

The Skills Economy and Workforce Development: a regional approach to policy intervention

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Introduction

The aim of this article is to provide an understanding of policy approaches towards tackling the barriers and improving the rates of return associated with lifelong learning trends within a context of regional workforce development. It focuses on a case-study within the region of Wales in the UK, and new experimental policy intervention within the region relating to shifting the cost burden of workforce training and skills development from workforce learners and their employers. The article is set within an approach drawing on the conceptual framework of a *skills economy* model (Huggins, 2001a), and utilises empirical evidence collected from both learners and employers that have been involved with policy action examining the effect on workforce participation of cost-based interventions.

The context of the intervention is very much one of stimulating cultural changes to workforce development within a region which lags behind most other UK regions and Western Europe in terms of the skills levels, as well as its overall economic competitiveness. Such competitiveness being defined as the capability of an economy to attract and maintain firms with stable or rising market shares in an activity, while maintaining stable or increasing standards of living for those who participate in it (Huggins, 2003). In Wales, this lack of competitiveness is manifested by below average per capita Gross Domestic Product, high rates of economic inactivity, and low productivity and earnings. Approximately two thirds of the region currently receives European Union (EU) Objective 1 Structural Funding, the main priority of the EU's cohesion policy, and administered to regions where the gross domestic product (GDP) is below 75% of the Community average. Wales is also in the process of restructuring from an economy historically dependent on heavy industry, and the skill levels of the region's workforce is a key element in enabling this process to be undertaken effectively.

The policy initiative we focus on in this article is known as the Learning Workers Pilot (LWP) programme for Wales, which seeks to alleviate some of the training market failures identified by Finegold (1996) and others, through the removal of the direct costs of training to both employers and employees. The initiative is funded by the National Council for Education and Learning in Wales and the Welsh Assembly Government, and is initially operational between 2002 and 2004. The programme's geographic focus is the industrial area of Llanelli, which covers a residential population area of approximately 80,000. The programme provides free learning for qualifications up to a maximum of level 3 to

any worker employed in the area on either a part-time or a full-time basis