what workers' contributions are worth. This premium offers compensation for the contribution specified in the contract and for as-yet-unspecified (and difficult to foresee) later contributions. Among these a crucial role is played by employee willingness to cooperate because organised collective effort raises the value of the whole above the sum of its parts. This dimension goes under the name of organisational citizenship behaviour (Organ, 1988; 1997) or extra-role behaviour (Van Dyne et al., 1995). It refers to discretionary individual behaviour that is not explicitly recognised in the formal pay system and, in the aggregate, promotes the effective functioning of the organisation. The organisational citizenship behaviour has a positive impact on performance because it lubricates the functioning of the organisation by decreasing conflicts (frictions) and by increasing its efficiency.

Management regard two particular dimensions of organisational citizenship behaviour as effective in enhancing unit performance: compliance and helping. Compliance denotes a general adherence both to the spirit and to the letter of the rules and norms of the organisation.

Helping denotes behaviour directed at a specific individual (client, colleague, supervisor): for example, helping a new worker learn the job, or helping an overloaded colleague in catching up with the workflow or helping colleagues in removing a bottleneck. Organisational citizenship behaviour and the two

aforementioned dimensions are often found to positively correlate with objective measures of organisational/team performance (Organ et al., 2006).

A long standing research line (Organ et al., 2006) has tested and found a robust relationship between job satisfaction and the helping dimension of organisational citizenship behaviour (and between fairness and job satisfaction, a relationship that will drive much of this report). We may therefore infer that, to the extent that job satisfaction favours organisational citizenship behaviour and this contributes to higher organisational productivity (as managers seem to confirm), the focus on the relationship between training and job satisfaction is a parsimonious, yet effective, way to capture the wider productivity effects of training. Early research (e.g. Hammermesh, 1977; Borjas, 1979; Freeman, 1978) showed that job satisfaction was related to objective work-related behaviour such as labour turnover and absenteeism: such behaviour can be effectively addressed by appropriate economic (wage) incentives. There are many other work contingencies that cannot be linked to wages but are important for organisational productivity.

3.5.4.2. *Effects of training on job satisfaction*

Other aspects of the relationship between training and job satisfaction have emerged in more recent econometric literature. Jones et al. (2009), for example, based on the UK workplace employee relations survey, showed that training is positively linked to job satisfaction and that job satisfaction increases firm performance; however, training needs to be 'substantial', lasting for two days or more.

A positive relationship between training and job satisfaction has also been reported by Siebern-Thomas (2005) across 13 countries, based on analysis of the European Community household panel. Moreover, an analysis of the EWCS revealed that workers in high performance work organisations – characterised by flat hierarchies, autonomous team-working, job rotation, and horizontal rather than vertical communication channels – reported higher levels of job satisfaction (Bauer, 2004). The study measured the effects of training on job satisfaction using a skills index derived from information about the number of training days either financed or provided by the employer over the previous 12 months. In this index Denmark, Spain and the UK, ranked highest, while Belgium, Germany, Greece, France and Italy ranked lowest as far as employer-provided training is concerned. Significant and positive effects of the skills indicator on job satisfaction were observed only in Denmark, Germany, the Netherlands, and for the pooled sample as a whole.

Receipt of training can be interpreted as an important potential contributor to job satisfaction, but it appears to be effective only in combination with other determinants of satisfaction. Some studies measure the effects of opportunities to progress one's career with organisational performance: Cornelißen (2006) examined the effects of detailed job characteristics on job satisfaction, job search and labour turnover using data from the German socio-economic panel. The results showed that job satisfaction is positively and significantly influenced by the opportunity for career advancement and access to learning opportunities. Clark (2004), using international social survey programme data for 19 OECD countries, found that promotion opportunities are the third most important characteristic of job satisfaction, behind good relations at work and job content.

While the body of evidence suggests that improvements to the stock of human capital in an organisation generally results in relatively high levels of job satisfaction, this is dependent upon there being a match between the skills possessed by the individual and the requirements of the job. The concepts of over-education or over-qualification are fraught with measurement difficulties, but evidence indicates that, where employees regard themselves as being over-qualified for a job, this tends to result in relatively high levels of job dissatisfaction with, presumably, all of the problems which arise when this occurs (Hersh, 1991; 1995).

3.6. Empirical evidence for social benefits of IVET

A key question is: why do employers invest in IVET in its many different forms, such as apprenticeships or graduate traineeships? The most immediate answer relates to the employer's wish to meet future skill needs in a cost-beneficial way. In the case of apprenticeships there is now a strong body of evidence that reveals employers to be highly cost-conscious in their decisions about how many apprentices to recruit, and that apprenticeships tend to be structured such that the employer is able to recoup their costs relatively quickly (Dionisius et al., 2008; Fougère and Schwerdt, 2002; Hasluck et al., 2008; Mohrenweiser and Zwick, 2008; Vogler-Ludwig et al., 2003; Wolter, 2008).

While employers are concerned about the costs of apprenticeships and their capacity to justify that expenditure, there are other, wider considerations which appear to guide employer behaviour. A survey of 874 US employers which sponsored apprenticeship training showed a positive overall evaluation of apprenticeship training: 97% report they would recommend the programme to other employers because it not only satisfied future skill needs but also

contributed positively to productivity gains and to the overall working environment (Lerman et al., 2009). Positive effects on productivity and competitiveness are reported for the UK, as well as improving the stock of human capital. It is notable, however, that the relative ease with which it is possible to inculcate company values in apprentices compared with fully trained workers recruited from the external labour market is considered particularly important by employers (Hasluck et al., 2008). Kenyon (2005) summarises the benefits employers derive from investing in apprenticeships as including:

- (a) efficiently securing a supply of people with the skills and qualities required;
- (b) costing less than recruiting fully experienced workers from the external labour market;
- (c) reducing labour turnover: apprentices have higher job satisfaction than non-apprentices, which is reflected in higher retention rates;
- (d) providing a cadre of employees from which to select future managers;
- (e) producing fully trained workers steeped in the values of the business;
- (f) providing more practical and job-related knowledge and skills than other forms of learning;
- (g) adding to the reputation of the business in industry/the local community (i.e. being the 'employer of choice').

Wolter (2008) also points to the importance of social responsibility as a reason for German firms investing in apprenticeships.

The importance of IVET is that it prepares the ground for CVET. Many of the risks attached to providing CVET – that the employee will take the skills obtained to another employer – are partly assuaged where the experienced worker has also been an apprentice or trainee with the company. Because the employer and employee have a set of shared values and a degree of trust, or a bond, established between them, the risk of the employee leaving after being in receipt of CVET is, other things being equal, reduced.

The next section draws on research from organisational behaviour to examine the relationship between the employer and employee and how this allows the benefits from training to be optimised.

3.7. High performance working, VET and social returns

3.7.1. Human resource management and the broader package of work practices

The question of how the quality of working life is related to measures of output and efficiency includes the problem of how staff development, flexible working practices and the quality of the physical working environment are bundled together into effective human resource management strategies. Increasingly, such strategies recognise that to derive benefit from investments in human capital, there needs to be a set of related human resource policies in place that allows this to happen. The distinction Herzberg made between so-called hygiene factors, such as pay and conditions which are needed to meet a certain standard to offset worker dissatisfaction but which otherwise do not lead to positive motivation, and motivation factors, such as achievement and recognition, which are capable of raising worker productivity, is instructive (Herzberg, et al., 1959).

Human resources represent a form of capital to the extent they add value to a firm through transforming the firm's product, but also in several less intangible ways, such as problem-solving, organising departments, etc. (Parnes, 1984). These less tangible benefits may be regarded as social benefits for the firm. Human capital within firms is accumulated through investments in hiring staff, by developing staff through training, and through the provision of a working environment conducive to learning. Since, at least according to standard neoclassical theory, employers will invest to the point where the marginal cost is equal to the marginal return, the size of any investment is contingent on what employers think employees can provide the firm (Snell and Dean, 1992). As the returns on human capital are manifested via the jobs people undertake, so the effectiveness with which the human capital inputs are marshalled into outputs will determine firm performance.

Literature on how human capital inputs may be effectively converted into outputs falls into two categories:

- (a) the universalist approach, which suggests that investments in human resources – or bundles of human resource management issues – bring about improvements in organisational performance (Huselid, 1995);
- (b) the contingency approach, which suggests that the success of human resource strategies are contingent on the product market strategy of the firm (Youndt et al., 1996).

The effectiveness of human resource practices – such as training or increasing employee motivation – is partly dependent on the adoption of a

relatively high value strategy. The implication of the contingency approach is that some sectors of the economy may have varying reliance on the existence of social factors to bring about improvements in performance from any VET they engage in, or that they may be reliant on different types of social factor. For instance, in those sectors of the economy more reliant on emotional labour, the types of social factors which need to be in place to realise the benefits of any VET investments may be very different from, say, the shop floor of a manufacturing workplace (Hochschild, 1983).

Research evidence suggests that raising the ability level of the workforce will, other things being equal, sub-optimally raise the level of organisational performance if measures are not in place to allow the skills conferred on the workforce through the provision of VET to be effectively deployed.

3.7.2. HPWP and social returns

The latest manifestation or recognition of the need for bundles of human resource strategies – incorporating practices that raise levels of job satisfaction and worker motivation – is that of HPWPs. Despite problems of definition, there is a growing research base which demonstrates that HPWPs are related to relatively high levels of organisational performance (Wood, 2002; Guest et al., 2003; Bosworth, 2005; Belt and Giles, 2009). Recent research on high performance work organisations classifies them as using the following (Sung and Ashton, 2005):

- (a) high employee involvement practices to encourage trust and commitment within the organisation;
- (b) human resource management practices to encourage investments in human capital and skill formation;
- (c) reward and commitment practices that increase an individual employee's stakeholding in the success of the enterprise.

Results from the work and enterprise survey in the UK empirically demonstrate the positive relationship between, on the one hand, skills and training, the wider set of human resource practices (including job satisfaction) and innovation with, on the other, organisational performance (Work Foundation, 2005). The study uses the strategic management index to score a sample of 3 000 companies in the UK. It is a measure based on five core areas: human resource practices; creativity and innovative management; customers and markets; stakeholder relationships; and shareholder and governance systems. The results show that, other things being equal, companies scoring in the top third outperform those in the bottom two thirds by GBP 1 600 of profit per worker per year. Critically, the study demonstrates that the best performers on the

strategic management index were high wage, high skill workforces, where the workplace environment was characterised by a high degree of informality, high trust relationships between members of the workforce, and visible and accessible business leaders, all of which aided quick decision making. In contrast, those that performed poorly on the strategic management index were characterised as having more bureaucratic decision making processes.

The emphasis on informality implies that there are set of tacit rules governing the operation of the workplace and the nature of the interaction between employees (and groups within the workplace). This is dependent on a high level of commitment and shared values by employees, supported by reward structures which recognise the value that employees bring to the production process; all of these are underpinned by relatively high skill levels and continuous VET. This raises the question of the extent to which HPWPs are transferable to sectors where product market strategies place less emphasis on quality improvement/value enhancement, and where skill levels are relatively low and VET provision by the employer is limited.

In an influential book from the 1970s, Daniel and McIntosh (1972) demonstrated that attempts to introduce increased job satisfaction and job enrichment into the jobs of operatives in the manufacturing sector could provide the employer with productivity gains and simultaneously improve the job content and job satisfaction of the employee. There were two main caveats:

- (a) the successful introduction of change into the work of employees is dependent on the employees being able to participate in the decision making, which affects the content of their jobs;
- (b) there are limits to the amount of job satisfaction or job enrichment which can be introduced into some jobs because of the routine nature of the production process.

Amplifying the above point, an early study by Cotgrove et al. (1971) revealed how attempts to introduce variety into the jobs of nylon spinners at plant owned by the ICI Corporation initially resulted in higher levels of job satisfaction among manual employees. As employees became used to the new way of working, the essentially mundane and repetitive nature of the work became apparent once more, their interest began to wane and the productivity gains were short-lived.

3.8. Conclusion

Literature reviewed in this chapter presents empirical findings about the social benefits which arise in the workplace from the provision of CVET and IVET. The

results suggest positive effects on workplace productivity and performance, job retention and employee job satisfaction. Both IVET and CVET are associated with long-term economic goals, such as improved competitiveness, as well as aiding increased organisational adaptability to changes in the work environment and external product market environment. This is in keeping with the view that social benefits are not always non-material and have a monetary value attached to them (such as reduced recruitment costs) (Cedefop, Descy and Tessaring, 2005).

There is a consistent body of evidence suggesting that the benefits of VET investments are best obtained through human resource strategies which raise levels of job satisfaction and worker motivation. Industrial psychologists have researched this since the early years of the 20th century with the pioneering studies conducted into fatigue. Their dependent variables tended to be those related to fatigue, monotony and physical comfort, and their models were not interested in the human capital of individuals. More recently, with the interest in HPWPs, there has been an increased focus on the skills of the workforce, and how these are best utilised through a range of human resource practices which encourage worker motivation and commitment. Economists are now beginning to look at the relationship between training, job satisfaction and organisational performance. To date, there appears to be a consistent message from literature: job satisfaction and the provision of training by the employer are positively related. There is, however, a caveat in that much of the econometric and statistical analyses of the relationship between VET and measures of job satisfaction, worker motivation and such like suffer from several conceptual and methodological weaknesses. These include:

- (a) the absence of a 'unifying', inter-disciplinary theoretical framework that the empirical work can draw on. While they offer some initial important insights (e.g. between general and specific training), it is clear that simple financial models of human capital theory do not capture the broader costs and benefits of training, including the social returns considered here. A new theory is required that draws on a range of disciplines, including organisational psychology, that opens up the 'black box' that represents training within economics literature. Some steps towards such a theory are presented in Chapter 4;
- (b) limitations in the measurement of VET. While there are many measurement issues, one in particular is the tendency for literature to relate to formal training (i.e. training which is provided through some form of structured provision either on-the-job or off-the-job) and largely to exclude informal learning. Increasingly, there is a body of evidence which suggests that

informal learning is an important means by which employees develop the capability to carry out their job. Here organisational learning literature is of importance;

- (c) heterogeneity. Nearly all of the studies reviewed are based on cross-sectional data sets in the absence of longitudinal data. Cross-sectional studies struggle to cope with the fact that some workplaces may intrinsically have high levels of job satisfaction that continue over time.

The next chapter builds on the review of the evidence provided above to develop a theoretical model to be tested using the survey data outlined in Chapter 2.

CHAPTER 4

Conceptual model of the social benefits of training for employers

4.1. Limits of economics and importance of other disciplines

In the simplest neoclassical framework, the issue of private versus social returns is dealt with by assuming that whoever benefits from training pays for it. Employees are not able to appropriate the benefits for employer funded specific training through higher wages, because doing so would reduce the returns to the employer and undermine the incentive to provide specific training. Similarly, employers cannot usurp the benefits of general education and training funded by employees (by paying lower than market wages, thereby increasing their profits), because it would reduce the returns for the employee who would seek to maintain those returns by moving to an employer willing to pay the market rate for their skills.

This simplistic, highly market-oriented view of the world may hold an underlying truth, that 'market forces will out' in the sense of favouring workplaces which are more in tune with the market and acting against those which are less in tune. However, it treats the firm as a black box and ignores all of the socio-psychological factors in the individual's decision to undertake training and management decisions about the design of work organisation that are relevant to determining the likely degree of success of the training.

Even the simple underlying market mechanisms give indeterminate outcomes where market power exists, particularly where there is market power on both the supply and demand sides. The dichotomous outcome based on market forces breaks down in the presence of joint monopoly and monopsony power; something further, largely outside of economics, is required to determine the allocation of costs and benefits of training.

4.2. Recasting the context of ‘who benefits pays’: predation versus symbiosis

This individual-interest approach may not be the most appropriate way of looking at returns on training, either from an employer or an employee perspective. The original dichotomy between specific and general training is cast more as a ‘parasitic relationship’ in which the employee seeks any benefit from employer-provided training, either in the form of the employer paying higher wages or in terms of jumping from that employer to one willing to pay more. Similarly, the employer is cast in the role of a predatory fish, seeking labour trained by other enterprises, while attempting to minimise any loss through exploitation by employees and keeping at bay other employers that would benefit by recruiting their employees.

Such a description of the world largely ignores the synergies which arise from a more symbiotic relationship between the employer and the employee, in which both may benefit from actions such as employer training. This does not mean that both the employee and the employer do not have their own ends, but that there is recognition (acceptance) that these ends are better served, at least in the long term, by coexistence and cooperation.

In nature, cooperation may not be based on a rationalised ‘giving’ and ‘returning’ culture of the type described by Akerlof (1982 and 1984); it may be programmed into the genes by the survival of particular individuals in the species that ‘cooperated’ more fully than others ⁽⁴⁾. Nevertheless, it may be inculcated in humans through a rationalisation process in which there are perceived costs and benefits of cooperating for an end-game in which both the enterprise and the employee benefit. It depends, therefore, on the existence of conditions both within and outside the enterprise in which both the employer and the employee perceive that long term benefits will emerge.

Several aspects of this discussion are worthy of further comment:

- (a) training is concerned with the ‘long-game’; employers and employees gain most when the benefits of joint activity and action are allowed to emerge. Either ‘partner’ may take a short-term gain, but at the expense of the long-term outcome. If conditions emerge in which it pays one of the partners to take the short-term benefit (e.g. an employee moves to a higher paid employer), one or both may suffer in the longer term. External influences

⁽⁴⁾ See the argument about work organisation (and routines) developed in Nelson and Winter (1982).

- may impact on the returns on training (such as industrial restructuring) that raise the rate of labour turnover in companies (the wastage rate);
- (b) it is wrong to see training as a separate entity; it should be viewed as a part of the system which describes the activities of the workplace. Training is bound up not only with other actions and activities in the workplace, but also those of the employee. The easier it is to separate from other activities of the employer and employee, the easier it is to focus on the (financial) costs and benefits of training as an isolated activity, and the more likely the participants are to consider their own individual gains (rather than 'identify' with the organisation);
 - (c) specificity and generality (of training) are examples that typify extreme outcomes, but they are arid constructs, designed only to simplify the economic division of costs and benefits between the participant groups.

4.3. Central role of the employee

If the employer provides training, these new skills must be used effectively both to meet the work expectations of the trainee and to produce the benefits that the employer anticipates. This stems from the nature of 'labour' as a factor of production (Bosworth et al., 1996, pp. 3-4) that gives employers only limited control over what workers do, in particular over whether the worker supplies their labour services to that employer or not.

Even if the employer funds the training, the individual is not a passive recipient of the skills; training may be difficult, if not impossible, where staff ⁽⁵⁾ have negative attitudes to training (OECD, 2003, Chapter 5; WMRO, 2006, pp. 137-138). Developing skills generally requires avoiding or overcoming several personal barriers to training: reticence to push for training; a fear of training ⁽⁶⁾; an unwillingness to be sufficiently flexible to accommodate training (e.g. some employees see the job as being '9-to-5' and have no interest in learning); family responsibilities; an unwillingness to delegate work to attend training; a lack of commitment to training; and embarrassment at the need for training (Statistics

⁽⁵⁾ This can include the manager(s), who may perceive training programmes as a threat to their security, including the control of the company. This may make them openly defensive or, more often, silently resistive (Didato, 1976).

⁽⁶⁾ Particularly off-the-job training in a 'classroom' environment. Perhaps especially among individuals with low basic skills, who may find basic reading and writing challenging, and among older workers, absent from a learning environment for many years (Cully et al., 2000).

Canada, 2002, p. 12). Even if reluctant workers can be persuaded to train, this does not guarantee that they learn the skills taught or apply those skills in practice (Bosworth and Stanfield, 2009, p. 28).

Historically, employee commitment to training was incentivised by the desire for promotion within the internal labour market. The employee competed with a (limited) number of others to attain the skills necessary to move from their present post up to the next rung on the hierarchical ladder, rewarded by better pay and had higher non-pecuniary benefits (better offices, higher status, etc.). Insofar as the hierarchy was stable, there was certainty over the returns on training, at least for successful candidates, although the competition for limited posts created problems in managing those who failed to secure promotion.

While there are still vestiges of internal labour markets in medium and large companies, the significant changes in organisational structure, along with the increasingly fuzzy boundaries between organisations (Bosworth, 2005, pp. 269-296; 2004), has resulted workplaces becoming flatter in structure, with a greater dispersion of tasks and more devolved responsibilities. Better performing workplaces have also been linked with the adoption of HPW, making the returns on training more complex, bound up not only with the use of HPW but also the issue of 'better jobs'.

This recasting of the nature of the enterprise, its organisation and the role of the employee, might have undermined the perceived role of training, but this is not the case, as people have become central to the efficient operation of modern enterprises and are recognised as a key source of competitive advantage (Prahalad, 1983; Pfeffer, 1994; Wright et al., 1994). Success in global markets requires appropriate human resource development to ensure employees have better skills than competitors (Pfeffer, 1994). As the quality of human resource management determines these skills (Adler, 1988; Reich, 1991; Youndt et al., 1996), ' [...] the effective management of human capital, not physical capital, may be the ultimate determinant of firm performance' (Youndt et al., 1996, p. 836).

4.4. **Work organisation: congruency of employer and employee utilities**

At enterprise level, the social welfare of employees is influenced by the way in which production is organised within each establishment. In principle, work can

be organised in many different ways, although there are limits set both by the product and process technologies available to the producer ⁽⁷⁾; these are partly limited by the skills of the workforce and other dimensions of factor supply. The standard of employees welfare is partly driven by the firms' own interests (e.g. higher welfare standards raise the productivity of employees), the altruism of the employer (e.g. 'sharing' some of the returns to 'improve the lot' of the workforce) and the need to meet regulatory requirements (e.g. minimum health and safety requirements).

Organisational psychology, dating back to the early years of the 1900s, has shown a long-standing interest in understanding how the organisation of work, worker involvement in decision making, and the physical work environment affect organisational performance through their influence on employees' attitudes to work. This foundation of work was eventually encapsulated in two main areas of modern literature:

- (a) labour economics moved into the treatment of employment relations (Bosworth et al., 1996, Part VI). The main focus concerned how employment (and the employment contract) could be arranged to increase worker commitment to the workplace through employment incentives, thereby aligning the employee goals and actions with those of the workplace ⁽⁸⁾;
- (b) management literature, which brought together research on HPW and high performance organisations, organisational psychology and the economics of training, to reveal the relative efficiency of organisational structures which value worker participation in decision making, a comfortable physical working environment, and the opportunity for human resource development (Bosworth, 2005).

While both literatures are relevant, the second is particularly pertinent to the focus of the present study, because of the central role played by human resources and human resource development.

Employers engage in, and fund, training because they believe it will improve the performance of the organisation. Some may have a more instrumental approach than others in that their ex ante evaluation (insofar as one is conducted) sees a direct monetary benefit to the organisation from delivering VET. Others may have a less instrumental approach in that their conception of how VET improves performance is less direct, with its influence mediated through

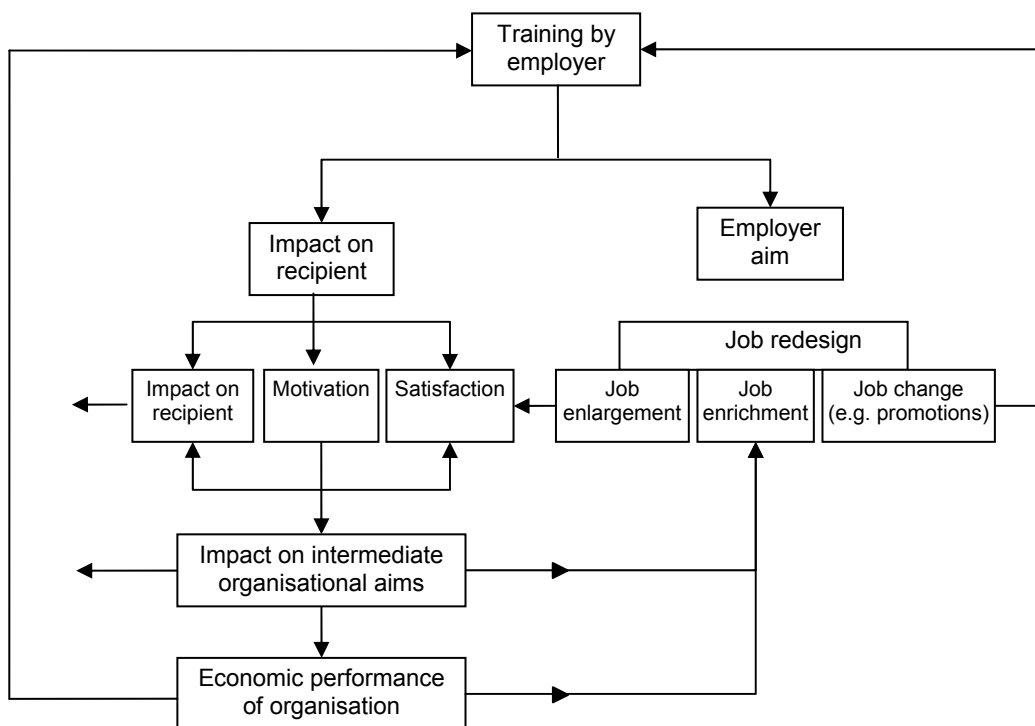
⁽⁷⁾ Early work in this area includes Burns and Stalker (1961).

⁽⁸⁾ A separate part of this literature focused on corporate governance (Bosworth, 2005, Chapter 7) aligning the goals of professional managers with those of the owners or shareholders.

factors such as job satisfaction and worker motivation. In this case, several social benefits need to materialise, before the more tangible gains (e.g. increased productivity or profitability) are realised.

In Figure 1 the employer delivers training with a specific purpose in mind. Depending on the scale of training, this will impact on the recipients of the VET in their workforce, including their skill base (which may be widened or deepened) and their attitudes to work. The training will also – again depending on the scale of the VET delivered – have an impact on the organisation of work (e.g. the design of jobs) and the relative position of people in the occupational hierarchy (e.g. training may lead to promotion). The allocative aspects of VET are important from the perspective of the acceptance of training by the workforce and need to be seen, in some sense, as being sufficiently ‘fair’ (Sections 4.5 and 4.6.4).

Figure 1. **Relationship between the social and private returns on employer provided VET**



Human resource management and industrial psychology literature demonstrate that improved job design (i.e. through job enlargement, where workers are expected to take on conceptually more complicated tasks) is positively related to both job satisfaction and worker motivation (which may be

considered as an intermediate level organisational aim); these then feed directly into more tangible, monetary benefits for the employer and higher wages for the worker. In the absence of a more fundamental restructuring of the work carried out, gains from training tend to be short-lived. If the VET intervention by the employer is relatively modest, or the nature of work carried out is mundane and monotonous, any initial gain from training is unlikely to persist.

One area, in particular, has seen VET as integrated within a broader group of human resources and work organisation: the work in HPW and high performance organisations literature (Bosworth, 2005, pp. 210-211; Belt and Giles, 2009). There are different strands of this literature, but a key focus is the role of human resource management and HPW in both promoting and developing the resources available to the enterprise, and in determining the ways in which such resources are organised and incentivised; this is a 'resource-based theory of the firm' (Penrose, 1959; see also Bosworth, 2005). Learning opportunities and training are two of the key ways in which human resources are developed, while the adoption of HPW is '[...] a general approach to managing organisations that aims to stimulate more effective employee involvement and commitment to achieve high levels of performance' (Belt and Giles, 2009, p. ii). This view of HPW moves the debate beyond improving the supply of skills, to the question of employer demand for skills and, thereby, effective use of them (Belt and Giles, 2009, p. i).

The work on the effects of individual human resource programmes (e.g. a training programme) or a new work initiative (e.g. annualised hours) has largely been superseded by that looking at the effects of 'bundles' of human resources practices and new forms of work organisation (e.g. appropriate training to enable working as a team, increased individual and team responsibilities, and job rotation) (Arthur, 1994; Huselid, 1995; Boudreau and Ramstad, 1996; Youndt et al., 1996). While the empirical evidence suggests that both the 'individual' and 'bundle' approaches have positive effects on performance, the enterprise appears to benefit disproportionately from the synergies that 'bundles' of new practices and new forms of working offer (Bosworth, 2005, pp. 222-235).

The question arises as to why these bundles of mutually reinforcing work practices are not universally adopted (Tamkin et al., 2008, p. viii). One explanation may be that the synergies that arise from bundles of HPW practices may require a scale of operations that lies out of the scope of most firms (e.g. SMEs). A second, and more complex, set of reasons has started to emerge from HPW literature, which is concerned with the 'fit' of the various policies (Huselid, 1995). The 'internal fit' is concerned with the compatibility of the group of human resource management policies chosen and the extent to which

complementarities can emerge from that mix; the 'external fit' is concerned with the compatibility of the 'suite' of human resource management policies adopted with the enterprise's broader competitive strategies, i.e. goals and product market strategies, such as cost saving versus improving quality.

4.5. Identity and partial gift exchange

HPW literature is largely empirically based, testing which combinations of working practices work best in which contexts (e.g. are most compatible with particular goals and strategies of the firm). This literature still does not reveal the sociopsychological relationships that make certain mixes of HPW work together in certain contexts. Without any attempt to be comprehensive, the rest of this section outlines contributions from other disciplines which may throw light on these relationships.

4.5.1. Identity

The discussion has already indicated that employer training is one area where monetary rewards are fraught with difficulties (see also Prendergast, 1999; Gibbons, 1998). Akerlof and Kranton (2005, p. 11) argue that '[...] identity is an important supplement to monetary compensation, which as sole motivator can be both costly and ineffective'. Identity, a person's sense of 'self' (or perhaps of 'belonging') has a value (Akerlof and Kranton, 2000) and, according to Akerlof and Kranton (2005, p. 11), '[...] the ability of organizations to place workers into jobs with which they identify and the creation of such identities are central to what makes organizations work. An employee who identifies himself as an insider in an organization needs little monetary inducement to perform his job well'.

In the standard economic model of labour supply, a worker's utility depends on wages (positively related) and effort (negatively related). In the 'identity' model, the worker takes on an identity as part of the organisation; by implication the individual loses utility if they do not act in the organisation's best interests (Akerlof and Kranton, 2005, p. 13). The presence of higher identity-utility will lower the wage differential needed to induce the worker to offer high levels of effort *vis à vis* another alternative worker with lower identity-utility, other things being equal.

There appears to be an important element of truth in this view of behaviour (Fehr et al., 1993). From an economic perspective, it suggests several important features. First, investments (such as training) aimed at increasing the degree to which the individual identifies with their organisation, produce an outward shift in

the worker-effort/wage relationship (e.g. the supply of labour curve), which is favourable to the employer; the same would be true if the employer was able to recruit workers that share the organisation's mission. Second, it establishes the general principle that non-monetary mechanisms may play an important role, which seems particularly important in the context of organisational investments in training, where the appropriation of returns to the employer requires some minimum degree of commitment to (and not just tenure with) the organisation. However, the idea that the firm simply increases training and, in turn, employees work harder seems to be another 'black box' that fails to identify how training really translates into better organisational performance.

4.5.2. Social exchange models: trust, reciprocity and fairness

The partial gift exchange hypothesis is that principles of 'fairness' and 'reciprocity' affect the interaction between workers and employers in determining labour contracts. This hypothesis has been couched in the context of the effect on wages (and employment) in a competitive labour market (Akerlof, 1982 and 1984). In this model, some employers choose to pay employees more than the standard competitive wage; other things equal, this means paying more than the employees are 'worth' and, in a highly competitive world, going out of business. However, in return for the higher wage, employees supply greater effort than if they were paid the going market wage. In this sense, one gift (the higher wage) gives rise to a reciprocal gift (the higher effort). In principle, a range of wage-effort outcomes can be equally competitive in the market.

When couched in terms of non-wage effects, including identity, social exchange models suggest a link between employee attitudes and HPW. HPW engenders a mutual-investment approach that is built on a reciprocal and social exchange relationship (Blau, 1964; Tsui et al., 1997) or on a psychological contract (Guest, 2004); training may be viewed as one part of a partial gift exchange. Management literature largely divorces the associated 'exchange' from economics, although the results have clear economic consequences. The willingness of employees to train is linked to the non-pecuniary returns associated with the development and participation practices of HPW, such as the opportunities for employees to take responsibility, make decisions, improve their knowledge and skills and their contribution to the enterprise. The employer benefits because of the greater 'affective commitment' of employees to the enterprise (Wu and Sankalp, 2009, pp. 1231-1232).

Related concepts concern the nature of social interactions within the enterprise and the enterprise culture. According to Bennis (1997, p. 3), group dynamics are an important source of synergies, where '[...] the leader and the

team are able to achieve something together that neither can achieve alone. The leader finds greatness in the group. And he or she helps the members to find it in themselves.’ Such group dynamics are the result of social interaction, and involve the enterprise in managing the group in a manner that generates a ‘gift culture’ of the type that underlies the Akerlof model ⁽⁹⁾. The prevailing culture forms part of the enterprise’s ‘productive social capital’ (Putnam, 1993).

Trust has become an important concept in company performance. Many researchers have found a relationship between trust in higher-ups and various measures of organisational performance (Kim and Mauborgne, 1993; Rich, 1997; Robinson, 1996). However, the behaviour of employees may be shaped not only by how much they trust management, but also by how much employees themselves feel trusted by management ⁽¹⁰⁾. In a similar manner, trust among outsiders is a key influence in building social capital in the workplace, but the level of the social capital of the organisation may also help to engender trust among outsiders. Social capital includes all forms of relationships, such as family, race, ethnic, and political. It can be viewed as the sum of all resources (bearing in mind there may be synergies between them) available to individuals from their relationships with others (Nahapiet and Ghoshal, 1998).

While oversimplifying, economists would not see any problem in reintegrating this within their traditional framework. They would view the ‘social exchange’ or ‘psychological contract’ as raising employees’ utility from their work (a non-pecuniary remuneration) while at the same time, raising their commitment and effort; this raises their productivity and potential tenure, which raises the returns on the investment in training by the employer. While it would not sit at all well with researchers from a sociological or psychological background (and many economists), the gift exchange could be viewed in the context of a neoclassical investment setting, where employers offer additional amounts of training linked to more demanding, but satisfying jobs. This reaches the point where, at the margin, the gains in performance (discounted future profits) from improved employee commitment, etc. are just equal to the additional costs of the training and HPW.

⁽⁹⁾ Dimensions of the management of such a culture are set out in Kramer et al. (2001).

⁽¹⁰⁾ ‘[...] we have shown that collective felt trust affects performance beyond the effect of employee trust in management. That individuals’ perception that they are trusted impacts responsibility and performance suggests that existing trust models may overlook an important factor that needs to be considered in the trusting decision’ Salamon and Robinson (2008).

4.6. Employer and employee surplus

4.6.1. Towards a new 'economic' framework

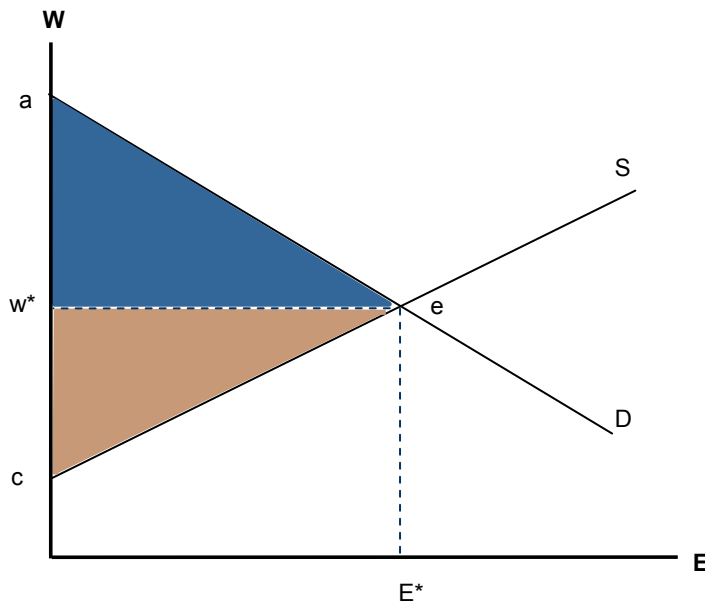
This section attempts to provide a starting point for a new framework which reflects the social returns of training for employers and employees; while the returns for these two groups can be distinguished, they are interdependent in nature. A willingness-to-pay approach is adopted, which is widely used in examining social returns in other contexts. The framework is intended to, at least, be consistent with the approaches found in other disciplines and no attempt is made to explore equilibrium outcomes in the model (other than to say what an equivalent hypothetical labour market outcome might look like). The model is at the early stages of development, and currently focuses on the labour market outcomes; later, it will need to say something about individual organisations. The full description of the working of the model can be found in Annex 4. The discussion will take up the issue of how the model may be developed at the end of this section.

4.6.2. Surpluses in the factor market and partial gift exchange

The first reason for working at factor market level is that consumer surpluses have been the traditional focus of welfare effects, such as the additional welfare – or surplus – that individual buyers obtain over and above the price they have to pay for a product. Little has been said about this phenomenon in the context of training or HPW. However, a surplus approach offers a link between the economic treatment of well-being and the concept of partial gift exchange, although it glosses over some of the richer insights of the sociopsychological theories. More important, an examination of surpluses in the context of labour market outcomes from training offers both a direct link with the concept of social returns, as well as new insights about the willingness of employers to offer training and that of employees to accept it.

There are other reasons for beginning working on a new conceptual model at the labour market level. First, unlike the standard perfectly competitive outcome, if individuals have a perception about what the overall market outcome will be, they may be more (or less) resistant to any given change, depending on whether the likely market outcome will be adverse to them (or favour them). In addition, where broader labour market institutions exist (employer bodies, unions, professional representative bodies), these institutions may themselves act in the broader interests of their members to resist (or encourage) the changes. Finally, it is possible to show how the standard, competitive market outcome is modified when employer provided training is enterprise-specific.

Figure 2. Employer and employee surpluses from trade in the labour market



The underlying idea is that the trade in labour services does not leave each group (employers and employees) feeling indifferent (Figure 2). In neoclassical theory, only the last possible market ‘trade’ leaves the (potential) employer and the (potential) employee feeling indifferent about the transaction, at the going (equilibrium) wage (w^*), where supply (S) equals demand (D). Under normal trading conditions, all preceding trades take place between employers who, in principle, would have been willing to pay a higher than market wage (area aew^*) and employees who, in principle, would have been willing to work for a lower than market wage (area cew^*). For example, the first employee (E) would have been willing to supply their labour for c ($c < w^*$) and the first employer to pay a ($a > w^*$) for the first employee. While the parts of the supply and demand curves (ce and ae respectively) remain unobserved, they can be estimated in various ways, for example, via the willingness to pay (and willingness to accept) concepts outlined in literature ⁽¹⁾.

Thus, all preceding trades than the final, market equilibrium trade can be seen as a partial gift exchange, in which, on the one hand, the ‘gift of work’ by the employer (a job) brings the employee a level of satisfaction more than necessary to off-set any disutility that arises from work, while, on the other hand, the ‘gift of

⁽¹⁾ There is a vast literature on this subject, see e.g.: Hanemann (1991).

work' (labour services) by the employee, in principle, generates more revenues than the costs of employing the individual. This suggests that the relative levels of satisfaction of the two groups are not determined by the wage alone, but also by the slopes of the supply and demand curves and, thereby, by the relative size of the areas aew^* and cew^* .

At the going market price, all preceding trades give rise to an employer surplus such that, the larger the surplus, the happier (more satisfied) they are from their labour market exchange; similarly, the greater the employee surplus, the happier (more satisfied) employees are from their exchange of labour services in the market. Each trade, with the exception of the final, equilibrium trade, can be looked on as an employer offering the employee a partial gift (a wage more than necessary to extract the offer of labour services) and the employee offering the employer a partial gift (their labour services for a wage less than the employer would be willing to pay).

The motivation for accepting or rejecting, encouraging or blocking proposed changes in training/HPW may rest, not on changes in wages or utility for the marginal worker, as in the case of traditional neoclassical theory; it may involve issues of trust and perceived fairness in the interaction between employers and employees, such as the sizes of the relative employer and employee surpluses gained from the employment contract pre- and post-training. Many of the implications of these interactions are less precise in their implications than traditional neoclassical outcomes and require further investigation and study. Annex 3 examines in depth the changes in employer and employee surpluses associated with training and the introduction of HPW.

4.6.2.1. *Partial gift exchange*

The general theme of the new framework is that employers cannot effectively impose a change on employees; they require some mechanism that induces employees to cooperate with training and use their new, post-training skills effectively. It has been argued above that employees may be able to block the effectiveness of such initiatives, so there is an issue of 'trust'; the employer trusts the employees to cooperate and not to undermine the investment in training/HPW. There is a further issue of 'fairness', insofar as the employer does not want the employees to feel unfairly treated, which may give rise to adverse

long-term behaviour by employees. In a long-term game, there is an incentive for employers to want employees to cooperate, so that the outcomes appear fair ⁽¹²⁾.

Consider the case of firm-specific training that also improves working conditions. Employers receive the benefits of the training and the employees receive the benefits of the improved working conditions. Improved working conditions are a gain for employees and might exert downward pressure on wages: employees should be willing to receive a lower wage in exchange for working in a better workplace. However, the training might exert upward pressure on wages if employee productivity is increased. A potentially special case applies when the upward pressure equals the downward pressure so that the employee wage remains constant at the 'competitive market wage'; other wage outcomes are a positive net wage increase, when the upward wage pressure exceeds the downward wage pressure, and a negative wage increase in the opposite case. In The ability to introduce specific training and forms of work organisation that cannot be replicated by other organisations opens up an additional surplus that allows the benefits to be shared between employers and employees. The question arises as to whether it is possible to say anything more about the division of the additional surplus between the parties?

The first consideration is that both training and changes in work organisation have a cost. While this may be primarily borne by the employer, there are other costs, such as psychological ones, which are borne by the employees. Such costs must be covered by the improvements brought about by the training/changes in work organisation. Both parties will have a view about the extent of the net benefits to employers and employees of the measures proposed. These views need to be managed to bring them sufficiently into alignment for the initiative to have a chance of success.

The second issue is that the returns on investment in training are generally dependent on the introduction of new forms of work organisation and *vice versa*. With employers as the primary recipients of the training surplus and employees as the recipients of the work organisation surplus ⁽¹³⁾, there is an interdependence of employer and employee surpluses (unlike standard welfare surpluses). The most successful changes will be those that bring about

⁽¹²⁾ The concepts of trust and fairness have become an increasingly important focus of game theoretic outcomes (see e.g. Rabin, 1993 for a discussion of the early, mainly experimental evidence of the importance of fairness in economic outcomes).

⁽¹³⁾ Employers can, in principle, appropriate the increased surplus resulting from improved working conditions if they are able to reduce the wage of employees (re the compensating variation).

improvements in the working conditions of employees and reduce (or even remove) the need for changes in the wage. Insofar as such changes are firm-specific (e.g. increasing the employee identification with the enterprise) they will also tend to reduce labour turnover and increase the returns on training.

A third consideration is that, unlike the neoclassical theory of the returns on training, this new theory does not envisage a central role for wages. Wage adjustments can be minimised through a compensating offering of improvements in employee surplus through working conditions that offset the increase in employer surplus that training potentially offers. The earlier discussion argued that wages are not a very efficient mechanism for the division of returns on specific training for several reasons: a downward movement in wages will be resisted by workers, even if their conditions of work are improving; and they are easily compared with what equivalently skilled employees are paid in other markets, making downward deviations a source of contention among employees or employers when the wage adjustment rises above the market wage.

Fourth and finally, it is possible to measure the changes in the absolute and relative values of the surpluses caused by any package of training and a change in working practices. While these measures are not intended to provide an indication of some equilibrium or optimum outcome, they may nevertheless suggest alternative outcomes of employer and employee surpluses that are potentially acceptable to both parties. Further evidence of how the surplus is shared might be gleaned from experimental economics literature (for details see Loomes, 1991).

4.7. Conclusions

Traditional, neoclassical economics, while intuitively appealing, only does the easy part of the job. It helps to provide insights about what the optimal level of individual and enterprise funded training might be from an economic perspective. It also provides useful but limited dichotomous extreme outcomes with regard to the distribution of training funding, in which either the individual (general training) or the enterprise (specific training) pays all of the costs.

While its conceptual boundaries can be widened (e.g. to include social as opposed to private cost-benefit analyses of training) this broadening of scope is more difficult both to conceptualise theoretically and to operationalise empirically. The focus of the present study is the social returns from training, particularly from

the employer and sectoral perspectives. In the present study social returns have a different meaning from that usually adopted in economics ⁽¹⁴⁾ and denotes the overall level of satisfaction individuals obtain from their work and the overall benefits obtained by the firm employing the individual these are referred to as economic surpluses. The question addressed in the present chapter is the effect that training has on each of these surpluses.

In attempting to broaden the boundaries in this way, economic analysis needs to draw increasingly heavily on other disciplines, such as sociology and psychology. A major development outside of economics has been sociopsychological literature on the employment contract as a partial gift exchange. Here, this concept is applied to the offer of training. If a firm offers to provide training to individuals (perhaps in the context of a broader HPW package), do the trained individuals reciprocate by being more productive within the enterprise: in the simplest model this would be by working harder, but there are much more complex and potentially more creative/innovative ways. What the new conceptual framework already suggests is that employees will not be positive about training if the scope to modify jobs is modest or non-existent. This is also true if there is scope to modify jobs but the modifications are not seen as being beneficial to the workforce.

The concept of partial gift exchange appears to have considerable merit. It fits well with the issue of the introduction of HPW, insofar as the latter offers:

- (a) employees non-pecuniary benefits, which result in improvements in attitudes to work (e.g. identification with the organisation) and, therefore, in terms of greater effort and more inventive contributions that improve the performance of the enterprise ⁽¹⁵⁾;
- (b) employers a mechanism by which they can fully exploit the benefits of the newly acquired skills in their production activities (e.g. by changing the methods of production – work organisation – or the nature of the product offer to consumers).

It is possible to think of partial gift exchange in terms of some optimal, equilibrium outcome. For example, the willingness to give or to reciprocate the gift may depend on what each party (the givers and receivers) gain from the

⁽¹⁴⁾ In economics, the difference between the social and private returns in terms of the costs and benefits of training that are not captured by the individual or enterprise funding the training.

⁽¹⁵⁾ This is consistent with the important finding that most employers claim that changes in workers' attitudes and abilities would bring about the greatest improvement in the performance and productivity of their companies or organisations (Clarke et al., 1980).

exchange. Since gifts have a cost to the giver and are a benefit to the recipient, it becomes relatively easy to recast this non-market exchange in a neoclassical context, e.g. based upon the marginal costs and benefits of giving and receiving. However, it is not at all clear that such a development would improve our understanding of what happens in the real world, where experimental economics suggests that issues of trust and fairness play a central role in gift exchange.

The present report attempts to reinterpret partial gift exchange from the perspective of employee and employer surpluses. From the employee perspective, this surplus is defined by the area between the labour supply curve and the wage. There is a corresponding measure of producer (employer) surplus, defined by the area between the demand for labour curve and the wage. The first of these two concepts reflects an estimated value that the employees obtain in working for the enterprise over and above the going wage, while the second reflects the value that employers place on labour over and above the going wage. Such areas represent the measures of social returns as defined in the present study, and can be viewed in terms of either the market wage or, for example, the wage set on the basis of some acceptable view of fairness on the part of employees and employers.

This suggests that the value employees place on the offer of training (as a part of a HPW package) can be judged from what this training would do to the employee surplus. Similarly, the value of any reciprocation by employees in terms of greater commitment and effort will be reflected in the surplus of the employers hiring labour. What happens to wages remains potentially important as the wage rate forms the dividing line that separates the two surpluses, but the ability of employers to offer non-wage benefits in the form of improved working conditions reduces the reliance of the outcome on wage adjustments, which are often problematic. The use of the surplus concepts within the analysis of training/HPW investment appears novel and quite distinct from the main economic focus on the rate of return on training/HPW based mainly on wages and profits.

The introduction of gift exchange theory in the context of employer and employee welfare surplus, however, suggests some surprising aspects of 'giving', in particular, that the giver:

- (a) may stand to benefit from the gift more than the receiver;
- (b) nevertheless wants the recipient group to share in the benefits of the gift.

The results suggest that employers have to be cautious in what they offer, because it seems likely that employees may react not only to the absolute

change in their surplus but also to the relative change ⁽¹⁶⁾. At the heart of this approach are issues of fairness and trust: the recipient group will expect to share in the benefits of the gift with the giver; the giver will generally want the recipient to share in the benefits to build trust so that reciprocation takes place and a fair outcome for both parties is reached.

This new view of the training/HPW and worker effort/productivity outcomes further blurs the already faltering distinction between the allocation of costs and benefits in traditional neoclassical theory, as well as the distinction between private and social returns. An employer's offer to share the benefits of investment in training/HPW may be seen as a social benefit to the employees, but it may also be seen as a way of ensuring not only acceptable returns from the investment by the employer, but also the future cooperation of the workforce by building trust through an environment of fairness. This does not reduce the importance of other forms of social returns (such as the important implications of training/HPW investments on net versus gross profits or in terms of spillovers and externalities), but this new view offers a richer understanding of the private and social issues than can be derived from the rather arid neoclassical framework.

4.8. Further development of the conceptual model

The present work is at the early stages of developing a conceptual model. While detailed justification was offered for beginning the exploration of the model at the labour market level, it is important to establish the micro-foundations of the model via the decision making processes of individual employers and employees. Some indications of possible ways forward in developing a micro-framework can be found in literature.

There is clearly an issue with heterogeneity within the labour market (there may even be a problem with the concept of a unique labour market where there is a mix of general and enterprise specific skills). One aspect of the issue of heterogeneity can be illustrated in the context of the present framework by the fact that the ranking of employers and employees in terms of their surpluses within the labour market appears to matter (e.g. that an employer with a high surplus from the employment of labour might be paired with employees with a low surplus, and *vice versa*). Thus, different employees and different employers within the market may face quite distinct relative wage and surplus effects from

⁽¹⁶⁾ Full analysis requires incorporating the costs of the 'gift' as well as the benefits.

otherwise similar training/HPW offers. Existing support for heterogeneity can be found in the experimental evidence, which suggests that effort offers at any given wage differ between individual workers.

To date, little has been said about the costs of training from the employer perspective, though there has been some discussion about the costs from the employee viewpoint (even where the employer pays the financial costs of training). Even from the employee perspective, there is a need for more detailed consideration of the costs. Specific training may reduce the mobility of employees between employers, while other investments may increase the identification of the employee with the employer. While such activities may raise the returns from training for the employer (and the employee), they may also increase the risk to the employee of putting all of their eggs in one employer basket and lowering their discounted stream of future returns from other lines of employment.

At this point in the development of the conceptual model, there is a need to give greater consideration to the dynamics of partial gift exchange. To date, all of the discussion has been in the context of the comparative statics of employee and employer surpluses. This needs to be extended to a two or more period model of the discounted cash flow type traditionally used in education and training decisions.

CHAPTER 5

Estimating the social benefits to employers

5.1. Lessons from the conceptual framework

The conceptual review argued that the private returns on employer-funded training from the individual and workplace perspectives, as they are traditionally calculated, tell us little about the social benefits of training and, thereby, the employer and employee surplus effects. The focus of the private returns literature is largely on the pecuniary returns: for the individual this is mainly wages or earnings, while for the enterprise it usually takes the form of the efficiency or profitability of the enterprise ⁽¹⁷⁾.

The conceptual review moved the general theoretical approach away from the neoclassical framework. An alternative, partial gift exchange, approach appears to provide considerable insights about the training decision and deals with the issue of how a training offer by employers (often in the context of a broader package of HPW) would be received by employees. The employee response has been shown not to be a simple function of the prevailing wage outcome, but heavily dependent on the change in welfare surpluses (e.g. employer and employee surpluses) that employees see resulting from the training.

There are two principal aspects to these surpluses from the employee perspective:

- (a) the change in the absolute magnitude of the employee surplus itself (an increase in the surplus is an unequivocal benefit, other things, including the going wage, being equal);
- (b) the change in the employee surplus relative to the employer surplus, which is argued to impact on issues of fairness, trust and mutual benefit.

An important contribution of the present analysis is to examine whether training has a positive impact on the size of the employee surplus and whether other aspects of working conditions, such as the presence of a learning and creative environment, appear to supplement training in this role. According to the

⁽¹⁷⁾ Even here, the returns for the employer in terms of efficiency gains (e.g. higher labour productivity) may not be realised in terms of higher profitability, as employees take some these improvements as higher wages, which are reflected in the higher costs of the enterprise.

theory, such effects should take place over and above the influence of the wage, where wages are expected to be positively related to employee satisfaction.

The present chapter provides an exploratory analysis of the EWCS 2005 and, to a lesser extent, the CVTS. The analysis is exploratory for several reasons:

- (a) it focuses largely on the determinants of the employees' satisfaction with their working conditions⁽¹⁸⁾. This work concentrates mainly on a key question contained in EWCS which allows the employee to rank their working conditions according to the degree to which they are satisfied with them, linking neatly to the conceptual work on employee surpluses;
- (b) it adopts ordinary least squares regression techniques, even though, at the stage reached since completing the present exploratory work, other methods (e.g. ordinal regressions) might be more appropriate to some of the estimates;
- (c) it adopts a multi-stage approach to determine the role of different groups of variables:
 - (i) key control variables to investigate the extent of differences across different countries, sectors, occupations, sizes of enterprise, etc.;
 - (ii) important dimensions of jobs that appear to relate to hazards of work, in particular unsocial aspects of work;
 - (iii) most important, the role of training, alongside key aspects of the way in which work is organised that allow employee flexibility in learning, be creative and to gain from experience, etc.;
 - (iv) the role of wages, primarily to examine whether any positive link between better working conditions and satisfaction with working conditions is maintained once wages are accounted for in the specification⁽¹⁹⁾.
- (d) while this part of the study explores the extent of training and links it with the presence of other dimensions of working practices, much more can be said in future work about the 'embeddedness' of training and complementarities between training and other dimensions of HPW⁽²⁰⁾;

⁽¹⁸⁾ Other results based on the European Foundation EWLBS are not reported here and will be considered in future work on the project.

⁽¹⁹⁾ If, for example, all unsocial aspects of working conditions are fully compensated for by compensating variations in wages, there would be a tendency for the wage variable to displace the work organisation variables in the explanation of the employees' satisfaction with working conditions.

⁽²⁰⁾ The earlier discussion noted that empirical literature finds tentative evidence that, while the private returns on training amongst enterprises are likely to be positive, they tend to be greater when training is embedded in a broader HPW package.

- (e) while this part of the study includes an initial examination of the role of wages, more research is needed to explore the relative roles of wage and non-wage compensation in different settings (e.g. countries, sectors, organisation sizes, etc.).

Section 5.2 continues with a discussion of the measurement of the employee surplus. While Chapter 4 adopted a 'willingness to pay' type approach to establish the magnitude of employer and employee surpluses, the present chapter uses a Likert measure. Section 5.3 provides the main empirical results to date. Reflecting the discussion above, it provides:

- (a) brief coverage of the control variables (e.g. country, sector, occupation, etc. effects);
- (b) brief outline of the role of the inherent riskiness or hazards linked to particular jobs;
- (c) (more detailed discussion of the links between training, learning opportunities and the employee surplus.

Finally, Section 5.4 sets out the main conclusions of the empirical work to date.

5.2. Social returns from training: employer-created surplus

Estimating the private returns on training is outside the remit of the present study. The focus is on whether enterprise training, either as a separate activity or alongside other HPW practices, gives rise to non-pecuniary employment benefits that are beneficial to employees and improve the quality of their working life. An indication of the individual employee's feelings about their overall working conditions can be isolated from the question asking about their degree of satisfaction with their work. EWCS 2005, for example, asks 'are you very satisfied, satisfied, not very satisfied or not at all satisfied with working conditions in your main paid job?' (q36). While this is the only question in EWCS 2005 that directly addresses employee satisfaction with their working conditions, it corresponds fairly closely with the concept of employee surplus, as set out in Chapter 4. Nevertheless, such measures of satisfaction have several dimensions that are difficult to unpick. The outcome might depend on several factors: the individual's comparison with other, quite different, jobs; a comparison with working conditions in similar jobs; and adjustments in satisfaction over time. An

individual might become 'normalised' to the nature of work they participate in (e.g. becoming adjusted to a degree of boredom or risk) or might become increasingly ill-adjusted to the nature of the work (e.g. as the daily grind or the unsocial hours take a cumulative toll).

For progress in assessing the quality of working life, therefore, the present study turns to the much richer detail about the way in which work is organised. The results may depend on the phrasing of any such question regarding job satisfaction: while the present question appears to be broad ranging, covering all aspects of working conditions, it is not clear that it will be as broadly interpreted by some individuals as by others, for example with regard to remuneration. The later statistical analysis focuses on how, and how much, the satisfaction measure encapsulates the different dimensions of working conditions ⁽²¹⁾. While there is brief consideration of the relative roles of work organisation and wages, the way in which pecuniary and non-pecuniary rewards are combined in different settings will be the subject of future research on this project.

A little more needs to be said about using this measure of satisfaction to understand the social returns from employment and, in principle, the social returns on training provided by enterprises. Dealing with conceptual issues, the simple labour market equilibrium will produce a factor surplus in which all suppliers feel, at worst, satisfied with the wage-employment outcome: the marginal worker will be indifferent between being employed or not. Dependent on the slope of the labour supply curve, this leaves the remainder – generally, most individuals – more than satisfied with the trade in the sense that they are paid a higher wage than the one they would be willing to work for.

Why, then, are so many individuals less than satisfied with the conditions of trade (Figure 3)? The reason is that labour markets are rarely (if ever) in equilibrium in this sense; it is disequilibrium in the traditional meaning of the word that gives rise to the need for training or other forms of investment or adjustment, whether to counter a market threat or to exploit an opportunity. Factor markets (like product markets) are being continually nudged by continuing economic and other forces, which may produce movements out of or towards equilibrium in this traditional sense or may create entirely new markets or completely undermine existing markets, in the Schumpeterian sense. Considering the social returns from training in this more dynamic sense is no different than admitting that wages themselves are subject to changes from economic and other forces.

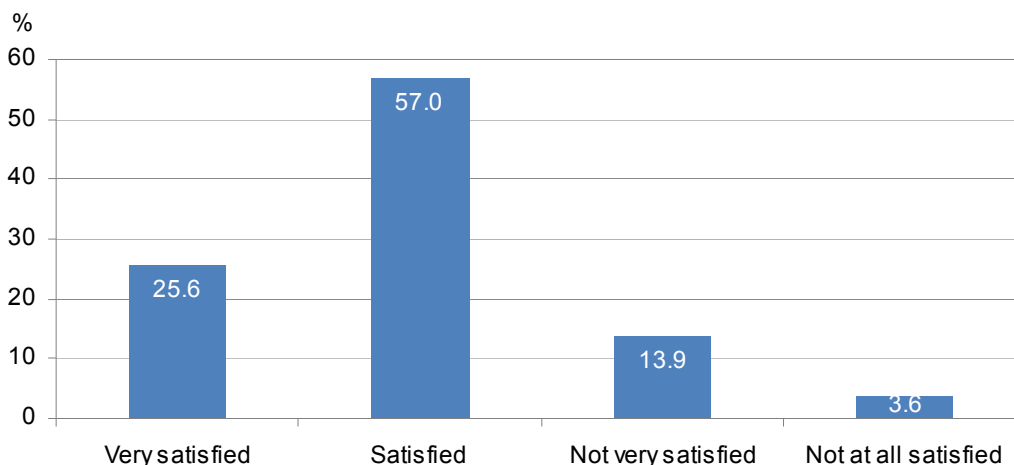
⁽²¹⁾ Initial work on remuneration and how it is linked to non-pecuniary benefits is not reported here, but will feature in future work by the authors.

Bearing these issues in mind, the survey question about the individual's satisfaction with working conditions appears both a useful approximation to the employee surplus and, thereby, a useful way of determining the factors that impinge on employee satisfaction. By implication, the present report will go some way towards deciphering the influences on the social returns from training and to disentangle these returns from other features of work organisation that impact on the individual's feeling of well-being.

No assumptions are made here about optimisation from an individual or collective perspective. The present study takes various aspects of working arrangements as being likely to generate positive (or negative) feelings among employees. Examples of arrangements likely to generate positive feelings include more socially acceptable lengths and times of working (e.g. working days as opposed to nights), greater flexibility of work (e.g. the ability to control the start and/or end times of the working period), higher levels of control over the work carried out (e.g. some ability manage own work loads). Such assumptions are a judgement as to what, 'on balance' is preferable, as such outcomes may not suit every worker. Whether or not such arrangements or features of work have a significant positive or negative effect are then tested in a model explaining each individual's satisfaction with their working conditions, based on question 36, as above.

Figure 3 provides the starting point for exploring job satisfaction. As might be anticipated, most individuals are either 'satisfied' with their working conditions (57.0%) or 'very satisfied' (25.6%), leaving a relatively small proportion 'not very satisfied' (13.9%) or 'not at all satisfied' (3.6%).

Figure 3. **Level of satisfaction with working conditions**



Source: EWCS 2005.

It remains quite difficult to interpret these figures in terms of the welfare surplus among employees. One possible interpretation would be that the ‘not very satisfied’ are the marginal group close to the intersection of the supply and demand curve for labour, where the wage is only just sufficient to compensate for the disutility of work. Depending on what proportion of this group are considered to be below their supply curve, between 3.6% and 17.5% (e.g. 13.9 + 3.6) may be thought of as being in a disequilibrium that might lead them to switch jobs or move into some alternative state such as unemployment or inactivity.

Figure 4. **Approximating the likely nature of employee surplus**

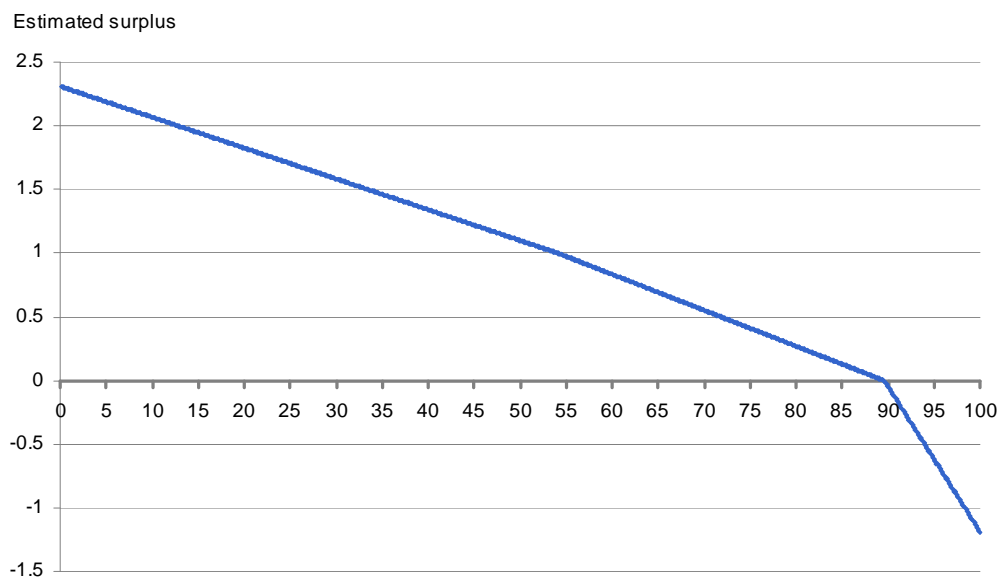


Figure 4 applies a linear interpolation to illustrate what the surplus might look like. This calculation arbitrarily sets the mid-point of the ‘very satisfied’ group (12.8% of individuals) to a value of 2 and 28.5% of individuals ([57/2]%) to a value of 1⁽²²⁾. The interpolation assumes that half of the ‘very satisfied’ group have a value higher than 2 and half have a value lower than 2, but higher than 1. Similar interpolations are applied to the other two groups of less satisfied

⁽²²⁾ The arbitrariness occurs because comparisons of interpersonal utility are fraught with problems. These values are the ordinal measures based on the survey values, but translating them into cardinal values (as carried out here) is problematic. However, in this exploratory stage of the work, cardinal and ordinal values are used interchangeably; in future development of the work, the modelling will use ordered estimating techniques that allow a distinction to be made between the two types of measure.

individuals. There is no reason why the positive part of the surplus figure should appear to be linear, but using this method of interpolation it is close to linear. However, there is a reason why the 'not at all satisfied' group creates a non-linearity; this is a sub-group of all those who would have been dissatisfied with their working conditions, but some of the group have already left to find other, more suitable forms of work or moved into unemployment or inactivity.

5.3. Influences on employee surpluses

5.3.1. Data and econometric analysis

Following on from the discussion in Section 5.2, the present section adopts the measures of satisfaction with working conditions as a proxy measure for the employee surplus generated by their employment. The initial application of linear regression techniques uses the coded values of 1=very satisfied, 2=satisfied, 3=not very satisfied, and 4=not at all satisfied, as a cardinal proxy measure of the underlying utility of workers.

This section explores several basic dimensions that might be anticipated to impact on employee⁽²³⁾ perceptions of working conditions from a survey of approximately 25 thousand individuals from 31 European countries. Section 5.3.2 deals with some of the main dimensions that, where appropriate, will be used as 'control variables' when the study begins a more detailed analysis of the inherent nature of the jobs (Section 5.3.3) and the role played by employer-based training and various learning-related aspects of the jobs held (Section 5.3.4). As the control variables always appear in the subsequent regressions (at least where appropriate) and are not otherwise discussed in any detail, it is important to spend time outlining them and discussing their links with employee satisfaction with working conditions.

5.3.2. Key control variables

The base line regressions with the main control variables are of some interest in their own right; they are not significantly altered by the inclusion of other key variables which we add later, such as training (see Annex 4).

⁽²³⁾ Although the term 'employee' is used here, it includes both the self-employed and those on employment contracts with an employer (e.g. a company, government funded organisation, etc.). However, control variables are included for self-employment versus employee status.

The results suggest, for example, that there are significant differences between countries in the overall level of worker satisfaction. The initial evidence suggests that most countries (but not all) have positive coefficients, which indicate that workers from those countries perceive their working conditions to be poorer than in the case of workers from the UK ⁽²⁴⁾. As the precise rankings are not entirely independent of the inclusion of other variables, they are not discussed in detail here but can be found in Table A1 in Annex 4.

Many of the sectoral coefficients are insignificantly different from zero at the 10% level or higher, indicating that the reported sectors do not differ significantly from the base sector, sector 2 (mining and extraction). However, at this stage, it appears that workers in hotels and restaurants (sect16) are less satisfied with their working conditions than the base group and that those in financial services (sect19) are more satisfied. The sectoral results are a little surprising. Sector 2 was chosen as a likely candidate for relatively low worker satisfaction and there was expectation that many of the estimated coefficients would be negative (e.g. individuals in other sectors would feel better off than those in sect2). Further, it was anticipated that there would be greater differences across sectors, leading to a greater number of significant coefficients (the number depends on how 'unusual' the chosen base group is).

The results show a clear occupational pattern, which, combined with the sectoral results, suggests that it is 'what you do' rather than in 'what line of activity you do it' that is more important to worker satisfaction. The results show a fairly clear ranking in worker satisfaction that distinguishes the professional, semi-professional and management groups (occup1-3 respectively) from elementary occupations (occup9, the base group). Only one occupational group (occup8, plant and machine operators, and assemblers) gives an indication of lower worker satisfaction than the base group, but not significantly so.

There appears to be a monotonic relationship between the size of the operating unit (essentially establishment size, not necessarily enterprise or organisational size, unless the operating unit comprises the whole of the enterprise or organisation) and worker satisfaction. As far as the present results are concerned, 'smaller is better', with the possible exception that workers rank the largest size (size500andover) somewhat better than the second largest size group (size250to499).

⁽²⁴⁾ Lower values of the dependent variable (worker satisfaction) are associated with higher levels of satisfaction, so negative coefficients on the estimated variables are linked to higher levels of satisfaction and positive coefficients to lower levels of satisfaction.

This result remains true even when variables are included to represent the employment status of individuals. Here, it might be expected that the inclusion of self employment with no employees (empself) would be highly collinear with the micro operating unit (size1). In fact, both the operating unit size and the employment status variables appear to perform well together, retaining the earlier size result, and indicating that self employment status is generally linked to higher work satisfaction than employee status (and significantly so). The only group to outperform the base self-employed group are the self-employed with employees (empselfemp).

The final base-line result is that males are significantly more likely to report lower satisfaction with working conditions than females.

5.3.3. Inherent nature of jobs: hazards and unsocial aspects

5.3.3.1. *Inherently 'hazardous' work*

This section provides an initial multivariate exploration of the relationships between the inherent nature of some jobs and individual satisfaction with working conditions. There are several types of work, often associated with specific occupations that are inherently hazardous, such as military service and fire fighting); however, there are many jobs which involve a degree of hazard, because of the particular machinery used, or the need to escape if there is a fire, etc. These can also be thought of as a group control variables, associated with the inherent nature of certain types of jobs. All of the control variables outlined in the previous section continue to be included in the analysis, and the results reported in this section (5.3.3) should be interpreted as being obtained having controlled for country, sector, occupation, enterprise size, employment status and gender.

The EWCS 2005 has a series of questions that, to some extent, deal with the issue of inherent risks, some of which are quite high on a spectrum of hazard. These are set out in the following questions (q10):

are you exposed at work to:

- vibrations from hand tools, machinery, etc.? (q10a);
- noise so loud that you would have to raise your voice to talk to people? (q10b);
- high temperatures which make you perspire even when not working? (q10c);
- low temperatures whether indoors or outdoors? (q10d);
- breathing in smoke, fumes, powder or dust, etc.? (q10e);
- breathing in vapours such as solvents and thinners? (q10f);

- handling or being in skin contact with chemical products or substances? (q10g);
- radiation such as X rays, radioactive radiation, welding light, laser beams? (q10h);
- tobacco smoke from other people? (q10i);
- handling or being in direct contact with materials which can be infectious? (q10j).

It is difficult to be exact about which hazards are inherent and which may be avoided by reorganising the work or by redesigning the equipment used, etc.

There are at least two ways of using the results from this question:

- (a) constructing an average count variable that reflects the number and degree of the problems that each individual faces (e.g. a measure is constructed by adding together the responses to each of the questions 10a-10j, where 1=all the time, ..., 7=never, and averaging these totals across the 10 types of problem, lower values are worse and higher values better);
- (b) applying factor analysis, creating new variables for each of the significant principal components isolated.

Both of these approaches have been used and tested (see Annex 4 for further information and the detailed table of econometric results).

Table A3 (in Annex 4) sets out the results relating the effects of these measures of hazardousness to the reported satisfaction of employees with their working conditions. They demonstrate, for example, that the higher the average hazard count (hazval1 is smaller), the less satisfied employees are with their working conditions (column 1). The same direction of relationship applies in the case of the principal component measure (hazval1A, linked to vibrations, noise and fumes in particular), as might be expected, given that the factor weights are all positive and not dissimilar in size (column 2). This, again, suggests that higher levels of hazard are associated with lower levels of worker satisfaction. This does not appear to be the case with respect to the second principal component, however, where, despite the presence of chemicals and radiation, employees report higher levels of satisfaction about working conditions. It may be that the degree of regulation and control of the working environment in the presence of such potential hazards make it a 'better' place to work.

5.3.3.2. *Other potential difficulties with working conditions*

A second EWCS question addresses more generic problems that may affect employee working conditions.

Does your main paid job involve:

- tiring or painful positions? (q11a);

- lifting or moving people? (q11b);
- carrying or moving heavy loads? (q11c);
- standing or walking? (q11d);
- repetitive hand or arm movements? (q11e);
- working at company/organisation premise? (q11f);
- teleworking from home with a PC? (q11g);
- working at home, excluding telework? (q11h);
- working in places other than home or company/organisation premises, e.g. client's premises, on the road? (q11i);
- dealing directly with people who are not employees at your workplace? (q11j);
- working with computers: PCs, network, mainframe? (q11k);
- using internet/email for professional purposes? (q11l);
- wearing personal protective clothing or equipment? (q11m).

It is clear, just from looking at the different parts of the question, that links to hazards or risks are much less clear than in the previous case (q10). There also seems to be an important distinction between questions 11a-e and 11f-l (question 11m is less clear), with the first half of the questions more clearly linked to more disadvantaged working conditions, while the second half includes some aspects of work that might be viewed as being positive.

Column 3 of Table A3 investigates the effect of the average across all the responses to question 11 (e.g. all 13 responses for q11a-m, represented by hazval2). This attempts to address the hypothesis of whether more intensive association across all dimensions covered in question 11 (e.g. a value closer to 1 than to 7) is associated with a lower level of employee satisfaction. It can be seen that, with the inclusion of hazval2, the coefficient on hazval1 (relating to q10) remains highly significant negative, although slightly smaller in absolute size than previously. The coefficient on hazval2 is negative and significant, but small in absolute size; the average responses to q11 suggest that such features are linked to slightly more adverse views about working conditions.

It is, however, fairly straightforward to illustrate the dichotomy in the results between the first and second halves of q11. This can be done in at least two ways: through separating the average count variables between the first and second halves of the results; and by the application of factor analysis. Table A3, column 4, shows the results of keeping the overall average variable hazval2, but adding a second variable hazval21, which represents the effects of the first five parts of question 11. In this employees view the first five dimensions of working conditions as being adverse and detracting significantly from their satisfaction with their working conditions. Having controlled for these adverse factors, the

overall effects of the working conditions, such as greater use of computers, working from home, etc., have a positive influence on employee satisfaction.

5.3.3.3. *Unsocial times and hours of work*

The final dimension investigated in terms of the hazardous or unsocial aspects of work concerns working time: the individual's experience of unsocial times of work (e.g. Sunday working, high working, etc.) and unsocial lengths of work (e.g. hours of work per week). The unsocial times part of the investigation is based on the responses to question 14:

- Normally, how many times a month do you work at night, for at least 2 hours? (q14a)
- How many times a month do you work in the evening, for at least 2 hours? (q14b)
- How many times a month do you work on Sundays? (q14c)
- How many times a month do you work on Saturdays? (q14d)
- How many times a month do you work more than 10 hours a day? (q14e)

The five dimensions of unsocial working times are reduced using factor analysis into two principal components (Table A4 in Annex 4). The effects of these two principal components in the explanation of employee satisfaction with regard to working conditions (unsoctime1 and unsoctime1a) are shown in column 6 of Table A3 (Annex 4). Component 1 has a significant positive value, indicating that a higher intensity of unsocial times of work is associated with a lower level of employee satisfaction. The interpretation of component 2 is less clear, but seems to imply that, while night, evening and long hours are sources of potential dissatisfaction, this may not be true of higher levels of weekend working. The results also show that longer hours of work per week are associated with lower levels of employee satisfaction with regard to their working conditions (column 6 of Table A3).

5.3.4. **Role of education, training and a learning environment**

There follows a more detailed analysis of the role played by education, experience, training and working in a learning-oriented environment. In the empirical results reported in the present section, both the control variables (Section 5.3.2) and the inherent risks and unsocial nature of the job (Section 5.3.3) are retained as the starting point for the present regressions⁽²⁵⁾. In

⁽²⁵⁾ The precise coefficient estimates previously reported (Annex 4) will change with the addition of the education and training variables.

addition to these variables, therefore, the present discussion explores the role of various education, experience and training variables drawn from both EWCS and CVTS (Table 2) and a learning- and creative-environment (Table 3).

5.3.4.1. *Education, experience and training*

Some care should be taken over establishing the role of education and training in influencing employee satisfaction for several reasons:

- (a) the present discussion only considers the relationship between training and employee perceptions with regard to working conditions: there are more complex ways in which training may be relevant, as in its interaction with other high level performance practices;
- (b) education poses a selection problem, as more educated (and qualified) individuals may not only select themselves into better paid employment, but also into jobs with better working conditions;
- (c) a reciprocal gift arrangement may require individuals to have higher satisfaction with their working conditions before they will respond positively to training; training and the perception of working conditions become simultaneously related.

The present, largely descriptive multivariate analysis cannot deal with some of these more difficult statistical issues.

The variables that appear in this part of the empirical work are as follows:

- (a) education level: highest achievement (0,1 dummy variables) ⁽²⁶⁾
 - (iii) no education (edlevel0);
 - (iv) primary education, ISCED 1 (edlevel1);
 - (v) lower secondary education, ISCED 2 (edlevel2);
 - (vi) upper secondary education, ISCED 3 (edlevel3);
 - (vii) post-secondary including pre-vocational or vocational education, ISCED 4 (edlevel3a);
 - (viii) tertiary education – first level, ISCED 5 (edlevel4);
 - (ix) tertiary education – advanced level, ISCED 6 (edlevel5);
 - (x) unknown education level (edlevelmiss);
- (b) how many years have you been in your company or organisation (yrsc0; q2d);
- (c) how many years have you been in paid employment since the age at which you stopped full-time education (q2c);

⁽²⁶⁾ Constructed variable which appears at position 274.

- (d) undergone training paid for or provided by your employer (tresp; q28a_1);
- (e) undergone training paid for by yourself (trempl; q28b_1);
- (f) total cost of continuing vocational training per participant in training (CVT) ⁽²⁷⁾.

While the effects of education, as represented by edlevel1-5, are significant if included at an early stage, without the control and subsequent variables, Table 2 shows that this is not generally the case when the control variables are present. Column 1 of Table 2 indicates that, after the inclusion of control variables, of the designated education levels, only edlevel5 (tertiary education – advanced level) is significantly different to the base group, edlevel0 (no education) and negative, indicating that such individuals have higher levels of employee satisfaction than the base group ⁽²⁸⁾. In subsequent regressions, the roles played by the lower education categories (edlevel1-4) are not reported, although regressions have been run to confirm that these levels of education continue to play an insignificant role.

Before considering the training variables, one further variable often noted in literature is included: the role of experience and learning in determining work satisfaction. In principle, this might take one of at least two forms: the first is the number of years of experience since leaving school; the second is the number of years of experience with the individual's present employer.

The best proxy available for the first of these two is the total number of years that the individual has been in paid employment with any employer (yrsemp). However, this variable is not significantly different from zero at the 10% level or higher in the explanation of the employees' satisfaction with their working conditions. This may be because the respondents have fairly complete employment histories and, therefore, the effects of this variable are already accounted for by the combined effects of years of education (or level of educational attainment) and years of age ⁽²⁹⁾.

The best proxy for the second of these two effects is the measure of the number of years of tenure of the individual with their present employer (yrsco).

⁽²⁷⁾ Variable constructed from CVTS.

⁽²⁸⁾ Edlevelmiss represents the group that are unable to report their education level. This may comprise a disproportionate number of older individuals who have forgotten what education qualifications they have. The coefficient on edlevelmiss is also negative and significant at the 5 per cent level.

⁽²⁹⁾ ÅE.g. for an individual with continuous employment since formal education, yrsemp=age-number of years of education.

This variable turns out to have a significant positive effect on employee satisfaction at the 1% level; the longer the individual has been with the present employer, the more satisfied they are likely to be about their working conditions. The associated result is shown in column 2 of Table 2.

Table 2. **Effects of education and training on worker satisfaction**

	1		2		3		4		5	
	Coefficient	P- value	Coefficient	P- value	Coefficient	P- value	Coefficient	P- value	Coefficient	P- value
edlevel1	0.016	0.755								
edlevel2	-0.026	0.593								
edlevel3	-0.026	0.596								
edlevel3a	-0.019	0.716								
edlevel4	0.014	0.769								
edlevel5	-0.143	0.013	-0.153	0.000	-0.153	0.000	-0.157	0.000	-0.223	0.000
edlevelmiss	-0.196	0.033	-0.174	0.027	-0.179	0.023	-0.180	0.022	-0.177	0.023
yrsc0			-0.004	0.000	-0.004	0.000	-0.004	0.000	-0.004	0.000
trem0					-0.040	0.000	-0.043	0.000	-0.045	0.000
trem01							0.056	0.002	0.055	0.005
CVT									-0.000	0.029
\bar{R}^2	0.168		0.171		0.171		0.171		0.165	
F	53.358	.000	56.758	.000	56.304	.000	55.795	.000	50.3	0.00
Significance		<10%		≥10%		≥5%		≥1%		

NB: General control variables and the role of hazardous and unsocial conditions of work are set out in Annex 4.

The discussion now turns to the main training variables. Three variables are included in the model, the results of which are reported in columns 3-5 of Table 2. The main two variables are derived from the questions asking about training paid for directly by the employer (trem0) and training paid for by the employee (trem01). Table 2 demonstrates that the coefficients on both of these variables are significant at the 1% level, but trem0 carries a negative sign (e.g. training funded by the employer is associated with a higher level of employee satisfaction with working conditions) and trem01 a positive sign (e.g. training funded by the individual is associated with a lower level of employee satisfaction with working conditions). In the case of employee-funded training, it may be the individual's dissatisfaction with their working conditions that leads them to undertake training, for example, because they want to change their job.

Only one of the continuing vocational training variables (from the CVTS) was found to be consistently significant in its effect on worker satisfaction. This variable was the total cost of continuing vocational training per participant in

training (CVT), shown in the final column of Table 2. This variable indicates that the higher is industry spending on training per trainee, the higher the employee level of satisfaction with working conditions, irrespective of whether the individual receives training or not (e.g. controlling for *trem* and *trempl*).

5.3.4.2. *A learning and creative environment*

The discussion now turns to the opportunities that the enterprise gives to individuals to incorporate learning in their working activities and to express their creativity.

The variables that appear in this part of the empirical work are as follows:

- (a) does your main paid job involve: learning new things (*learnew*=1 if yes; *q23f*);
- (b) does your main paid job involve: solving unforeseen problems on your own (*solveprob*=1 if yes; *q23c*);
- (c) you are able to apply your own ideas in your work (*q25j*):
 - always (*ownideaalw*=1);
 - often (*ownideaoft*=1);
 - sometimes (*ownideasom*=1);
 - rarely (*ownidearar*=1);
 - never (base group, omitted);
- (d) you find your job intellectually demanding (*q25l*):
 - almost always (*inteldemalw* =1);
 - often (*inteldemoft*=1);
 - sometimes (*inteldemsom*=1);
 - rarely (*inteldemrar*=1);
 - almost never (base group, omitted);
- (e) which of the following alternatives would best describe your skills in your own work (*q27*):
 - I need further training to cope well with my duties (base group, omitted);
 - my duties correspond well with my present skills (*skillmatch*=1);
 - I have the skills to cope with more demanding duties (*skillover*=1).

The first of these variables, *learnew*, relates to whether the individual's job offers scope to learn new things. The effect (reported in column 1 of Table 3) shows that the ability to learn new things is valued by employees, leading to higher satisfaction with working conditions.

The same appears to be true of the scope the individual has to solve unforeseen problems (*solveprob*), the coefficient of which is negative (e.g. giving rise to greater satisfaction with working conditions) and significant at the 5% level (column 2 of Table 3). However, this is one of the few coefficients which appear

to be sensitive to the inclusion of other variables, the effect of which is illustrated in column 3 of Table 3. The coefficient on solveprob in column 2 appears to be the net result of two effects: one is the freedom to take responsibility for solving challenging but interesting problems and the other is the result of ‘fire fighting’. Hence, the coefficient is only significant at the 5% level and sensitive to the inclusion of a related variable (e.g. ownidea, see below).

The inclusion of a set of variables representing the extent to which the individual can make use of their own ideas (ownidea) takes up one direction of the effect of solveprob (e.g. the one having a positive effect on employee satisfaction), leaving the other, negative effect on satisfaction with working conditions. The results of including ownidea are shown in column 3, where the base group comprises those never able to exercise their own ideas. It can be seen that the set of variables, ownidea, gives a monotonic and positive relationship between the extent to which employees’ are able to make use of their own ideas and their level of satisfaction about work. Solveprob now has a positive coefficient (e.g. negative relationship with worker satisfaction), as it picks up the ‘fire fighting’ (less controlled) element of problem solving.

Table 3. **Effects of a learning and creative environment on worker satisfaction**

	1		2		3		4		5	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Learnnew	-0.099	0.000	-0.094	0.000	-0.049	0.000	-0.041	0.000	-0.045	0.000
Solveprob			-0.025	0.045	0.031	0.010	0.035	0.005	0.035	0.004
Ownideaalw					-0.402	0.000	-0.383	0.000	-0.380	0.000
Ownideaoft					-0.285	0.000	-0.278	0.000	-0.274	0.000
Ownideasom					-0.154	0.000	-0.147	0.000	-0.145	0.000
Ownidearar					-0.047	0.012	-0.044	0.018	-0.041	0.028
Inteldemalw							-0.076	0.000	-0.078	0.000
Inteldemoft							-0.014	0.376	-0.014	0.368
Inteldemsom							-0.047	0.001	-0.046	0.002
Skillmatch									-0.090	0.000
skillover									-0.047	0.001
\bar{R}^2	0.168		0.169		0.202		0.204		0.205	
F	50.9	0.000	50.3	0.000	60.0	0.000	58.0	0.000	57.5	0.000
Significance		<10%		≥10%		≥5%		≥1%		

NB: General control variables and hazardous and unsocial conditions of work are set out in Annex 4; education and training in Table 2.

The extent to which jobs are intellectually demanding (over and above learning new things, problem solving and using own ideas) is dealt with by the set

of variables inteldem (the base group is never intellectually demanding). Two of the three inteldem coefficients are significant and negative (e.g. associated with higher levels of satisfaction with working conditions), but the coefficient on inteldemoft (the intermediate, 'often intellectually demanding' variable) is not significantly different from zero at the 10% level; this may reflect the range of other variables in the regression which capture some of the significance of this variable.

There is also a set of variables which reflect the degree of match between the skills the individual holds and those that they feel they need in their work. The results, shown in column 5 of Table 3 indicate that individuals whose skills match the job appear to be most satisfied with their working conditions (other things equal), but those with more skills than necessary are more satisfied than those with less skills than they believe they require.

5.3.5. Role of wages

While the conceptual model developed in Chapter 4 focuses on the role of work organisation in generating employee surplus, it still presents a role for wages. However, in the extreme, it would be possible for employees to be fixated on wages alone, giving no role for training and other non-wage conditions or to fixate on non-wage conditions to the exclusion of wages. Table 4 illustrates that both wages and work organisation factors (including training) play significant roles in determining employee satisfaction with their working conditions.

The inclusion of wages reduces the absolute size of the coefficients on years of experience with the employer (yrsc0), employer provided training (trempt), employee provided training (trempl) and the training intensity (CVT, continuing vocational training per participant in training). However, all of the coefficients remain significant at the 10% level or higher, with the main training variable (trempt) significant at the 1% level.

The learning and creativity variables remain largely unaffected by the inclusion of the wage variable. Only the coefficient on using their own ideas rarely (ownidearar), as opposed to never, moves to a level of significance below 10% (it was previously significant at above 5%). The results looking at the degree of match between employee skills and those demanded by the work they are required to do (skillmatch and skillover) remain largely unchanged.

The wage coefficient has an expected negative sign (employees are more satisfied the higher their wage, other things being equal) and is significant at the 1% level or higher. However, this is an early stage in investigating the relative roles of wage and non-wage influences on employee satisfaction with working conditions.

Table 4. Role of wages alongside training and other working conditions

	1	
	Coefficient	P- value
Yrsco	-0.001	0.050
Tremp	-0.032	0.007
Tremploy	0.039	0.057
CVT	0.000	0.034
Learnnew	-0.049	0.000
Solveprob	0.051	0.000
ownideaalw	-0.375	0.000
ownideaoft	-0.258	0.000
ownideasom	-0.144	0.000
ownidearar	-0.018	0.371
inteldemalw	-0.084	0.000
inteldemoft	-0.018	0.241
inteldemsom	-0.060	0.000
skillmatch	-0.096	0.000
Skillover	-0.049	0.001
Wages	-0.018	0.000
\bar{R}^2	0.213	
F	50.4	0.000
Significance		<10%

NB: all prior variables are included in the regression, but not reported here.

5.4. Conclusion

This chapter focuses on a quantitative analysis of the individual (employee and self-employed) satisfaction with working conditions. Four main groups of variable have been included in the explanation of worker satisfaction:

- control variables (e.g. country, sector, occupation, etc.), which attempt to allow for differences in the nature of jobs;
- those reflecting the inherent risks or unsocial nature of the tasks being carried out;
- a set of education, training and learning related variables;
- wages (an earnings variable).

The variables available from EWCS have been supplemented by matching at the industry level data on training from CVTS. This provides an enormously rich dataset covering individuals from as many as 31 European countries.

Despite the wide range of variables described above, all the coefficient estimates tend to be robust and are often significant, with interesting interpretations. One particularly interesting result is that the education variables

do not play the same role in the present analysis as in standard neoclassical theory. In the traditional theory, wages exhibit a largely monotonic relationship with the level of education such that more advanced education attainment attracts a premium over lower levels. In the present results, there is tentative evidence that the more qualified have higher levels of work satisfaction than those with no qualifications, but many of the coefficients are not significantly different from zero and there is no immediate, simple pattern.

The results suggest that employer funded training has a positive impact on employee satisfaction with working conditions. The estimated coefficient maintains a negative sign (employer funded training raises individual satisfaction) throughout and is significant at the 1% level in every regression. This result is maintained even when wages are included in the regression.

The opposite is true of employee funded training. Here the estimated coefficients are positive throughout; employees funding their own training are less likely to be satisfied with their working conditions. This might be interpreted as employees being unhappy at having to fund their own training; equally, the causation might run in the opposite direction, such that employees who have low levels of work satisfaction are more likely to fund their own training to increase their chances of finding new and better employment. While this result is maintained even when wages are included in the regression, the significance level of the associated coefficient is slightly lower, but is still significant at the 10% level or higher.

The CVTS variables were included partly to pick up broader, sector-wide spillover effects, such as enterprises in the sector receiving benefit not only from their own training but also from the training provided by other enterprises in the sector. In practice, the only CVTS variable to play a consistent, significant role was that of the cost of continuing vocational training per participant in training. This variable appears to represent the scale of the investment in training 'heaped' on each individual: individuals who have more money spent on them to improve their skills report higher levels of satisfaction. The coefficient on this variable remains largely unchanged by the inclusion of the wage variable and remains significant at the 5% level or higher.

There are also variables that represent the opportunity for individuals to continue learning and developing within the enterprise. Individuals value their ability both to learn new ideas and to apply them; they appear less keen on problem-solving, particularly if this involves some form of 'fire-fighting' activity. Jobs that make intellectual demands on employees tend to lead to higher levels of satisfaction, although the relationship between demands placed on the individual and satisfaction with working conditions appears potentially quite

complex. The role of these variables remains largely unaffected by the inclusion of the wage variable.

Consistent with the literature review, individuals whose skills best match those most needed in their job tend to be most satisfied. Those who have higher skill levels than needed in their jobs tend to have somewhat lower work satisfaction than those whose skills are matched, but higher than those who have fewer skills than needed for their work.

The analysis has only just begun to test the role of wages in this specification. To date, the results demonstrate that higher levels of wages have a positive influence on employees' views about their working conditions. The next stage of work will begin to address the issue of how wages, training and work organisation interact, exploring more flexible functional forms in bringing the different measures together. Finally, it will examine how wages, training and various other aspects of work organisation are brought together in different countries, sectors, and organisation sizes.

CHAPTER 6

Employer views of the social benefits

6.1. Introduction

To complement the quantitative exploration of the relationship between VET and a wider range of benefits than the economic returns for the employer, a series of employer case studies were conducted in selected sectors and Member States. These were establishment based studies (Annex 5 provides further details of the case study establishments).

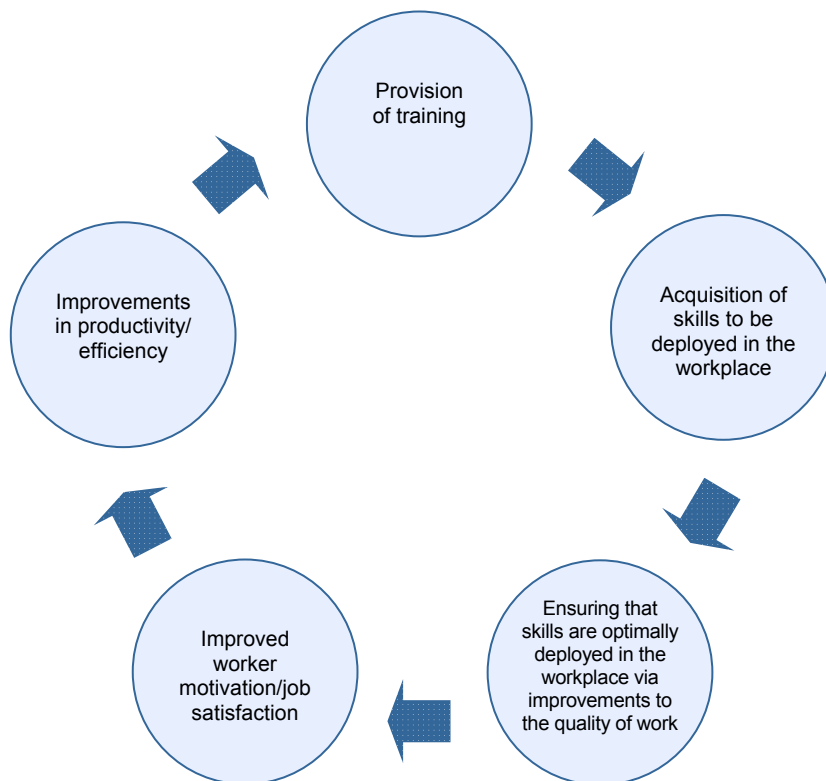
The model which provided the framework for conducting the case studies is outlined in Figure 5. In this model, the capacity of the employer to bring about non-financial/non-material improvements in the work situation of employees will ultimately bring about improvements in organisational performance. This tends to be implicitly recognised in high performance work literature but, for some jobs, training may deliver some social benefits to the employee, but these may be unsustainable over the long term if the essential nature of the job is repetitive and mundane (Cotgrove et al., 1971).

While improvements in the financial performance of the organisation may be mediated through a range of social or wider benefits which training confers on the workforce, these benefits can be an end in their own right. As the evidence in this chapter will reveal, employers may have a long-term aim to improve organisational performance, with respect to several monetary indicators, but recognise that the achievement of this is dependent on creating a working environment in which employees are motivated and committed to the goals of the organisation. Other things being equal, an organisation rife with conflict and dispute is less likely to perform successfully. Training activities may cumulatively improve the overall economic performance of the organisation but individual training activities may sometimes be more concerned with achieving non-material gains, at least over the short- to medium-term, so that conditions are right to bring about future economic gains.

The framework for the case studies is closely allied to the theoretical model developed in Chapter 4. An offer of training that results in gains in employer surplus, but with no returns to employees, will not generally be viewed as 'fair' by the employees of the organisation, particularly as the employees are the conduit through which the gains are achieved. The offer to share some of the financial reward with employees through higher wages appears to be an inefficient way of

ensuring that employees commit themselves both to the training and to the use of their new skills post-training. Given that exploitation of the additional skills generally requires some change in work organisation, a more efficient approach is to offer revised working conditions which are also seen as an improvement by the employees.

Figure 5. **Relationship between training and social and financial returns**



6.2. Employer case studies description

The qualitative empirical evidence for the study is drawn from 25 employer case studies across four industrial sectors and eight countries (as described in Annex 5). The case studies were spread across a range of countries with varying approaches to VET and the organisation of employment relations. The countries were selected according to the characteristics of their VET systems (collectivised versus more market oriented approaches) and their skills structures (high-skill versus low-skill countries). At least two case studies were conducted in the Czech Republic, Germany, Ireland, Spain, France, Poland, Portugal and the UK.

The case studies are summarised in Table 5. To compare like with like, the case studies were carried out in selected sectors in services and manufacturing. These included relatively high-skill/high value added sectors (accountancy/automotive engineering) and relatively low-skill/low value-added sectors (hospitality/food manufacturing).

Table 5. **Selection of case studies**

	Company	Country	Number of employees	Main business of company
Food manufacturing				
1	UK manufacturer	UK	450 (at site/20 000 worldwide)	Manufacturer of coffee
2	CZ manufacturer	CZ	760	Beer manufacturer
3	CZ manufacturer	CZ	410	Sandwich producer
4	PL manufacturer	PL	2 000	Sweets manufacturer
5	DE manufacturer	PL	535 nationally	Manufacturer of sugar
6	FR manufacturer	FR	France ~12 000 (Europe 30 000; 80 976 worldwide)	Fresh dairy products; water; baby food
Automotive				
7	UK manufacturer	UK	8 500 (across three sites)	Manufacturer of luxury saloons and sports cars
8	DE manufacturer	UK	1 200 (split across many sites)	Repair and maintenance of new models
9	DE manufacturer	DE	25 000 at site	Luxury car manufacturer
10	DE manufacturer	DE	7 000 at site	Utility vehicle manufacturer
11	DE manufacturer	DE	/	Large car manufacturer
12	FR manufacturer	FR	France ~56 000 (121, 422 worldwide)	Manufacturing of cars and light trucks
13	manufacturer	FR	France ~14 000 (Europe 32 761; 52 200 worldwide)	Automotive OEM and parts supplier
Accountancy				
14	IE accountancy	IE	500 across Ireland	Division of a major accountancy corporation providing auditing and business consulting
15	UK accountancy	UK	7 000 nationally; 400 at site	Fast growing – through acquisition – accountancy and business services provider
16	UK accountancy	UK	13	Independent accountancy company operating in local market
17	DE accountancy	DE	270	Independent national accountancy focusing on audit and tax accounting
18	DE accountancy	DE	6 500 nationally, split across many sites	Division of a major accountancy corporation providing services in auditing and tax advice

	Company	Country	Number of employees	Main business of company
19	DE accountancy	DE	4 600 nationally, split across many sites	Division of a major accountancy corporation providing auditing and business consulting
Hospitality				
20	US hotel chain	ES	300 (around 150 in each of the two hotels considered)	Cluster of two hotels part of a US based hotel chain – mainly aimed at business clients
21	European hotel chain	ES	4 500	Luxury, urban focused hotel chain
22	US hotel chain	IRL	400 (cluster of hotels in Dublin)	Dublin based cluster of hotels – mainly aimed at business clients
23	International hotel chain	UK	235	Cluster of hotels in UK – mainly aimed at business clients
24	PT international hotel chain	PT	1 800	Large tourist hotel
25	PT catering provider	PT	5 000 nationally	Large scale catering

The case study respondent in each establishment was the manager with direct responsibility for training. This tended to be a human resources or training manager in larger establishments, or a general manager or the proprietor in smaller enterprises. In some cases information was also collected from other people in the workplace whose activities were related to training.

To assess the extent to which non-material benefits were derived from employer investments in VET, the employer case studies sought to:

- (a) classify the employer's rationale for investing in training (either IVET or CVET);
- (b) assess the non-material benefits which accrued in the workplace – either directly or indirectly – from the training provided by the employer;
- (c) identify the factors which inhibit or support employer-provided VET and improvements in the work situation of employees.

The types of social benefit which the cases studies were trying to locate were improvements in employee job satisfaction or job interest which might result from improvements in work practices (such as the extent of worker autonomy), job content (such as job enrichment), or the physical aspects of work (such as the degree of fatigue associated with a job).

6.3. Rationale for training

To understand how employer-provided training might have a social impact – along the lines described in Figure 5 – it is necessary to look at the employer's rationale for providing training and the content of that training. Case study employers described these as one or more of the following:

- (a) a need to maintain skills supply through recruiting trainees and/or training existing staff due to business expansion or a need to replace who had left;
- (b) filling skill gaps among existing employees;
- (c) succession planning which requires (some) employees to be continually trained so that they can fill, eventually, more senior positions in the organisation;
- (d) a need to improve organisational efficiency, typically through organisational change which required people to take on a wider set of functions than hitherto or to work more effectively;
- (e) to improve teamwork at either micro level (people working better in self-contained teams within a department) or at workplace or enterprise levels where there were perceived barriers to employees working together effectively across departmental or workplace boundaries;
- (f) because the sectoral norm is to train and develop people, employers in some sectors feel obliged to train and develop their staff to avoid employees either expressing dissatisfaction with the employee or leaving to join competitors;
- (g) a means of differentiating the employer for purposes of recruitment, especially in external labour markets characterised by excess demand for skills, such that the establishment becomes the 'employer of choice' for job seekers in the (local) labour market;
- (h) a means of differentiating the employer in product markets by signalling that all employees are suitably trained and qualified and that skills are updated as necessary;
- (i) a preference to train staff rather than recruiting fully trained workers from the external labour market because this results in trained employees being more committed to the organisation;
- (j) a need to meet some of the requirements imposed by other corporate policies (such as health and safety, well-being at work agreements, etc.).

Implicit and explicit in the above reasons for training are both economic and psychological motives:

- (a) economic: concerned primarily with the acquisition of skills which will bring about some marginal improvement in the performance of the workplace;

- (b) psychological: concerned primarily with gaining the support of the workforce for the goals of the training being delivered by the employer.

The psychological perspective or motive is of particular interest to the current study. Often the aim is to ensure that employees are committed to the corporate goals of the organisation and, in so doing, maximise or optimise the consensus surrounding these goals. Optimise may be a better description in the context of the case studies because there was recognition among the case study employers that a degree of conflict is inevitable (and perhaps even desirable if progress is to be achieved) in the process of change management. This is important because the delivery of training by the case study employers was often part of the overall package of policies and practices designed to support change in the workplace ⁽³⁰⁾. Change in the case study establishments related to both the introduction of organisational change – such as new, more efficient working practices – and the significant technical change from the introduction of new plant, machinery and equipment.

Gaining a consensus around corporate organisational goals required organisations to engage in a balancing act: some VET programmes were directed towards the development of individuals (such as those employees signalled for fast-track promotion), while others were aimed at encouraging more group effort (e.g. teamwork initiatives). These approaches were not necessarily inconsistent with one another but they have the potential to be so. For example, where an individual employee is trained for fast-track promotion, this can weaken the collective work ethic in the group to which the individual belongs if there are perceptions of inequality. Conversely, where group identity is too firmly established within separate parts of an organisation this can result in intra-organisational conflict, with the effect of driving down overall levels of job satisfaction across the entire organisation. As will become clear, training initiatives within firms were often directed at solving these types of dilemma.

The rationale for training, and the extent to which psychological or economic motives were to the fore differed between IVET and CVET. The next section, which looks at the types of social, non-material benefits which arose from the training employers delivered, considers IVET and CVET separately.

⁽³⁰⁾ Some training programmes were concerned with providing employees with the communication and negotiating skills to manage change across departmental boundaries.

6.4. The social benefits derived from IVET

Many of the case study employers provided IVET through graduate traineeships and apprenticeships. The rationale employers provided for their delivery of IVET was a mixture of:

- (a) a need to replenish the stock of labour, typically on an annual basis;
- (b) a demand for new skills;
- (c) recognition of the value of 'growing one's own' skilled employees;
- (d) part of the process of differentiating employers in the product and labour markets (i.e. by emphasising that all of their employees are suitably trained and qualified).

Some employers, mainly ones located in Germany, also mentioned their corporate social responsibility to provide IVET to young people. This reflected a commitment by some employers to invest in the communities in which their workplaces were located by providing training opportunities in excess of their own immediate needs.

Employers, especially the larger ones, had a yearly inflow of trainees (either apprentices, or their equivalent, and higher education graduates). This is the process by which they restocked the workforce in response to people leaving or retiring, and met their skill needs as a consequence of business expansion. It also had the benefit of creating an inflow of new talent into the business since apprentices, trainees, and graduates tended to bring with them new skills and knowledge; a process which is reinforced as they receive their IVET.

There was a clear economic rationale displayed by those employers which provided by IVET: to meet the projected future skill needs of the organisation. The definition of the future depended partly on the occupational group being trained. In high wage, high skill occupations – such as accountancy and engineering – the future was defined as the long-term development of the organisation; among less skilled occupations the future was often viewed over shorter-term horizons. Regardless of the time horizons over which employers notionally discounted their investments in IVET, there was a clear economic reason for their investments.

Employers suggested wider benefits than the economic rationale for investing in training:

- (a) company values are more readily inculcated in trainees compared with skilled workers recruited from the external labour market;
- (b) people who train with a company are more likely to stay with the company, other things being equal, because of the close correspondence between company values and those held by the individual employee;

- (c) a relatively cordial or harmonious working environment because of the high degree of correspondence between the values of the company and those held by the former trainees and apprentices;
- (d) a pool of committed, loyal employees from which future supervisors and managers can be selected.

The above benefits, which tend to be mutually reinforcing, all confer economic benefits on the employer (such as lower recruitment costs) but certain factors need to be in place for the employer to obtain these benefits. This can be explained with reference to the content of IVET provided.

Employers can view IVET within a narrow set of parameters. There is evidence that expenditure on IVET may be recouped even before the training period has come to end; the employer has a relatively low expectation that the trainee or apprentice will remain with the organisation for very long once they have qualified. The relatively low level of employer investment in IVET, coupled to a working environment which tends to regard employees as readily replaceable factors of production, results in IVET delivering few, if any, of the wider benefits of training. There was evidence of this from the case studies where IVET was delivered to meet a relatively narrow set of skill needs by the employer; for example, offering little prospect of career development on its completion. Some of the smaller accountancy firms, which as a consequence of their size had limited scope to offer career progression, tended to adopt this approach. In these instances, the trainee received professional training and in return undertook auditing work which recompensed the employer for the costs attached to the training. But there was little further guarantee of career development with the company. Similarly, some food and drink manufacturers tended to train narrowly because the aim was no greater than to meet current production demands.

Other case study employers took an approach to the delivery of IVET which was much broader than that of delivering the skills the trainee required to fill the job they would have immediately on completion. This approach regarded the trainee as a long-term asset to the organisation and was promulgated through human resource practices which anticipated both employer and employee meeting several obligations:

- (a) IVET was regarded as no more than the first-stage of a much longer process of continuous professional development training which employees would engage in as they developed their careers within the organisation;
- (b) The employer provided a high degree of transparency about the career paths open to trainees within the company once they had completed their IVET such that employees could plan their future career progression;

- (c) there was an expectation that employees would take responsibility for developing their careers within the organisation and make use of the information which was available to them in this regard;
- (d) the employer provided a training infrastructure which employees were expected to make use of, given their career plans;
- (e) employees were expected to adhere to the company's corporate values which typically required a commitment to maintaining product quality and behaving – in and out of work – in a way which was consistent with the company's values.

The example of the luxury car manufacturer in Germany is typical of such a broad based approach to training apprentices (Box 1).

Box 1. Case study: luxury car manufacturer – Germany

The company is a German car manufacturer which annually provides around 1 000 apprenticeships to young people in across more than 20 occupations.

The company is considered to be an attractive one in which to work as reflected in the number of applications for apprenticeships. Due to the high standard of the apprenticeship programme, the commitment of apprentices to the company is very high. For example apprentices in the first year are members of so-called 'junior companies' where they have the opportunity to learn about corporate transactions by working in a real business environment. The apprentices have to apply for projects and then have to organise them on their own. This programme aims to foster both creativity and autonomy in apprentices.

The company also provides special apprenticeship programmes for particularly gifted apprentices who have the chance to attain the University of Applied Sciences entry qualification (DBFH) during their vocational training. Last year approximately 350 apprentices had the chance to continue studying after their apprenticeship training had ended. The company also provided studentships for outstanding students in higher level technical studies.

The training plan can be adapted and expanded according to the firm's particular skill requirements; the apprentices undertake additional training modules which go well beyond the scope of the standard training plans set by the Federal Institute for Vocational Education and Training. This target-oriented training increases the satisfaction of the apprentices – they feel valued by the organisation – and prepares them for working life in the company.

Implicit in the IVET delivered is that the company is making a long-term investment in its apprentices.

The example from the UK, also from a car manufacturer, indicates the importance of instilling company values into apprentices.

Box 2. Case study: luxury car manufacturer – the UK

The company, a branch of a major European car manufacturer, has a UK workforce of around 20 000 people. The training centre in the case study is responsible for delivering apprenticeships in vehicle maintenance – with apprentices taking up jobs in the dealer network – and meeting the training needs of people in the dealer network, including mechanics, sales staff, and managers.

The company has sought to establish a product brand based on quality and reliability. It seeks to impress this upon the workforce through a range of training initiatives where employees are expected to consider their behaviour in a wider context than simply the scope of the tasks they are expected to carry out in their job. All their behaviour at work is expected to reflect company standards. This could be as simple as ensuring that phones are answered in a timely fashion, behaving in a courteous fashion to fellow workers, etc., as well as being technically competent. This is thought to contribute to a good working environment which is reflected in the quality of customer service. The importance of maintaining the company's brand image ran through all elements of the apprenticeship.

The emphasis given to company values, according to management, has the impact of instilling a degree of pride in trainees about working for the company and working on their products.

The way company values were expressed varied between case study establishments, but the list below, drawn from a Czech food manufacturer, is fairly typical:

- (a) think big and take on big challenges; set the bar high, never be satisfied with the results, and constantly strive to be the best;
- (b) motivate oneself and others to provide the maximum contribution to the business;
- (c) have impact and influence, such that others are inspired to achieve improved performance;
- (d) act as an owner; always act in the best interests of the company, taking results personally;
- (e) adhere to company policy in carrying out one's job;
- (f) lead by example; 'walk the talk, be an ambassador for our culture, doing things the right way'.

For the values to be accepted by the trainees – and continue to be accepted by them as fully trained employees – requires those values to be consistent with those they hold as individuals outside the workplace, and to provide the trainee with some reward, not necessarily a material one, from abiding by them. The values employers tried to instil in trainees across many of the case studies tended to emphasise the importance of doing a job well and meeting customer expectations; this had the effect, by reinforcing the value attached to the product, of reinforcing the employee's pride in working for the company. The message to apprentices at one of the luxury car companies was that the high quality of the product needed to be supported by a high quality of service from the company's

employees. The trainees, it was reported, clearly recognised the quality of the product and took a source of pride from being associated with it. But this needed to be supported by high quality of training provision, otherwise a vital link in the value-chain would be broken. If the company were unprepared to invest in training it would send a signal inconsistent with the rest of the message the company was trying to convey to the trainees.

It was also apparent that another value which employers instilled in their trainees was that of behaving in a reasonable manner with fellow employees and trainees. HPWP literature, and much of related organisational psychology literature, stresses the importance of norms and values within an organisation being collectively arrived at rather than being a top-down mandate from senior management; hence the importance of participative management practices in HPWP literature. It is not clear that trainees participated in participative management type practices, but it was clear that their training was designed, in some cases, to prepare them to engage in this form of activity, as fully trained employees, by training or coaching them both to respect the views of their fellow employees and to be confident in expressing their own views constructively.

There was general recognition across all countries and all sectors that IVET provided the best opportunity to develop employees who were committed to the organisation and who adhered to its values. Further, employees who had trained with the company were more likely to have the exact specific technical skills the organisation required. It is the fit between the values of the organisation and those of the individual – coupled with technical competence – which is considered important by employers because it ensures a relatively harmonious working environment; this is thought to result in employees being more committed to meeting the organisation's goals. Employers are convinced that this is the extra benefit conferred on the organisation by engaging in IVET. Inculcating the values of the organisation in fully experienced workers recruited from the external labour market – despite the use of rigorous recruitment processes – could not be guaranteed to take hold quickly enough, employers reported.

6.5. The social benefits derived from CVET

6.5.1. CVET and social benefits

Once the IVET cycle comes to a close there is recognition by many employers that this is merely the end of the initial stage of training, which the individual will build on during the remainder of their working lives. For CVET, a complex pattern

emerges regarding the employer's rationale to train, with several determinants identified:

- (a) part of the process of succession planning/career management;
- (b) a need to update existing technical skills;
- (c) responses to organisational and technical change;
- (d) strategic choices about how to respond to the actions of competitors (who may be up-skilling their workforces).

CVET has the potential to increase levels of job satisfaction through:

- (a) improving job content by:
 - (i) signalling opportunities for career advancement (Section 6.5.2);
 - (ii) being a source of employee motivation in a relatively static internal labour market (Section 6.5.3);
- (b) being recognised by employees as a social good in itself (Section 6.5.4);
- (c) breaking down barriers within organisations (Section 6.5.5).

From research literature, it is apparent that CVET also has the potential to foster dissatisfaction among employees where it is seen to be conferred only on certain groups or individuals; a sense of inequality can be generated among some employees. There was no evidence of this from the case studies though there was some evidence that employers were becoming more discriminating in their selection of employees for training as a consequence of difficult trading conditions and a need to obtain better value from their training investments (Section 6.5.6).

6.5.2. CVET and career development

Nearly all of the case study establishments were in the process of driving up efficiency levels in their organisations. Integral to this was the employer's need for employees to work to their full potential. This was partly achieved through giving people incentives to develop their skills, linked to the possibility of promotion. There are numerous examples throughout the case studies of companies undertaking annual performance appraisals which clearly specified the skills required by employees if they were to achieve promotion, together with an indication of how the company might assist the employee in acquiring those skills. Employers generally recognised that for those employee's whose skills or potential capabilities were not being fully realised, this was a potential source of job dissatisfaction as well as a lost resource to the company. Companies tended to provide a range of training programmes which individual employees could apply to enter or be selected to participate in. Accepting someone for training sent a strong signal to the employee that the company valued their services

(which provided a form of psychological satisfaction to the employee), as well as an opportunity to demonstrate their full potential and, possibly, achieve promotion.

The example of the hotel group in Ireland is fairly typical of the type of programme employers had in place which allowed people to develop their careers through training (Box 3).

Box 3. Case study: hotel – Ireland

The organisation, part of an international chain of hotels, runs various training courses. The General Leadership programme is a relatively high volume course aimed at managers at different levels of seniority in the hotel chain. It is designed for people who want to be supervisors or have recently become supervisors. It is built around providing the competences of being a supervisor in the hotel group. It comprises a 10 module training programme. Participants are expected to make use of the company university (an online training resource) and the virtual classroom established by the group in Ireland.

Selection to be included in the General Leadership programme is rigorous: written application, interview, online assessment, plus agreement from an employee's line-manager. In the past all employees would have got into the course but now, because this represents a significant investment by the company in the individual, an assessment of suitability is required. There are currently 16 participants in the three Dublin hotels and, for the first time, it is possible to fail the course.

The next level of the General Leadership programme is for people who are, or about to be, assistant managers. Is it business focused: how to manage margins and under-performance. This is purposefully a difficult course to complete and tends to self-select those who are genuinely interested in management. It is up to individuals to apply to go on this course, but again encouragement will be given to those people who might obtain the most benefit.

The General Leadership course has sent a strong signal to employees that the company is making significant investments in them. This tends to be recognised by staff and they have responded accordingly: their performance and motivation has picked up, it was reported, as a consequence of being a course participant. This needs to be seen in the context of the Irish labour market and economy. There is considerable uncertainty in the labour market, so the company is showing employees that they are investing in them in difficult times.

A further benefit of the leadership course is that it brings people together from around the Dublin chain of hotels. The participants become aware of vacancies within the hotel group and acquire the confidence to apply for them from successfully completing the training course. For the company this has the impact of reducing recruitment costs which, during the more buoyant labour market times, represented a significant cost in the business. The training has also managed to instil common values in supervisory staff and managers across the business.

Employers were convinced that employees who took part in such programmes were able to realise their career ambitions, at least in part, which contributed to both the overall levels of job satisfaction they reported in their jobs and the commitment they brought to carrying out everyday tasks. Implicit in the notion of being promoted was that some form of job enrichment was taking place

in that employees were expected, in due course, to bring a higher level of conceptual thinking to their jobs.

6.5.3. CVET and improving the current job

The discussion so far has been concerned with linking CVET to improvements in job content and career development measures. There are situations, usually in mature industrial sectors and establishments, where CVET can be used as a means of motivating the workforce where there are relatively few opportunities for job promotion, but where the organisation needs to obtain year-on-year improvements in efficiency or productivity levels. The example of the food manufacturer in the UK is an example of this. The site had low labour turnover – partly because there were few other employers in the local area – which meant that there were few opportunities for promotion. This was seen as a potential source of job dissatisfaction and demotivation among the workforce. To maintain improvements in organisational performance – necessary to secure further investment from the parent company – the company had introduced a new training programme for operatives and engineers to raise their skill levels with the aim of increasing throughput and reducing machine downtime. This also had the impact, to management surprise, of increasing job satisfaction (Box 4).

Box 4. Case study: food manufacturer – the UK

While the company did not monitor the relationship between the social benefits and training, it had observed changes in the behaviour of its employees following training – mainly that it had increased the demand for further training. The plant was willing to fund any training the employee requested, so long as the employee was willing to undertake the training in their own time. The company was prepared to fund a wide range of courses - not just those directly related to the production process - because it can never be sure what skills it will require in the future. For management at the company the important goal was to encourage people to engage in the learning process.

Job satisfaction is mostly measured through the Pulse survey which is conducted every two years. It tends to show high levels of job satisfaction. In particular, the company tends to regard the high percentage of employees who report in the survey that they would like further training as an indication of the positive impact its approach to training has had on jobs and attitudes to jobs.

The company had also introduced a new training programme for its engineering technicians. They had been trained to make repairs to the production line which had been previously the responsibility of the production line's manufacturer. Where, in the past, engineers needed to be brought in from Switzerland – which was a source of frustration to the workforce because it resulted in long periods of machine downtime – they could now be fixed relatively quickly. The capacity to make repairs to the production line had been, management reported, warmly welcomed by the engineering technicians. It was a source of professional pride to the technicians that they could make the repairs when called upon to do so.

In the above case study, one explanation for the workforce's positive reaction to CVET was that it marked a broadening of their day-to-day tasks and introduced new interest into their jobs. The workforce were aware of the low labour turnover – and the absence of alternative employment nearby – so were willing to accept the provision of CVET and the impact on their jobs without consideration of promotion or wage increase. Wage levels had already been agreed in the collective bargaining round with a two-year agreement reached.

6.5.4. Training as a social good

Being involved in training – and the networking opportunities it provides – is reported as being valued by employees (see the example of the hotel chain in Ireland in Box 3). Employers reported that training can raise levels of employee self-confidence. The employee feels positive at being selected for training (i.e. the employee recognises that the employer is investing in them) and also realises during training that many of the issues they are grappling with are shared with their colleagues. Training has the effect of raising the sense of self-worth and self-confidence, though if the employee fails to meet the standards required by the training programme this may have the opposite effect; this was not reported as occurring by the case study employers. Some employers are becoming more discriminating in whom they select for training. Implicit in their selection criteria is an assumption that the employee who will take part in the training has the ability to complete it successfully, so the problem of how to manage the employee who fails the training is a relatively uncommon occurrence.

6.5.5. CVET, team-working and intra-organisational boundaries

Social benefits from CVET also derive from those training programmes which are designed to equip employees with generic skills related to team-working and communication. For the larger organisations, the problems of silos developing within businesses creates a demand for training which provides the means to break through barriers in the organisation; this concerns having emotional intelligence and the skills to manage conflict. Where conflict is evident in the workplace it can generate reports of job dissatisfaction from employees.

A training programme was introduced at one of the car manufacturing companies in the UK with the aim of breaking down barriers between different divisions of the business with a view to improving productivity levels and overall business performance. The group identities established in some functional areas of the business were detrimental to both the overall performance of the organisation and the personal interaction between employees. The training programme was used to breakdown these identities, based on reinforcing the

core values of the overall business in how managers went about their the day-to-day tasks, as well as providing managers with the skills to manage and tackle conflict between groups within the organisation (Box 5). This revolved around the acquisition and deployment of a range of soft skills, including:

- (a) understanding the other person's perspective;
- (b) team-working;
- (c) managing change;
- (d) listening skills;
- (e) communication skills.

Box 5. Case study: car manufacturer 2 – the UK

The aim of the learning intervention developed in this organisation was to improve both the individual and team performance of the company's managers. The training programme consisted of a series of events in which leaders from different functional areas were coached through a learning process to encourage reflection, building relationships, and changing behaviours.

In relation to the core values that the programme was expected to reinforce, interviews with the managers indicated that the programme encouraged 'open communication' and 'building relationships'. The programme also had positive outcomes at three different levels: on the individual employee; within functions (i.e. departments); and to the organisation as a whole. The programme provided individual participants with the opportunity to reflect on, and find solutions to problems that had not been addressed before due to day-to-day responsibilities taking precedence. 'What the [programme] did was force me to think about a creative solution to the problem that I faced' (quoted by a manager participating in the programme).

The programme also helped to improve relations among employees by creating a culture of communication between managers at different levels in work teams. 'I think the longer-term effect has definitely been that it's reinforced an improvement in working relationships over the time since.'

The programme also contributed to increasing the efficiency of the different working teams in the organisation. There seemed to be agreement that this effect on the business stemmed from focusing on managers' personal and professional development and from encouraging effective communication across the organisation.

'From our point of view, it was more of a how to get the best out of us as a team than how us working as a better, more cohesive and aligned team can actually deliver back to the company. It's actually about the company as bottom line; it's about delivering change [...]'

Learning interventions designed to equip participants with so called 'soft' skills and capabilities present challenges in terms of evaluating their impact on the organisation. Evaluation of the leadership development programme indicated that managers obtained new personal and professional skills and capabilities and that these were deployed in practice. Managers reported that they felt better able to communicate openly with colleagues in different functional areas of the business in a non-confrontational way. The skills which the managers had acquired resulted in reduction in conflict across the organisation and brought about an improvement in the job satisfaction levels of individual employees.

The example above illustrates how the development of effective team working skills can reduce conflict within organisations by equipping individuals

with the specific skills which allow them to communicate and listen. This brings about a reduction in the day-to-day conflict which exists between different groups in the organisation. Arguably, the training programme in this instance was able to instil an organisation-wide sense of identity at the expense of that attached to particular groups in the organisation.

Training provided to employees at this company had the impact of maintaining levels of job satisfaction as the company faced some substantial changes, including a sharp decline in profitability. Human resource managers explained this finding – observed from a questionnaire survey which collected data before and after the announcement – with respect to the training which had reinforced a company identity in employees. There was now a much stronger collective identity, allied to increased self-belief among managers about their ability to run the business: the effect of the worsening market environment on the morale of managers was thought to have been much less than it would have been before the training was introduced.

6.5.6. The limits to CVET improving job satisfaction

Several caveats must be applied in relation to CVET bringing about social benefits in the workplace. First, in some sectors and occupations there was an expectation that CVET would be provided such that any job satisfaction which accrued to the employee only emerged if the training provided was over and above that which was expected. This was particularly the case in accountancy and where people were attached to fast-track management development programmes. Second, CVET sometimes resulted in little or no improvement in the content of work in that it was concerned with a piecemeal change in skills; the employee would continue to carry out the existing job much as before (e.g. training related to new health and safety regulations in the food manufacturing sector, or the small-scale introduction of new equipment). Employers expected such training to have little impact on employee motivation or job satisfaction. Third, where training was delivered with a view to the employee being able to progress their career there were dangers, recognised by employers, of dissatisfaction arising among those who had applied and failed to be selected to take part in the training. These three points are considered in turn.

6.5.6.1. Employee considers CVET a right

In high skill sectors such as accountancy, employees have an expectation – developed during their IVET – that they will have access to continuing professional development and training throughout the early to mid stages of their career (Box 6). Job satisfaction or overall satisfaction with the work situation

could only be achieved if training went beyond employee's expectations based on what they considered to be the norm in their occupation or sector.

Box 6. Case study: accountancy firm – the UK

The company was relatively small compared to the largest multinational companies, but was still a significant employer with around 4 000 employees in the UK spread across 10 offices. The company tries to differentiate itself in the accountancy recruitment market for trainees by stressing the quality of its training, its capacity to provide international placements, and the opportunity to experience job rotation while training to gain wide experience. It feels that by stressing its commitment to training and the support it can subsequently offer to staff post-qualification to realise their career ambitions, it marks itself out from the competition and, consequently, is able to retain the services of its trained accountants. In a sense, it is the quality of the training, coupled to its corporate ethos, which are its unique selling points in the university graduate recruitment market and the external training market for qualified accountants. The company feels that this approach is reflected in the level of customer service it is able to provide to its customers.

At the time of the fieldwork the accountancy company, was operating in a labour market characterised by excess demand for high skilled and qualified accountants. It felt that its approach – which offered employees a wider variety of CVET options than that of its competitors, linked to an opportunity to put those skills into practice – had raised job satisfaction within the organisation such that it had managed to retain many of its former trainees in the face of strong competition from other employers. It was not simply the offer of CVET which was important but the opportunity it provided for employees to pursue their particular interests in professional accountancy which accounted for the success, as measured by levels of job satisfaction and relatively low labour turnover.

Nearly all of the accountancy companies reported that those employees who had completed their IVET with the company expected to receive continuous CVET linked to career development. A failure to meet this expectation, employers reported, would result in people leaving to join other companies who could satisfy their expectations.

6.5.6.2. *Piecemeal CVET*

The piecemeal nature of some CVET is exemplified by some of the examples from the food manufacturing case studies where many production line jobs were semi-skilled and employers had engaged in relatively little training other than that required by health and safety regulations or the introduction of new technologies (Box 7). Training of this type does not appear to be explicitly related to job content or job quality and there is little expectation that any improvement in job satisfaction will result from the training delivered.

Box 7. Case study: catering company – Portugal

The company employs about 5 000 people. Large-scale catering is the main business with major clients including hospitals, schools and motorway service stations.

With high labour turnover among a predominantly low skilled workforce, the company tries to minimise training investments to those which will maintain quality service standards. Training is seen as a risky venture because of high levels of labour turnover (32% a year).

Training and professional development is limited to food hygiene and safety which are mandatory for all employees, alongside governance training for the leadership team, and job-specific training for middle management positions and production supervisors.

The company recognises the importance of training. The human resources manager, for instance, stressed that training was especially needed for the relatively low-skilled workers on the shop floor because quality standards and health and safety regulations are increasingly stringent in the catering business. The company also recognises that the catering business has been subject to increasing innovation in food processing technologies.

Because training was considered a risky undertaking in an environment of relatively high labour turnover, training for shop floor operatives was limited to that required for the company to comply with regulations and that related to the introduction of new machinery.

In this case study, the employer clearly preferred to bear the cost of high labour turnover (and presumably the level of job dissatisfaction which led to employees exiting the company). Whether training would have been able to lower levels of labour turnover is a moot point given that the jobs on the production line were both mundane and repetitive and not necessarily amenable to job enrichment.

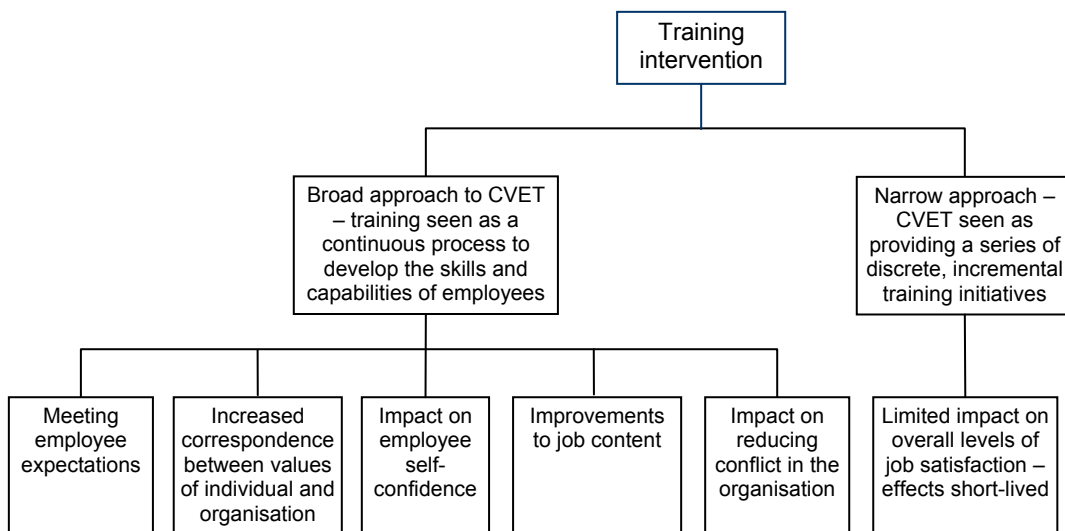
6.5.6.3. Exclusive access to training

The example of the hotel group in Ireland (Box 3) is interesting in regard to risks of raising expectations about access to training and then not being able to satisfy requests. Previously, company training programmes which allowed people to develop their careers to gain access to supervisory and management positions, had been open to all employees. In difficult trading conditions, the company needed to ensure that it obtained the most from its training expenditure and so there was a rigorous selection processes before being accepted for the training programme(s). To date this had not caused a problem, even though people had been turned down for training, but the company recognised the danger attached to its switch in policy and how people will react if they are not selected for training. To some extent this can be dealt with through other human resource practices (such as annual appraisal), but it is a potential problem.

6.5.7. Summary of the impact of CVET

The above evidence has indicated the various ways in which CVET has an impact on different aspects of job satisfaction and job content for the employee (see Figure 6 for a summary). Where CVET is regarded as continuous process, designed to improve both the performance of the organisation and the position of individuals within it, it is seen to have a positive impact on the work situation of the employee. It has the capacity to bring about a better fit between the social and personal identifies of the individual employee, ensure that group identities are appropriate to the needs of the organisation, and improve the content of employment. Where CVET is delivered on a piecemeal, incremental basis it has much less capacity to deliver sustained improvements to the work situation of employees. The next section examines the barriers and facilitators to VET bringing about improvements in the work situation of employees.

Figure 6. Summary of the impacts of CVET on job satisfaction



6.6. The barriers and facilitators to social benefits arising in the workplace

The factors which are likely to inhibit or aid the emergence of a range of social benefits to employers resulting from the delivery of VET include:

- (a) strategic choices by employers;
- (b) size of enterprise;
- (c) sectoral specificities;
- (d) national employment and training systems;
- (e) social partnership.

6.6.1. Strategic choice

The case study companies faced common pressures from their external and internal labour markets and the product market. Most were engaged in improving efficiency either through raising the rate of throughput (as in some of the manufacturing establishments), improving the quality of service to customers, and improving their adaptability and flexibility in the face of rapidly changing product market conditions. As the economy across the EU weakened dramatically over the course of the fieldwork, the importance of this last goal was magnified. This created instability in the internal environment in which training was taking place.

Training – either CVET or IVET – was part of the strategic response of organisations as they sought to adapt to product market pressures. There was general recognition among the case study establishments that improvements in the performance of the organisation were dependent on both the skills and commitment of employees. How organisations successfully combined training with human resource activities which delivered the commitment of the workforce to meeting organisational goals varied between employers; this cannot be explained by reference to sector or country.

In the food and drink sector, for example, case study companies were engaged in comparable forms of production but had adopted different approaches to workforce development. The example of the Portuguese food manufacturer shows an organisation which had adopted a piecemeal, incremental approach to the development of skills in the workplace; the quality of work or issues related to job satisfaction did not appear to be one of the higher priorities for the management team, which was more focused on how to meet the immediate demands of its customers. A similar situation was evident in a food manufacturer in the Czech Republic (Box 8).

Box 8. Case study: food manufacturer 1 – the Czech Republic

The company has approximately 400 employees, of which 250 work in the case study establishment. Historically the company has struggled to recruit people because of the relatively poor working conditions, but with the closure of nearby factories recruitment has become easier. At the time of the case study the establishment provided limited training opportunities to its workforce. Following induction training employees receive little further training other than occasional health and safety training because management see little need for it given the nature of the production process (essentially that of machine-watching). The company prefers to keep people working at the same job – job rotation had been rejected because of its detrimental effect on productivity – and feels that this approach will continue to allow it to meet customer demands.

The examples cited above from Portugal and the Czech Republic can be contrasted with that of another food and drink manufacturer, again in the Czech Republic.

Box 9. Case study: drink manufacturer 2 – the Czech Republic

The human resource strategy is strongly influenced by the corporate human resources strategy of the parent company, which is geared towards ensuring that employees comply with the values of the company and that these values reflect the importance it attaches to the quality of its workforce.

Training activities are steered by employee appraisals. Assessment of individual development takes place in one-to-one meetings between employees and their managers. In these appraisals training needs are identified and the employee is evaluated according to several competences. The appraisal generally takes place once a year.

A personal development plan exists for all employees and defines their next development steps. It also encompasses information about skills required for each job an employee might like to fill and a detailed job description. Using this tool, any gap between the employee's current level of competence and that required to carry out either their current or a future job successfully can be addressed via training.

Developing the workforce further is seen as a key element of business success and training plays a significant role in the strategy of the company. 'When employees have the chance to improve their competences it has a positive effect on the development of the overall company', reported the human resources manager. According to the employee engagement survey, training measures are rated positively by the workforce.

A similar position was found at a UK food manufacturer. This also had a human resource policy that recognised the importance of gaining employee commitment to the values of the company and providing training so that employees' capabilities were fully deployed for the benefit of the organisation.

In many respects the strategic choice employers are making is of the extent to which human resource strategies and training strategies are consistent with one another and mutually reinforcing. Employers in many of the case study establishments had a set of values to which they wanted all employees to adhere, had transparent career progression pathways, and a VET infrastructure which supported employees who wished to develop their skills. This is not to say that employees always succeeded in their career development plans, just that organisations had structures which allowed people the opportunity to develop their abilities. There were two models in place:

- (a) a voluntarist one where the company – usually through a corporate website – lists the courses available to allow individuals to develop their careers, but it is up to the individual employee to decide what training they require;

- (b) a model which incorporates much more guidance because an individual has been earmarked for a particular role in the company in the succession plan. This often relates to people in fast-track senior management programmes..

While these models were in evidence in many workplaces, often the larger ones, they were found to be absent from some establishments and the wider benefits which might accrue to the employer or employee did not materialise to anywhere near the same extent as in the other types of workplace.

6.6.2. Size of enterprises

There is indicative data that many of the social benefits materialise in larger enterprises which have the resources to develop the types of human resource strategies required to support training – either IVET or CVET – or achieve the types of social benefit which sometimes emerge where training is provided. This might be compensated for by more informal approaches to training and human resource policies in smaller organisations, given that the quantitative analysis suggests that job satisfaction is relatively high in these workplaces. Some of the larger case study establishments also reported relatively low levels of social benefit attached to their training activities, so the evidence does not support the view that size is an overwhelmingly strong determinant of job satisfaction related to training.

6.6.3. Sectoral specificities

The strategic choice of employers in how they approach training will be constrained by the product market in which they operate and by the principal technologies they use. From a sectoral perspective, employers faced several distinct challenges:

- (a) car manufacturers are confronted with the rapidly changing technological development, which emphasises the need for upgrading skills. Employees often have to adapt to changing technologies built into cars or in the production processes;
- (b) in accountancy there is a continuous need for employees to update their skills in relation to the changing regulatory environment. VET is an essential part of working life; especially as career progression is dependent on acquisition of higher level professional skills;
- (c) service quality in hospitality – the right attitude to customers – plays the most important role. This needs to be continuously improved as service quality reflects the brand image of a company;

- (d) the products of food and drink manufacturers differ in the nature and complexity of their production processes. Maintaining the quality of products is particularly important, as is cost reduction.

Skill demand may be less, on average, in hospitality and food and drink manufacture, which could result in skills and training being less important in these sectors but this is not borne out by the evidence. In hospitality the case study employers consistently emphasised the importance of customer service in meeting their business goals; also, given that many of those involved in hospitality are engaged directly with the customer, if employees are demotivated or dissatisfied then this is quickly transmitted to the customer. This was the reason cited by the human resource manager in a Spanish hotel chain for the company's preference to train as many of their staff via the IVET route rather than rely on the external labour market to recruit fully-trained staff. Those employees who had been trainees or apprentices with the company were not only much more aware of the company's values, but tended to respect those values more compared with fully trained workers recruited from the external labour market.

While there is evidence from food and drink manufacturing that some organisations had less sophisticated approaches to the provision of skills and ensuring that employees remained motivated and satisfied, the approach to human resource management and skills development in other examples was as sophisticated as that found in the other sectors.

In both the automotive sector and accountancy there was general agreement among the case study employers that employees needed to be trained to a relatively high standard and there was a need to ensure skills kept pace with changes in the production process or the provision of new services. Automotive engineers need to be able to cope with the introduction of new production lines and products when a new vehicle is introduced to the market; accountants need to keep pace with regulatory developments and the invention of new financial products. For companies in these sectors, competitive advantage stemmed from the capabilities of their workforce – for example, the skill the employees deployed in the design and servicing of motor vehicles – such that there was a strong requirement for employers in these sectors to ensure that not only were their employees skilled but that they were highly motivated to use their skills in the best interests of the organisation and its customers. These sectors exhibited training and human resource measures which ensured that employees' career development plans were supported.

6.6.4. Country differences

One might expect country differences to emerge as a consequence of the differences between:

- (a) national training and employment systems;
- (b) the extent of collective bargaining or voluntarism;
- (c) levels of product market competition.

The case studies offer little evidence on which national systems affect the propensity of employers to ensure that social benefits accrue from their training activities. This is based on a relatively small number of case studies. The exception to this finding relates to employers operating in relatively low value markets. Some of the food and drink manufacturers in the Czech Republic, Poland, and Portugal, which were operating in less competitive or less high value-added markets, had less sophisticated approaches to human resource management and tended to give less recognition to value of training or the need to integrate training with other human resource practices to maximise the return from their training investments. Whether this relates primarily to these countries is arguable. In the UK, for example, it was noticeable that one of the accountancy companies, which served a local market, also tended to have a relatively less sophisticated approach to the delivery of training activities compared with larger companies serving a national market. It might be that the key differentiator is the level of competition and the level of value-added generated in the product markets rather than the country.

6.6.5. The role of social partnership

There was evidence that some training activities in firms were determined partly through social partnership. This was especially evident in one of the French automotive case studies. Of interest in the context of social partnership was the company's commitment to meet the government's plan to reduce stress and psycho/social distress in the workplace, the agreement it reached with the trade unions to launch a social climate survey among all employees, and the workforce agreement to set up 'well-being at work' committees within each of its establishments in France. This will result in training for all employees in well-being at work. The company has already introduced a 'well-being and efficiency at the workstation' training programme which included practical exercises to be carried out at the workstation with the aim of preventing musculoskeletal disorders and the risk of accidents. This clearly has a material benefit to the employer insofar as there is a potential reduction in levels of absence due to sick leave, but it also conferred benefits on the employee (improved health and

safety) and sent a signal to employees about the company's interest in the well-being of its employees.

In general, however, the voice of social partnership was largely silent in the case study establishments on the relationship between VET, job quality, and overall levels of employee job satisfaction.

6.6.6. Summary of facilitators and barriers

There is a sectoral dimension to the relationship between VET and the social benefits of training; there is also a product market dimension insofar as case study companies operating in higher value-added markets are more likely to have a sophisticated approach to their training strategy. But companies have a degree of strategic choice in that they have a relatively free hand to develop training programmes which explicitly aim to improve the work situation of many employees. Some employers recognise, from experience, that to maximise the returns from any training investment they need the employee's full support: there is a strong theme running through many of the case studies of the need to obtain the employee's acceptance of the company's corporate goals and values. To this end, there is a degree of convergence across many of the larger case study establishments – regardless of sector or Member State – of ensuring training strategies are integrated with a wider set of human resource development strategies which are consistent with the values of the organisation.

6.7. Conclusion: social benefits of training

Among a core of case study employers there was recognition that the role of the human resource function was to convert the skill or competence based outputs from either IVET or CVET into organisational performance improvements; essential elements of this involved gaining employee commitment to the organisation's goals and encouraging employees to deploy their skills fully in the production process. Training is just one part in the overall mix. Training provides employees with the skills which might allow them to realise their career aspirations within the workplace, but a much wider set of human resource policies is needed to encourage those skills to be effectively deployed. If VET is provided in a workplace which is otherwise characterised by relatively poor management-employee relations, it is difficult to see how its provision could have any bearing on either employees' commitment to the organisation or their motivation to utilise their skills fully. In contrast, there is the possibility that the

provision of VET in such an environment may be viewed negatively by the workforce.

IVET is concerned with equipping the trainee with the skills required to pursue their chosen profession; in this, the employer is concerned principally with the relative monetary cost-benefit of providing traineeships. Some case study employers, however, were aware of the need to provide a range of non-pecuniary benefits to retain their apprentices and trainees. Such benefits (e.g. the opportunity to pursue particular vocational interests) emerged or were more manifest at the point at which the IVET phase was complete. It is in relation to CVET that the social benefits are more clearly in evidence.

The rationale for providing CVET was varied, including training:

- (a) to equip employees with the skills necessary for organisational and/or technical change to succeed;
- (b) in relation to the development of new products;
- (c) to raise productivity or efficiency levels;
- (d) to improve working relationships.

The evidence points towards CVET bringing about a range of social benefits, including:

- (a) improved working relationships within and across departments;
- (b) sending a signal to employees that the decision by the employer to invest in training them was a reflection of the value the employer attached to them, which was warmly received by the employee;
- (c) tackling often longstanding issues of conflict within the organisation;
- (d) bringing about improvements in the physical working environment (e.g. more comfortable working conditions).

But for the VET to generate social benefits in the workplace several conditions need to be in place:

- (a) training is regarded as relevant to current and future needs by employers and employees;
- (b) training provision at least meets employee expectations;
- (c) training initiatives are relatively substantial;
- (d) training is designed either to assist with employee career development (as assessed through performance reviews or appraisals of some type) or improves the content of existing jobs where there is limited scope for career progression;
- (e) training is seen as continuous process by employees and employers rather than a one-off exercise;

- (f) career structures are transparent and programmes to promote training are inclusive;
- (g) there is a training infrastructure which employees can access relatively easily and which is linked to performance review;
- (h) training is designed to weaken barriers and divisions within the workplace;
- (i) the work situation of employees is amenable to some type of improvement through training;
- (j) there is a consensus among the employees about the values of the organisation;
- (k) human resource practices more generally are consistent with training strategies.

In contrast, there are possible VET characteristics which result in relatively low levels of employee job satisfaction and low returns for the employer:

- (a) training tends to be piecemeal and discrete;
- (b) there is little culture of training or continuous professional development;
- (c) training is not valued by the employer (or employee);
- (d) there is relatively little training infrastructure to which employees have access;
- (e) there is relatively little scope for occupational progression in the workplace;
- (f) human resource policies and training strategies – insofar as they exist – are not necessarily integrated.

While employers have some constraints placed on their capacity to bring about the types of social benefit listed above, they also have a high degree of strategic choice of the values or workplace culture they want to create.

CHAPTER 7

Conclusion

Neo-classical economics has tended to dominate the discussion about investments in training by either employers or employees. This report has attempted to extend the discussion through the development of a rigorous conceptual framework, drawing on economics and organisational psychology, to show how both employers and employees might benefit from VET where the intent is to improve the work situation of the employee via training. It needs bearing in mind that, in many organisations, the employer is often also an employee in the form of senior management and self-employment.

The quantitative evidence – though limited by the availability of micro-level data which adequately captures the full relationship between VET and the wider, social benefits of training – demonstrates a positive relationship between training and measures of job satisfaction across the EU. This is consistent with the relatively few studies which have looked at this issue. Similarly, the qualitative data – drawn from several employer case studies – reveals that training can affect employee work situations in several ways:

- (a) through improving job content (via job enrichment);
- (b) providing employees with the skills to manage conflict in the workplace (e.g. working across departmental barriers) which might otherwise be a source of dissatisfaction with work;
- (c) sending a signal to the employee that the employer is investing in them (an especially important signal in those workplaces which are facing difficult trading conditions);
- (d) providing a social context in which employees can share their experiences with other employees from different parts of the business – simply by bringing employees together to consider various aspects of their performance in the organisation – such that problems and solutions can be shared.

The employer only obtains the full benefits of the training they provide if that training is integrated with a wider set of human resource practices which recognise that employees require – and sometimes expect – some form of continuous development. It is also apparent that continuous development should incorporate not just the acquisition of new skills and competences but the overall quality of the employee's work situation if the aim is to improve the job

satisfaction of the employee. Much of this has been recognised in organisational psychology literature for many years with respect to human resource practices, such as the use of participative management, job enrichment, worker autonomy, and so on. Research undertaken in the Hawthorne Experiments, by Herzberg, Coch and French, Daniel and McIntosh and many others, point to the importance of these types of work-related factors being important determinants of organisational performance. But little consideration has been given to the role of VET in improving the work situation of employees.

With the increasing interest in high performance work organisations, which has come to light over recent years, more interest has been given to the contribution of training, alongside other human resource development practices, in promoting organisational performance. But research on HPWOs tends to adopt an over-arching economic approach, with the research questions framed along the lines of what contribution training can make to workplace performance measured with respect to productivity or profitability? As yet, these studies have shown less interest in understanding the process by which VET might improve organisational performance. For example, in what ways are jobs changed by VET which makes employees more or less willing to deploy those skills in the interest of the employer. In this report the aim has been to demonstrate the way in which training is integrated with human resource policies to bring about improvements in the work situation of employees which has the potential to bring about material improvements for the employer (and indirectly for the employee). There is a need to recognise that improvements to the work situation of the employee are a desirable end in their own right so long as these gains are sustainable.

From a theoretical perspective, a conceptual model has been developed which draws on both economics and organisational psychology to show that there are increased benefits to be derived by both employers and employees if the benefits of training are shared. The conceptual model suggests that any attempt by employers to appropriate all of the benefits, even in the case where training is highly specific in nature, will be met by a lack of cooperation among employees that will undermine the training initiative. From the case studies, it shows that the concept of sharing – from a non-material perspective – is frequently incorporated into the design of training typically through:

- (a) increasing the employee's interest in the job;
- (b) providing the employee with more responsibility and autonomy for their part of the production process.

The quantitative work suggests that, alongside the positive effects of employer provided training, there are positive effects of working in a learning and creative environment.

Of interest to this study has been the means by which management are able to gain the acceptance of the workforce of the training goals. Several features are seen in the employer case studies:

- (a) a degree of trust needs to be established between employees and employers (management) so that there is belief on both sides that the training is being introduced for the benefit of everyone;
- (b) trust is established through the creation of shared values (the identification of individuals with the goals of the enterprise). These values appear to be more readily shared where each side is seen to gain from their observance;
- (c) training is one of the ways in which values are seen to be shared. Training is regarded as a good by employees with a non-material value (e.g. it sends a signal to the employee that the employer values their contribution to the workplace);
- (d) access to continuous training and development is often one of the shared values of employers and employees (this was particularly the case in the accountancy sector but it was readily observable in other sectors too);
- (e) training is often a means of instilling the values of the organisation in the individual, but these will tend to be reinforced only where other human resource practices are consistent with those values;
- (f) there needs to be an element of inclusiveness so that all employees potentially have access to training and development. In this way, groups within the workforce are not excluded and thereby are not a source of potential conflict.

The study has also revealed that employers in all sectors and all countries have a high degree of strategic choice as to whether or not they adopt an approach to training which is consistent with the points made above. The product markets in which employers operate, the principal form of technology used in the production of a good or service, and the size of establishment are constraints on this type of approach being adopted, but these types of constraints can be easily overstated: strategic choice is a much more important determinant.

The model presented in Figure 5 outlined how improvements to organisational performance will be maximised where employees effectively deploy the skills they have acquired through training because they are motivated and committed to the goals of an organisation. This is basically a long-term, continuous development. Where training is provided to meet a highly specific need in the workplace and is a one-off training episode, the wider social benefits are unlikely to be realised to anything like the extent possible where training is an integral part of human resource policies designed to bring about mutually

reinforcing improvements to both the work situation and material improvements in organisational performance.

The way the model is formulated also suggests that employers tend to gain from the training they provide. It is less clear whether training provided by other employers will provide the same type of wider social benefits because it cannot, by definition, be part of the psychological contract with the current employer. Because of the emphasis on the longer-term relationship between employer and employee, it also points to the importance of IVET since employers are convinced that trainees tend to stay with the company longer and are more steeped in the values of the organisation.

What can policy-makers and the social partners learn from the findings of this study? Several recommendations present themselves:

- (a) employers – and the social partners more generally – need to take a holistic view of training within the workplace. Training needs to be an integral part of wider human resource development policies which seek to encourage continuing workforce development;
- (b) a transparent training infrastructure is needed to allow employees to see how they can access training to develop their careers;
- (c) all groups in the workforce need to have access to training opportunities to avoid the creation of ‘in-groups’ and ‘out-groups’ with respect to training;
- (d) the design of training in the workplace needs to pay heed to its likely impact on job content – this can be a source of both job satisfaction and dissatisfaction depending on how training affects job content;
- (e) a long-term view of training benefits needs to be adopted. One-off training episodes will not create the shared sense of benefits at the core of the wider social benefits model;
- (f) the role of IVET appears to be of critical importance given that employers indicate that shared values are more readily established between employee and employer where the employee was formerly a trainee with the organisation.

From a research perspective, it is apparent that there are now excellent sources of data on employer training provision, such as CVTS. There are also excellent sources of data on the quality of work, including the surveys funded by the European Foundation for the Improvement of Living and Working Conditions, such as EWCS and EWLBS. But there are no micro-level data which combine detailed training data with that of working conditions. This could be combined by incorporating more questions on training in EWCS or EWLBS, or asking more about working conditions in CVTS. The European company survey 2009 makes much progress in this regard by incorporating several questions about human

resource development within workplaces; this was not yet available for use in the study ⁽³¹⁾. At sectoral level, however, data from CVTS can be merged with the EWCS carried out by the European Foundation to provide a particularly rich data set ⁽³²⁾.

To conclude, it is possible to paraphrase Daniel and McIntosh (1972): If there is one single lesson that can be learned from the research it is that the tasks employees are required to do in their work are of central importance in influencing their attitudes to both the job and the organisation for which they work. The provision of VET gives employees opportunities to develop their abilities. Allowing employees to use those abilities will give their work more meaning and they will be much more likely to regard their work, their place of work and everything associated with it as a source of satisfaction. Many employers already recognise this, but there are likely to be many more who would do well to learn the lesson.

⁽³¹⁾ The questionnaire for the European company survey is available at:
<http://www.eurofound.europa.eu/docs/surveys/ecs2009/questionnairemm.pdf>

⁽³²⁾ This is the purpose of a separate study for Cedefop.

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ANNEX 1

Literature search terms

General VET search terms:

- Employer (investment in) skill
- Employer (investment in) training
- Employer (investment in) workforce development
- Employer (investment in) vocational education and training
- Continuing vocational education and training
- Initial vocational education and training
- Informal learning/training
- Non-formal learning/training
- Formal learning/training
- General 'social benefits' search terms:
- Monotonous employment/work
- Absenteeism
- Fatigue
- Labour turnover
- Retention
- Recruitment
- Work intensification
- Worker autonomy
- Participative management
- Worker involvement
- Job Satisfaction
- Employee/Worker motivation
- Employee/Worker Commitment
- Employee/Worker Time Keeping
- Social benefits

To find relevant articles cross classify each search term in 'general VET search terms' with each of those in 'general social benefits search terms'.

Additional searches

Skills and organisational performance

- High performance work practices and training/VET
- High performance work organisations and training/VET

Spillovers

- Training and spillover
- Skills and spillover
- VET/vocational education and training and spillover
- VET/vocational education and training and poaching
- Skills and sectoral spillover
- Training and sectoral spillover
- VET/vocational education and training and sectoral spillover

ANNEX 2

Quantitative data sources

EWCS

The approach adopted has been to base the study primarily around the EWCS (initially for 2005, although, in principle, data are available for three other, earlier surveys)⁽³³⁾. This contains a range of variables relating to individual characteristics and individual experiences of their working conditions, as well as the effects of such working conditions on the health and other aspects of the wellbeing of the individual. However, while there is a wide range of variables available in the EWCS, including a reasonably large number of training and learning variables, it is not as rich in certain areas as we would like for the present programme of work. There are two principle areas of weakness that have been addressed: education and training variables (which have been amalgamated from CVTS) and broader performance variables (which will be drawn from Eurostat sources).

EWLBS

The study has also made use of the EWLBS (initially for 2005, although data are again available for earlier surveys and the latest survey, which should become available shortly, appears to contain a range of interesting HPW variables, which are closely allied with some aspects of the conceptual framework developed in the present report). As will become clear in the quantitative section, EWLBS contains almost no information about the training activity of enterprises⁽³⁴⁾, so any use of this data requires training activity to be matched onto the database. Despite this limitation, EWLBS appears crucial to providing an employer perspective on the social returns on training (rather than the individual perspective provided by EWCS). As a first step, the strongest of the training variables from EWCS was matched onto EWLBS to supplement the one usable training variable already in the database.

⁽³³⁾ Data from the ESRC archive.

⁽³⁴⁾ Except for information about employees returning to the business.

CVTS

The CVTS contains a wide range of relevant education and training variables. CVTS is not an individual survey, however, but an establishment level survey and so some dimension other than the individual is needed to match CVTS with EWCS. At present, data from CVTS, 2005 has been matched at the sectoral level to EWCS 2005. This enables the inclusion of a wide range of VET variables relating to the sector in which the individual worker finds him or herself. Broadly speaking, these include information about the extent and nature of both IVET and CVET, which provide an indication about the probability an individual in a given sector will receive CVET (or IVET), the extent of that training (hours, cost, etc.) and the nature of that training (e.g. formal, non-formal, informal, etc.).

ANNEX 3

Changes in employer and employee surpluses associated with training and the introduction of HPW

Training and changes in employer and employee surpluses

Labour surpluses with general training

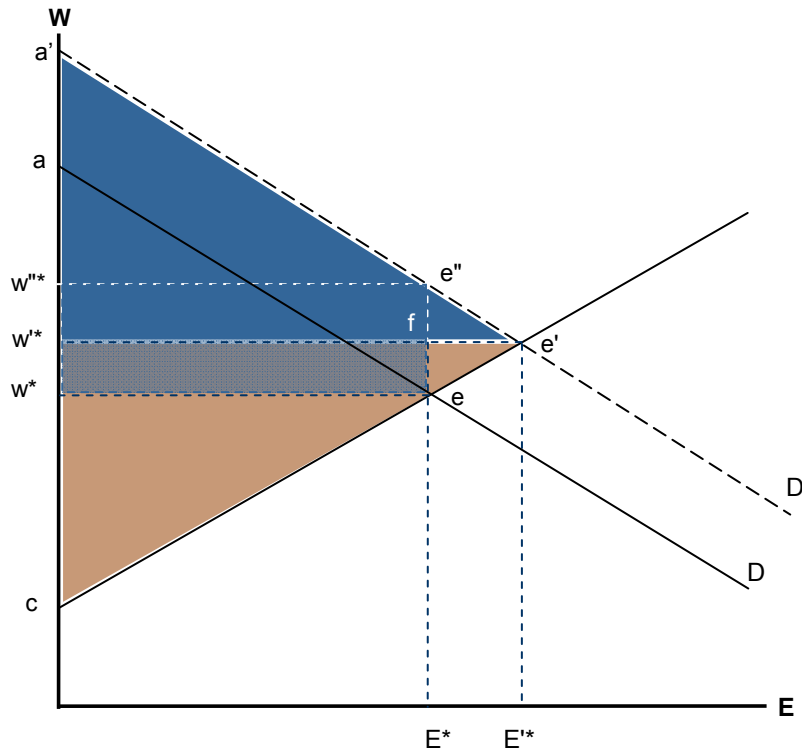
Figure A1 illustrates the effects of training by employers (which is analogous to an increase in labour quality or the offer of effort by employees), but assuming that labour supply (in terms of the person-wage relationship) remains unchanged. The result is an outward shift in demand $D \rightarrow D'$. In a freely operating competitive labour market, if the training is general this would result in a change in equilibrium from e to e' and an associated rise in the average employee wage to w^* . More important in the present context, for normally sloped supply and demand curves, the training produces an unequivocal rise in both employer surplus $a'e'w'^* > aew^*$ (note that $aew^* = a'e'w'^*$) and employee surplus, from cew^* to $ce'w'^*$.

However, what happens to the relative sizes of the two areas of surplus depends crucially on the relative size of the absolute slopes of the demand and supply curves. It can be seen that a perfectly elastic supply of labour curve (a horizontal line), other things equal, is associated with zero employee surplus and any increase in training results only an increase in employer surplus, while a perfect elastic demand curve (a horizontal line), other things equal, is associated with zero employer surplus and any increase in training only increases the employee surplus. In both of these cases, while one group's surplus increases with training, the wage remains constant at the initial market level.

One final consideration, however, is that increased general training by existing employers creates a further imbalance unless it is the existing employers who take up the additional trained employees created in the market. To illustrate this, assume that existing employers maintain their employment levels at E^* in Figure A1. Then their post-training surplus is $a'e''fw'^*$ – total employee surplus remains at the new level $ce'w'^*$ (though the benefit to the employers' own employees is now $cefw'^*$) and new entrant firms hiring labour benefit by $fe'e''$ from the existing employers training activities. This is a special case of the

'poaching' argument more generally attached to all employer-provided general training.

Figure A1. **Surpluses – Effects of training**



Labour surpluses with specific training

The general training outcome can now be contrasted with that of specific training. It is assumed that specific training has the same magnitude of effect on labour productivity (as in the case of general training), again, shifting the labour demand curve out from D to D'. Here normal market forces are largely absent: insofar as the training is organisation-specific, training can only be offered by existing enterprises with sufficient 'production experience' to inform the training decision and content. Thus, organisations entering the market will do so without the ability to offer training and, since training makes existing enterprises more competitive, it creates a temporary barrier to entry, a degree of monopoly power in the product market and monopsony power in the labour market.

As a consequence, only E^* of individuals can be trained in the market⁽³⁵⁾ (Figure A1). According to standard neoclassical theory, employees will not be paid more after than before training and the going wage remains at w^* . Thus, the employee surplus remains unchanged at cew^* , but there is an unequivocal increase in employer surplus from aew^* ($=a'e''w''^*$) to $ae''ew^*$ (a gain of $w''ee''w''^*$). The absolute rise in employer surplus, with a constant employee surplus is, therefore, also associated with a relative rise in the employer surplus⁽³⁶⁾.

The question is whether such an allocation would be viewed as acceptable by employees (or, even, employers). This seems unlikely from an employee perspective:

- (a) the increase in employee quality resulting from the training ($Q_0 \rightarrow Q_T$) will give rise to comparisons between the pay they receive for that level of quality with the pay others receive when that level of quality is achieved through general training. Individuals of the 'same quality' compare w^* with w''^* , which will suggest that their position is unfair compared with other employees;
- (b) in addition, the rise in employer surplus *vis-à-vis* employee surplus, both in absolute and relative terms, will suggest that – despite the fact the human capital is embedded in them – the employers gain all of the reward. Thus, the outcome appears to be unfair in terms of the distribution of returns between employees and employers.

HPW, working conditions and changes in employer and employee surpluses

Competitive market outcome

If the introduction of a HPW package favourably alters the conditions of work in the market, but does not alter the amount of effort (or the productivity of workers), then the supply of labour to the jobs affected will shift outwards, as shown in Figure A2 ($S \rightarrow S'$). The outward shift in the supply of labour produces a new

⁽³⁵⁾ It is assumed, for the moment, that the prior knowledge required for the receipt of specific training is embodied in existing employees and cannot be imparted to new recruits.

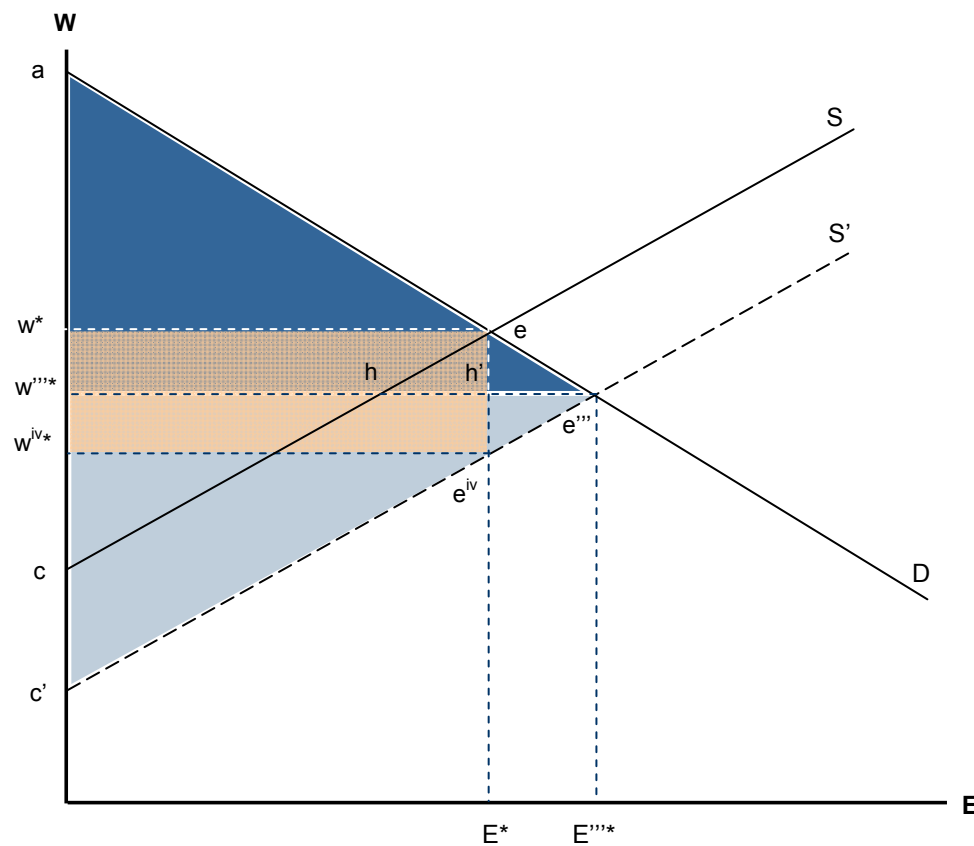
⁽³⁶⁾ It is clear that the value that employers place on the trained employees (willingness to pay) not only must be more than the costs of training (other things equal), but, also, if the enterprise had to pay that much, would still enable it to operate more efficiently than without the training.

competitive market equilibrium at, e''' , which, in the absence of a perfectly inelastic (vertical) demand for labour curve, will always be to the right of e .

In this particular case, the effect on the employer surplus (which employers capture) is always non-negative ($ae'''w''' \geq ae^*w^*$). While the impact on employees through the operation of the market is to lower wages from w^* to w''' , the effect on the employee's surplus is also positive as $c'e'''w''' > c'e^{iv}w^{iv}$ (note $c'e^{iv}w^{iv} = ce^*w^*$).

By accepting improvements to working conditions in a competitive labour market, current employees face a reduction in their wage rate $w^* - w'''$ (e.g. the 'compensating variation' in wages⁽³⁷⁾ in a competitive labour market where working conditions have improved). Based on perceptions about what will

Figure A2. **Surpluses – Improvements in working conditions**



⁽³⁷⁾ E.g. that dirtier, nastier, riskier jobs generally have a (positive) wage premium caused by the adverse effects of the nature of the work on labour supply (Sherwin, 1986).

happen at the market level, employees may be resistant to downward pressure on their wages (even though other things are not equal here, as the quality of working conditions are improving). Such a hypothesis dates back at least to Keynes' (1936) work on the asymmetry between reactions to wage increases and reductions (see, e.g., Blinder and Choi, 1990).

However, their surplus changes by the net amount, $w^{iv*}e^{iv*}e^{iv*}w^{iv*}$, which compares with the change in employer surplus $w^{iv*}e^{iv*}w^{iv*}$. Where the absolute slopes of the demand and supply curves are equal, the absolute and relative changes in surplus are identical for employees and employers, but where the absolute slopes differ, so generally will the absolute and relative outcomes for both groups.

Labour surpluses with improved working conditions for current workers

If improved working conditions are offered as a reward package that can only be accessed by existing workers, this restricts maximum employment to E^* . The question arises as to why the employer would want to offer improved working conditions, where there is a cost to doing so:

- (a) at one extreme is an 'altruistic response': assuming the costs of the improvements are small, all of the benefit is offered to employees. In this case, wages are maintained at w^* and the employee surplus increases from cew^* to $c'e^{iv*}ew^*$ (note $ce^{iv*}w^{iv*} = cew^*$).
- (b) at the other is a 'surplus maximising' employer goal: the employer feels that they can reduce the wage to w^{iv*} , allowing the employer surplus to rise from aew^* to $aee^{iv*}w^{iv*}$.

The question is whether such allocations would be viewed as acceptable by employers or employees. Several comments are in order:

- (a) employees might view w^{iv*} as unacceptable because:
 - (i) of their natural tendency to resist reductions in wages and wage differentials (even though working conditions have improved);
 - (ii) they are able to observe wage outcomes in equivalent competitive labour markets, where the outcome is a wage of w^{iv*} ($>w^{iv*}$);
 - (iii) the relative size of the employer to employee surplus increases from aew^*/cew^* to $aee^{iv*}w^{iv*}/c'e^{iv*}w^{iv*}$ ($=aee^{iv*}w^{iv*}/cew^*$);
- (b) employers might view w^* as unacceptable because:
 - (i) they would want to recoup their expenditures on improvements in working conditions through some reduction in the wage rate below w^* ;
 - (ii) they are able to observe competitive outcomes in other markets where the equivalent of the new working conditions prevail, in which wages are w^{iv*} ($<w^*$);

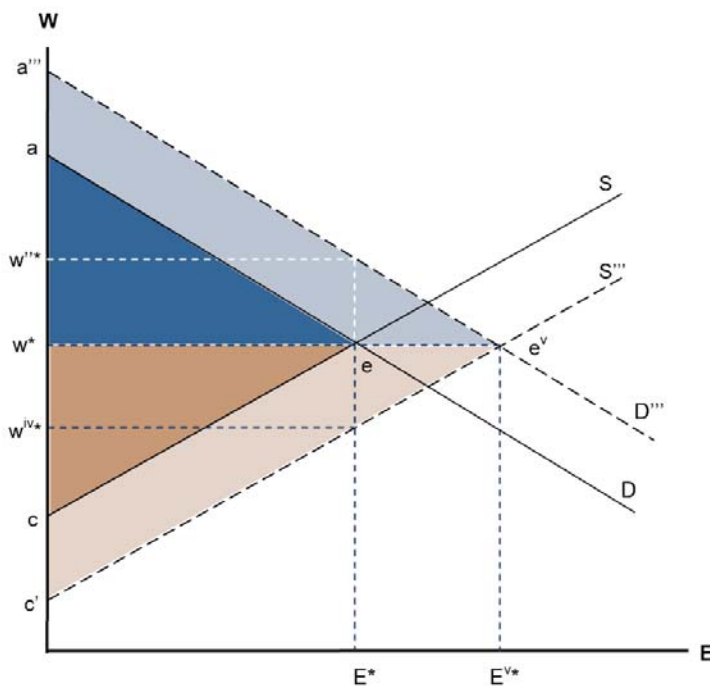
- (iii) the relative employee to employer surplus increases from cew^*/aew^* to $c'e^ivew^*/aew^*$.

Combined role of training and improved working conditions

Competitive market outcome

Figure A3 shows the market outcome when the investment in training/HPW shifts both labour supply ($S \rightarrow S'''$) and labour demand ($D \rightarrow D'''$): in other words, it increases the productivity of workers, and thereby the demand for labour, at the same time that it improves the conditions of work, and thereby the supply of labour at any give wage. In this example, the outcome is simplified slightly by making the new equilibrium wage the same as the original wage, at level w^* (e.g. the intersection of D''' and S''' occurs at e^v , at the same height on the vertical axis); however, the new competitive market employment level (E''') is higher than the initial level (E). In this case, it can be seen that the surpluses are unequivocally higher for both employers and for employees ($a''e^vw^* > aef$ and $c''e^vw^* > cef$ respectively).

Figure A3. **Surpluses – Effects of training and improved working conditions**



ANNEX 4

Additional information relating to quantitative estimates

Results for the control variables

Following the discussion in Section 5.3.2 Table A1 includes:

- (a) regression 1 – country dummies (e.g. be, cz, ...), where the dummy for the UK is omitted as the base group;
- (b) regression 2 – sectoral dummies (e.g. sect2, sect3, ...), where the dummy for Sector 2 (e.g. mining and extraction) is omitted as the base group (and Sector 1 – agriculture, forestry and fisheries – is not covered in the survey);
- (c) regression 3 – occupation dummies (e.g. occup1, occup2, ...), where the dummy for occupation 9 (e.g. elementary occupations) is omitted as the base group;
- (d) regression 4 – enterprise size dummies (e.g. size2to4, size5to9, ...), where the dummy for the smallest size group (size1, on-person companies) is omitted as the base group;
- (e) regression 5 – employment status (e.g. empselfemp, empee, ...), where the dummy for self employment ⁽³⁸⁾ without employees is omitted as the base group;
- (f) regression 6 – gender (e.g. males=1 and females=0).

Not all of the coefficients in each variable set are significantly different from their own base group. In the case of the sectoral dummies, for example, many of these are insignificantly different from the base group, sect2 (see below). The insignificant ones do not add greatly to the explanatory power of the equation and, thus, neither the share of total variation explained by the model (\bar{R}^2) nor the F statistic may be improved by their inclusion.

⁽³⁸⁾ Note that self employment and size1 might be expected to be highly correlated.

Table A1. Influences on work satisfaction – the base-line regressions/control variables

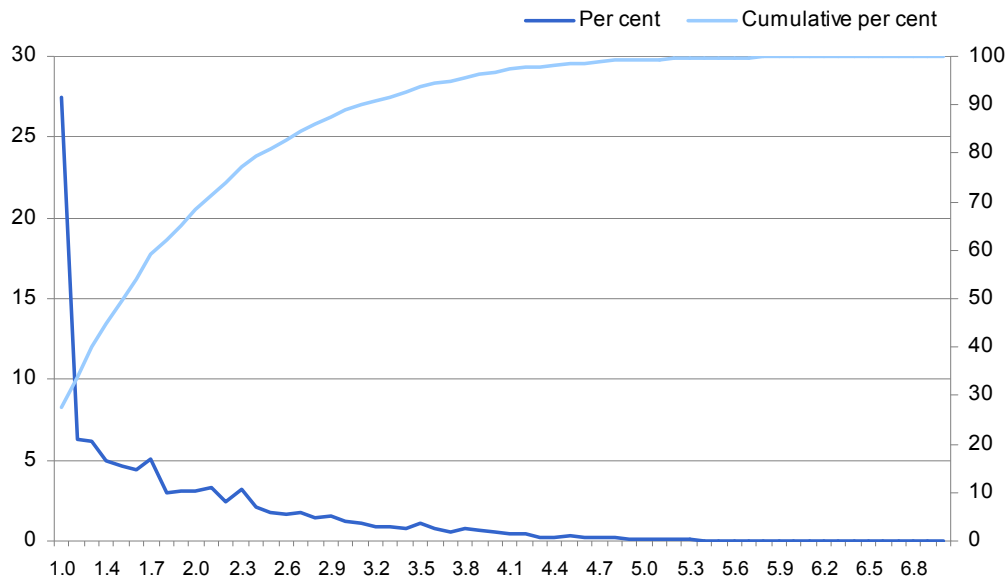
	1		2		3		4		5		6	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
(Constant)	1.640	0.000	1.682	0.000	1.783	0.000	1.664	0.000	1.613	0.000	1.587	0.000
be	0.095	0.009	0.077	0.033	0.072	0.044	0.093	0.009	0.099	0.005	0.099	0.006
cz	0.157	0.000	0.164	0.000	0.163	0.000	0.176	0.000	0.176	0.000	0.175	0.000
dk	0.144	0.196	0.129	0.241	0.102	0.349	0.134	0.218	0.136	0.211	0.135	0.214
de	0.443	0.000	0.419	0.000	0.397	0.000	0.419	0.000	0.422	0.000	0.423	0.000
ee	0.212	0.000	0.205	0.000	0.208	0.000	0.217	0.000	0.221	0.000	0.221	0.000
el	-0.042	0.316	-0.035	0.391	-0.043	0.289	-0.047	0.250	-0.043	0.288	-0.043	0.292
es	0.525	0.000	0.508	0.000	0.500	0.000	0.508	0.000	0.506	0.000	0.509	0.000
fr	0.409	0.000	0.377	0.000	0.359	0.000	0.390	0.000	0.392	0.000	0.390	0.000
ie	0.312	0.000	0.305	0.000	0.305	0.000	0.325	0.000	0.324	0.000	0.325	0.000
it	0.333	0.000	0.343	0.000	0.332	0.000	0.345	0.000	0.348	0.000	0.348	0.000
cy	0.582	0.000	0.550	0.000	0.549	0.000	0.581	0.000	0.589	0.000	0.585	0.000
lv	0.540	0.000	0.511	0.000	0.500	0.000	0.519	0.000	0.520	0.000	0.521	0.000
lat	0.193	0.000	0.181	0.000	0.191	0.000	0.204	0.000	0.207	0.000	0.207	0.000
lu	0.441	0.000	0.427	0.000	0.424	0.000	0.460	0.000	0.475	0.000	0.474	0.000
hu	0.535	0.000	0.515	0.000	0.490	0.000	0.506	0.000	0.509	0.000	0.510	0.000
mt	0.259	0.099	0.288	0.064	0.284	0.065	0.290	0.059	0.294	0.054	0.293	0.055
nl	0.554	0.000	0.538	0.000	0.526	0.000	0.546	0.000	0.533	0.000	0.536	0.000
at	0.262	0.000	0.274	0.000	0.291	0.000	0.301	0.000	0.297	0.000	0.295	0.000
pl	0.301	0.075	0.283	0.091	0.257	0.120	0.287	0.082	0.288	0.080	0.284	0.085
pt	0.413	0.000	0.397	0.000	0.373	0.000	0.391	0.000	0.387	0.000	0.388	0.000
si	0.331	0.000	0.287	0.000	0.257	0.000	0.281	0.000	0.288	0.000	0.289	0.000
sk	0.258	0.000	0.260	0.000	0.250	0.000	0.251	0.000	0.251	0.000	0.250	0.000
fi	0.577	0.000	0.536	0.000	0.524	0.000	0.528	0.000	0.530	0.000	0.531	0.000
se	0.461	0.000	0.431	0.000	0.411	0.000	0.430	0.000	0.431	0.000	0.433	0.000
bg	0.064	0.155	0.079	0.077	0.067	0.127	0.088	0.045	0.087	0.047	0.086	0.049
hr	0.079	0.024	0.084	0.016	0.093	0.007	0.106	0.002	0.112	0.001	0.111	0.001
ro	0.578	0.000	0.535	0.000	0.518	0.000	0.543	0.000	0.537	0.000	0.538	0.000
tr	0.456	0.000	0.422	0.000	0.391	0.000	0.410	0.000	0.419	0.000	0.418	0.000
no	0.590	0.000	0.556	0.000	0.522	0.000	0.552	0.000	0.548	0.000	0.550	0.000
ch	0.702	0.000	0.671	0.000	0.658	0.000	0.700	0.000	0.708	0.000	0.702	0.000
sect3			0.074	0.177	0.078	0.154	0.093	0.087	0.078	0.152	0.086	0.115
sect4			0.149	0.006	0.137	0.012	0.154	0.005	0.137	0.012	0.156	0.004
sect5			0.032	0.566	0.043	0.446	0.065	0.249	0.047	0.407	0.052	0.362
sect6			0.105	0.073	0.146	0.013	0.144	0.014	0.122	0.038	0.125	0.034
sect7			0.113	0.040	0.106	0.055	0.106	0.056	0.089	0.107	0.089	0.106
sect8			0.038	0.519	0.109	0.063	0.104	0.076	0.090	0.125	0.092	0.117
sect9			0.013	0.802	0.043	0.431	0.034	0.532	0.013	0.816	0.012	0.822
sect10			0.142	0.019	0.137	0.025	0.162	0.008	0.152	0.012	0.154	0.011
sect11			-0.198	0.001	-0.131	0.023	-0.120	0.037	-0.139	0.016	-0.140	0.015
sect12			0.039	0.442	0.060	0.248	0.094	0.069	0.093	0.071	0.091	0.077
sect13			-0.035	0.529	-0.019	0.739	0.020	0.731	0.004	0.949	0.003	0.952
sect14			-0.089	0.105	-0.035	0.527	-0.010	0.855	-0.022	0.686	-0.019	0.729
sect15			-0.017	0.739	0.043	0.394	0.092	0.071	0.080	0.116	0.091	0.073
sect16			0.113	0.034	0.167	0.002	0.206	0.000	0.197	0.000	0.203	0.000
sect17			0.050	0.341	0.018	0.733	0.040	0.453	0.032	0.549	0.032	0.542
sect18			-0.043	0.460	0.034	0.560	0.040	0.488	0.016	0.784	0.018	0.754
sect19			-0.298	0.000	-0.165	0.003	-0.141	0.010	-0.165	0.002	-0.162	0.003
sect20			-0.197	0.001	-0.040	0.489	-0.023	0.696	-0.050	0.390	-0.048	0.408
sect21			-0.096	0.066	-0.004	0.936	0.038	0.471	0.026	0.626	0.032	0.544
sect22			-0.035	0.494	0.042	0.426	0.050	0.339	0.027	0.600	0.031	0.548

	1		2		3		4		5		6	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
sect23			-0.115	0.024	0.053	0.310	0.068	0.196	0.034	0.515	0.050	0.343
sect24			-0.055	0.281	0.079	0.131	0.100	0.055	0.076	0.145	0.093	0.074
sect25			0.034	0.660	0.037	0.629	0.060	0.436	0.031	0.681	0.030	0.698
sect26			-0.140	0.006	-0.073	0.153	-0.021	0.677	-0.037	0.470	-0.027	0.603
occup1					-0.300	0.000	-0.290	0.000	-0.221	0.000	-0.227	0.000
occup2					-0.318	0.000	-0.324	0.000	-0.303	0.000	-0.305	0.000
occup3					-0.248	0.000	-0.257	0.000	-0.244	0.000	-0.243	0.000
occup4					-0.158	0.000	-0.172	0.000	-0.171	0.000	-0.163	0.000
occup5					-0.136	0.000	-0.132	0.000	-0.130	0.000	-0.128	0.000
occup6					-0.106	0.081	-0.081	0.183	-0.048	0.430	-0.044	0.465
occup7					-0.076	0.000	-0.074	0.000	-0.064	0.001	-0.073	0.000
occup8					0.045	0.035	0.035	0.098	0.039	0.065	0.031	0.148
occup10					-0.088	0.101	-0.107	0.048	-0.100	0.062	-0.114	0.035
size2to4							-0.014	0.394	-0.008	0.655	-0.007	0.710
size5to9							0.076	0.000	0.050	0.011	0.050	0.011
size10to49							0.092	0.000	0.051	0.004	0.050	0.004
size50to99							0.116	0.000	0.073	0.000	0.073	0.000
size100to249							0.151	0.000	0.107	0.000	0.105	0.000
size250to499							0.169	0.000	0.122	0.000	0.121	0.000
size500over							0.134	0.000	0.088	0.000	0.085	0.000
empselfemp									-0.147	0.000	-0.150	0.000
empee									0.102	0.000	0.103	0.000
empother									0.164	0.001	0.166	0.001
gender											0.037	0.000
\bar{R}^2	0.071		0.088		0.109		0.114		0.119		0.120	
F	66.0**	0.000	46.8**	0.000	50.5**	0.000	47.9**	0.000	48.2**	0.000	47.8**	0.000
Significance		<10%		≥10%		≥5%		≥1%				

Hazardous aspects of work

Figure A4 sets out the results of the average count variable: for purposes of illustration, the results have been reordered, from 1=best to 7=worst possible outcomes. As the underlying variables (q10a-j) range from 1 to 7, so potentially does the estimated average value, although combinations of exposure to large numbers of hazards are not at all common. There is something of a discontinuity for the average value of unity, as a significant minority of jobs have no exposure to the any of the risks, but a declining and cumulatively significant number of employees are exposed to higher levels of risk.

Figure A4. Degree of hazard in work and the cumulative hazard



NB: Average hazard score across 10 types of hazard; 1=best and 7=worst.

The second main route to constructing measures of the inherent hazardousness of jobs is to apply principal component analysis, Table A2. Doing so results in two significant components with clearly different features. While the weights in component 1 differ by about a factor of two (compare q10a/b with q10j), they are all positive, placing greatest emphasis on vibrations, noise and fumes in particular. It is difficult to be certain what types of work would be linked to this component, but construction activities seem a likely job type. Component 2, however, has negative weights for these components in particular, but positive weights for exposure to various chemicals and radiation. Again, it is difficult to be certain, but jobs in the chemicals, nuclear and health sectors seem likely to be associated with this component.

Table A2. **Work hazards, principal component analysis** ⁽³⁹⁾

	Are you exposed at work to:	Component	
		1	2
q10a	vibrations from hand tools, machinery, etc.?	0.717	-0.282
q10b	noise so loud that you would have to raise your voice to talk to people?	0.738	-0.340
q10c	high temperatures which make you perspire even when not working?	0.682	-0.265
q10d	low temperatures whether indoors or outdoors?	0.585	-0.350
q10e	breathing in smoke, fumes, powder or dust etc.?	0.763	-0.085
q10f	breathing in vapours such as solvents and thinners?	0.716	0.308
q10g	handling or being in skin contact with chemical products or substances?	0.619	0.500
q10h	radiation such as X rays, radioactive radiation, welding light, laser beams?	0.454	0.376
q10i	tobacco smoke from other people?	0.439	-0.044
q10j	handling or being in direct contact with materials which can be infectious?	0.352	0.629

Other difficulties of work

To check the impact of difficult working conditions, the analysis initially includes a simple average count variable based on the results of all sections of question 11 (e.g. as if greater involvement with every dimension covered in question 11 is associated with a 'difficulty' likely to have a negative impact on the employees' satisfaction with their working conditions). For each of the parts of the question, the hypothesis is that values closer to unity (they experience that dimension all the time) have a negative effect on well-being and values closer to 7 (they never experience that dimension) have a positive impact on well-being, Table A3. For completeness, Figure A5 outlines the distribution of the constructed average count variable (in this case, low values indicate that the individual experiences these dimensions all the time and high values that they rarely experience these dimensions).

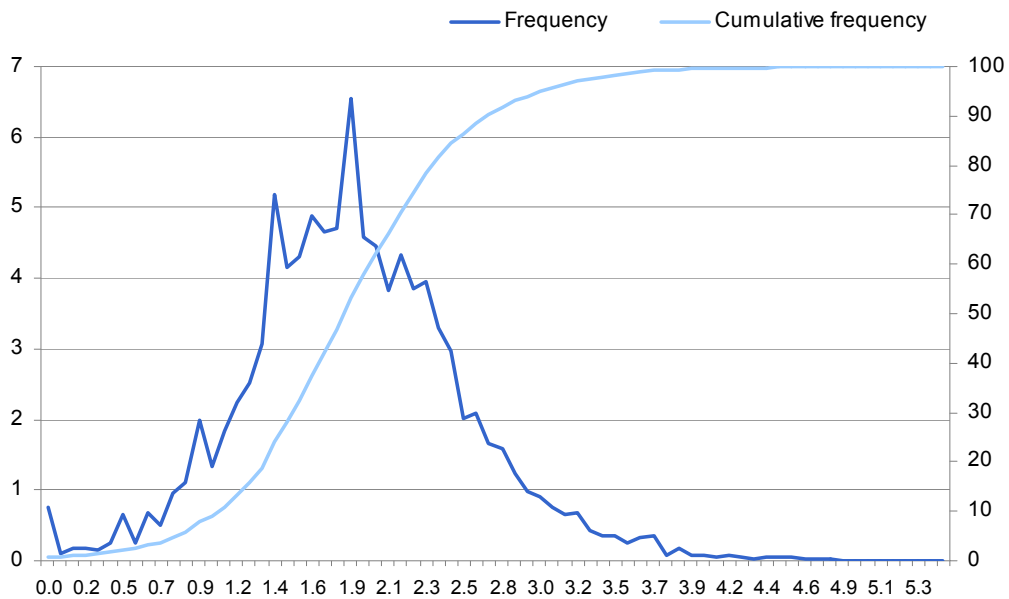
⁽³⁹⁾ E.g. with Eigen values greater than unity, the normally accepted cut off point.

Table A3. Hazardous and unsocial aspect of working, and worker satisfaction

	1		2		3		4		5		6		7	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
hazval1	-0.165	0.000			-0.149	0.000								
hazval2					-0.046	0.000	0.060	0.000						
hazval21							-0.111	0.000						
hazval1A			-0.024	0.000			-0.015	0.000	-0.016	0.000	-0.016	0.000	-0.016	0.000
hazval1B			0.018	0.000			0.017	0.000	0.015	0.000	0.015	0.000	0.014	0.000
hazval2A									-0.016	0.000	-0.016	0.000	-0.016	0.000
hazval2B									0.011	0.000	0.011	0.000	0.012	0.000
hazval2C									-0.005	0.069	-0.004	0.120	-0.004	0.094
hazval2D									0.013	0.000	0.014	0.000	0.015	0.000
hazval2E									-0.032	0.000	-0.032	0.000	-0.033	0.000
unsoctime1											0.006	0.000	0.007	0.000
unsoctime1A											-0.011	0.000	-0.012	0.000
unsochrs													0.003	0.000
\bar{R}^2	0.148		0.149		0.147		0.161		0.161		0.165		0.167	
F	59.1	0.000	58.9	0.000	55.9	0.000	60.5	0.000	58.0	0.000	57.3	0.000	57.2	0.000
Significance		<10%		≥10%		≥5%				≥1%				

NB: control variables set out in Table A1.

Figure A5. **Extent of potential difficulties with work and the cumulative ‘hazard’**



NB: The ordering in this diagram is derived directly from the coding in the questionnaire, such that 1=all the time and 7=never; the figure shows the distribution of individuals (e.g. percentage of all individuals) across the range 1 to 7.

Principal component analysis suggests that the underlying latent variables associated with question 11 may be more complex than the simple dichotomy suggested by the role of hazval21. Table A4 demonstrates that there are now five significant components isolated by the factor analysis:

- (a) the first component largely deals with the dichotomy outlined above (and accounted for in hazval21), showing positive weights for q11a-e, but also a positive and similar weight for q11m (e.g. wearing personal protective clothing or equipment). In Table A3, column 5, it can be seen that this component (hazval2A) has a significant negative value, consistent with the earlier finding with respect to hazval21;
- (b) the second component from Table A4 seems to place considerable emphasis on teleworking, homeworking and working from places other than the individual's home or company premises (working at the company premises is given a negative weight in this component). The effect on the reported satisfaction with the working conditions of employees (hazval2A) is positive: greater involvement with work outside of the firm organisation appears to improve employee satisfaction;
- (c) component 3 from Table A4 tends to emphasise working at the employee's company or organisation (working at home is associated with two relatively

small positive weights, while working in a place other than home or the employer's premises has a relatively large negative weight, the only negative weight in component 3). There also appears to be some evidence of computer-related working in this component (see the weights for q11e, k and l in particular). The effect of more intensive association with these activities is to lower employee satisfaction with their working conditions (see the coefficient on hazval2C in column 5 of Table A3, although the coefficient is only significant at the 10% level);

- (d) component 4 in Table A4 appears particularly linked to intensive lifting and handling of people and dealing with people who are not other employees (e.g. customers, patients, etc.); many of the other dimensions have coefficients of the opposite sign. Examination of the results in Table A3 (column 5, hazval2D) suggest that individuals who are dealing with 'the public', even where this involves lifting or moving people, are likely to report higher satisfaction with their working conditions;
- (e) component 5 from Table A4 appears to be related to a group of individuals who are involved with computers away from both their employer's premises and their home, who experience lower levels of satisfaction with their working conditions (e.g. the coefficient on hazval2E, column 5 of Table A3).

Table A4. **Other potential difficulties with working conditions, principal component analysis**

	Does your job involve:	Component				
		1	2	3	4	5
q11a	tiring or painful positions?	0.601	0.267	0.309	-0.195	0.201
q11b	lifting or moving people?	0.228	0.312	0.134	0.482	-0.261
q11c	carrying or moving heavy loads?	0.667	0.272	0.167	-0.043	0.130
q11d	standing or walking?	0.663	0.100	0.247	0.221	-0.150
q11e	repetitive hand or arm movements?	0.479	0.109	0.447	-0.325	0.219
q11f	working at company/organisation premise?	-0.135	-0.384	0.705	0.231	-0.106
q11g	teleworking from home with a PC?	-0.342	0.615	0.162	-0.209	-0.351
q11h	working at home, excluding telework?	-0.296	0.587	0.071	-0.121	-0.508
q11i	working in places other than home/company/ organisation premises, e.g. client's premises, on the road?	0.160	0.613	-0.444	-0.035	0.373
q11j	dealing directly with people who are not employees at your workplace?	-0.134	0.368	0.014	0.724	0.299
q11k	working with computers: PCs, network, mainframe?	-0.758	0.148	0.372	-0.052	0.320
q11l	using internet/email for professional purposes?	-0.747	0.245	0.345	-0.076	0.289
q11m	wearing personal protective clothing or equipment?	0.541	0.089	0.148	-0.043	0.000

Unsocial times and hours of work

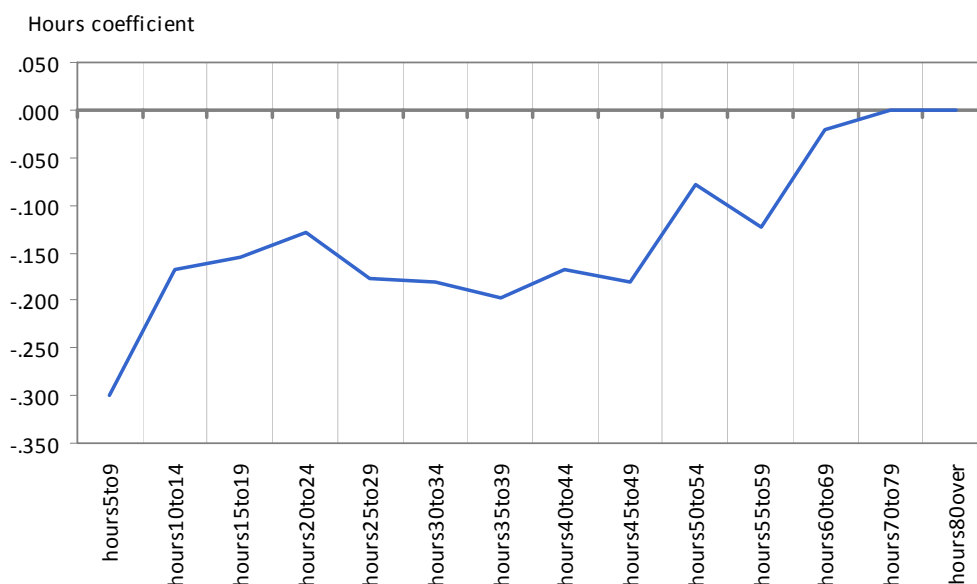
The five dimensions of unsocial working times are reduced using factor analysis into two principal components, as shown in Table A5. The first component applies a roughly equal weighting across all potentially unsocial times of work. The second appears to make a distinction between weekend working, to which it attaches a negative weight, and other forms of unsocial times.

Table A5. **Unsocial times of work, principal component analysis**

	Normally, how many times a month do you work:	Component	
		1	2
q14a	at night, for at least 2 hours?	0.609	0.461
q14b	in the evening, for at least 2 hours?	0.711	0.408
q14c	on Sundays?	0.686	-0.479
q14d	on Saturdays?	0.638	-0.592
q14e	more than 10 hours a day?	0.546	0.247

Unsocial length of work is represented by the hours worked in the main job. This was initially tested in the employee satisfaction regression by estimating separate coefficients for each band of hours worked, as shown in Figure A6 (the lowest number of hours worked, up to four per week, was dropped as the base group). The results show clearly, that longer hours of work per week are associated with lower levels of employee satisfaction with regard to their working conditions. While the resulting coefficients are not monotonically increasing, the general trend was upwards. Hence, the categorical hours variable was replaced by a continuous variable (unsochrs), the results for which are shown in column 6 of Table A2.

Figure A6. **Unsocial hours of work**



ANNEX 5

Details of the case studies

The selection of sectors is outlined in Table A6.

Table A6. **Selection of case studies**

Skill Level	Sector	
	Manufacturing	Service
Relatively high skills (e.g. high demand for third level or intermediate level skills) in the workplace	Automotive manufacturing	Accountancy
Relatively high demand for lower level skills in the workplace	Food and drink manufacture	Hospitality

The case study selection includes countries which exhibit varying approaches to VET and the organisation of employment relations according to:

- (a) the prominence of the market in determining skill provision;
- (b) collectivised versus individualised employment relations.

The selection of countries is shown in Table A7.

Table A7. **Selection of case studies**

VET System	Country	
	High skill	Low skill
Collectivised approaches	Germany/France, Ireland*	Spain/Portugal
Market dominant approaches	UK	Poland/Czech Republic

* Ireland is an interesting example: its approach to employment relations and training has become more collectivised over recent years at the same as its skill profile increased.

Combining the selection criteria presented in Tables A6 and A7 provides a case study selection grid as outlined in Table A8.

Table A8. Case study selection

Sector	Country	
	High skill	Low skill
Service sector	Germany (3 cases) UK (3 cases) Ireland (2 cases)	Portugal (2 cases) Spain (2 cases)
Manufacturing	Germany (3 cases) France (3 cases) UK (3 cases)	Poland (2 cases) Czech Republic (2 cases)

The case studies are of workplaces which have invested in either IVET or CVET to identify how this results in a range of social returns for the employer and, in aggregate, for the sector. This is a complex process since it needs to disentangle the impact of negotiations over pay and working conditions that might be taking place simultaneously with investments in VET and which, depending upon their success, may be a source of dissatisfaction for employees. The case study analysis allows identification of the extent to which investments in VET allow for changes in work organisation – that bring about job enrichment – resulting in material improvement in the job content of individual workers or the general work environment.

The case studies have been designed to identify the extent to which the workplace feels that it has achieved a range of social benefits for its employees and then to find out whether the learning and training the workplace has provided has contributed to the realisation of those benefits. The social benefits which the employer claims are in place may not derive from the training provided. Research literature, however, indicates that social gains are often necessary for financial gains to be obtained from training, and that relatively strong financial performance is dependent on employers having appropriate ‘bundles’ of human resource and product market strategies. The benefits of training can be transitory and wear-off quite quickly if they do not result in modification to the employee’s day-to-day job, but they can be long-lasting where significant and substantial changes have been made.

Details of the types of training undertaken in the case study establishments and the impact of the training is provided in Table A9.

Table A9. Training, working conditions and the benefit to the employer

Case study organisation	Type of training	Impact on workforce	Benefits to company
Hospitality			
UK Hotel	CVET: management and supervisory training to improve various aspects of the hotel's performance according to a range of key performance indicators	Generally responded well to being trained and the possibilities this provided for career progression	Difficult to gauge from key performance indicators data, but company justified training investments with respect to continually improving how they went about their business
ES Hotel	CVET: general training programme as above	Improved motivation of staff reflecting greater satisfaction with their jobs	Lower recruitment costs, improved adaptability of staff to the demands of the market
IE Hotel	IVET and CVET: general training programme as above	Welcome signal that the company was investing in its workforce which suggested a degree of future security in a difficult market	More flexibility across the hotel chain with people able to move between hotels in the chain, reduced recruitment costs, continuous improvement of the service
PT Hotel	IVET: large trainee programme (lasts 1 -6 months); CVET: for all occupations with the aim of upgrading skills but also strengthening the employee's commitment to company values	The training impressed upon the workforce the need to provide the hotel's customers with a high level of service.	(1) Improvements to the quality of service to the customer; (2) improvements to the company's financial performance; (3) increased employee motivation; (4) creates a stock of skills for the future development of the company; (5) reduced recruitment costs
PT Catering provider	IVET: small-scale trainee programme for university graduates CVET: training and professional development is limited to food, hygiene and safety training for manual workers.	A recent job satisfaction survey showed high job satisfaction levels but there is a high rate of labour turnover.	The intention is to address the skills of the workforce in the future, but for now training activities are limited.

Case study organisation	Type of training	Impact on workforce	Benefits to company
Automotive			
UK Automotive 1	IVET: apprenticeships in car vehicle maintenance	Apprenticeship places were highly sought after. The training course instils in trainees the importance of delivering a high quality service which reinforces the apprentices' pride at being selected for the apprenticeship.	Provision of a high quality service to customers, which reinforces the image of the brand.
UK Automotive 2	CVET: introduction of a management development course to alter the approach of managers to the business	Had allowed managers to reassess completely how they went about their business and their effectiveness. Initial results for some managers were uncomfortable but confidence in their own ability grew	Need to improve quality standards in a brand which was coming under market pressure
DE Automotive 1	IVET: large apprenticeship programme (duration 3 -3.5 years) CVET: broad supply of general and specific training courses	High standard of IVET brings about strong commitment to the company, motivation of the apprentices increases (proud of being part of the successful company)	IVET ensures the future supply of qualified staff; CVET is essential to update employee skills, especially given the pace of technical change.
DE Automotive 2	As above in DE – Automotive 1	Employees appreciate the opportunity of internal careers	IVET ensures the future supply of qualified staff and increases public image; VET essential to stay competitive and reduces recruitment costs
DE Automotive 3	As above in DE – Automotive 1	Provided the workforce with the skills to develop a career within the company. According to in-house surveys, satisfaction with CVET is high among the workforce.	IVET ensures the future supply of qualified staff and increases flexibility within the company.
FR Automotive 1	Continuous CVET for employees, based on annual appraisal	Continuous development of employee skills linked to promotion opportunities	More effective communication across the company contributes to requirement to make constant efficiency gains
FR Automotive 2	Company gives all employees a right to train – linked to annual appraisal system	Central to the company's operation is a social contract with employees which relates to the quality of work, work-life balance, and the opportunity to develop careers via training.	Employees are trained to ensure that they can develop their careers within their occupational group. This creates an increased stock of skills which the company can use.

Case study organisation	Type of training	Impact on workforce	Benefits to company
Accountancy			
UK Accountants	IVET: attempt to gain a competitive advantage in the recruitment market through the use of innovative approach to professional development	Opportunity to experience a wider range of activities than would be usual in a large accounting practice	Able to obtain the quality of graduate recruits the company wanted in competition with large accountancy practices
UK Accountant	IVET: provision of professional training in return for which trainees undertook audit work	There were limited prospects for promotion, but trainees acquired the skills to develop a career in the external labour market.	Allowed auditing work to be carried out at a competitive price
IE Accountants	IVET/CVET: provision of rigorous pre-qualification training which leads on to a career development path leading to partner level	Opportunity to develop a career with a large accountancy practice and the opportunity to specialise as appropriate	Able to recruit a standard of graduate and then to develop them in a way which maintains the organisation's competitiveness in the marketplace across Europe
DE Accountancy 1	CVET: in Germany 40 hours of professional training per accountant and year are obligatory. Provision of a career development path leading to partner level IVET: trainee programme available	Workforce appreciates opportunity to develop their skills and further their career within the company. CVET increases motivation and employees have the opportunity to build professional networks during training.	Necessary to stay competitive and to defend market share; Important for image of a company which invests a high amount in its employees; important to maintain quality of service provided to clients.
DE Accountancy 2	CVET/IVET as above in DE – Accountancy 1	Low labour turnover rate due to career opportunities available within the company. Workforce appreciates opportunity to develop their skills and career within the company.	Essential to ensure the high standard of professional service to clients. Provision of training important to attract high quality trainees/graduates.
DE Accountancy 3	CVET/IVET as above in DE – Accountancy 1	CVET necessary to develop an internal career, especially so as employees are required to specialise. This also allows employees to take on a wider set of interesting tasks as they develop their careers.	CVET is necessary to survive in the market and provide a high standard of professional service to clients

Case study organisation	Type of training	Impact on workforce	Benefits to company
Food Manufacturing			
UK Food manufacturer	IVET/CVET: developing opportunities for a workforce where there is limited scope for promotion due to low labour turnover in a rural area	Opportunity to develop new skills and deploy these in the workplace – reports that it had resulted in increased worker motivation	To avoid stagnation in the workforce and ensure that they retain a high level of commitment to the company's goals. Less machine downtime
FR Food manufacturer	Continuing professionalisation of the workforce with increased numbers of people trained each year (CVET)	Employee survey demonstrates that those who received training reported improved satisfaction with job on several indicators	Increased workforce flexibility, which allows company to adapt to changing market developments
PL Food manufacturer 1	Importance of training increased in recent years. IVET: 2009 the first apprenticeship programme started at company with 16 apprentices. CVET: courses to optimise production; 'train the trainer' very important	CVET generally increases commitment of workforce. However, some older employees are not interested in CVET. There are problems of labour turnover which persist.	CVET important to increase knowledge transfer due to an aging workforce that will leave the company in a few years.
PL Food manufacturer 2	Company is still developing a corporate human resource strategy. Training of shopfloor workers limited with recruitment of fully experienced workers being preferred to training.	In general, training motivates employees but the extent of the effectiveness depends on the frequency of training. Success of training is strongly linked to the training needs of the employees.	The investments in training were reduced in 2009. CVET is planned to be expanded this year. CVET is not yet considered to be important for the company's performance.
CZ Food manufacturer	CVET: mainly for management and sales department. Employees on the production line mainly receive health and safety training IVET: small trainee programme	Training increases job satisfaction as it enables employees to do their work in a better way, but the overall level of training provision is currently small-scale.	Though training is limited the company recognises that training is of critical importance to improved organisational performance. The company wants to establish a more structured continuing training programme in the near future.
CZ Drink manufacturer	CVET: several training courses IVET: Global Management Trainee Programme for talented graduates	The motivation of employees is positively influenced by the career opportunities available to them. According to employee engagement survey, training measures are evaluated very positively by the workforce.	CVET seen as key element of business success; important for product quality

List of abbreviations

CVET	continuing vocational education and training
CVTS	continuing vocational training survey
EWCS	European working conditions survey
EWLBS	European survey on work-life balance
EWCS	European working conditions survey
HPW	high performance working
HPWP	high performance work practices
IVET	initial vocational education and training
VET	vocational education and training



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The anatomy of the wider benefits of VET in the workplace

This report aims to provide a reference framework to investigate the relationship between training and the wider benefits of learning at the workplace. An empirical analysis, carried out on a representative panel of European households, is combined with the analysis of several case studies. The results confirm indications from organisational psychology literature that employers only obtain the full benefits of the training they provide if training is integrated with a wider set of human resource practices which recognise that employees require — and sometimes expect — some form of continuous development. It is also apparent that continuous development should incorporate not just the acquisition of new skills and competences but also the overall quality of the employee's work situation if the aim is to improve the job satisfaction. The way in which training is integrated with human resource policies to bring about improvements in the work situation of employees has the potential to bring about material improvements for the employer. The message is that there is a need to recognise that improvements to the work situation of the employee are a desirable end in their own right so long as employer gains from training are sustainable.

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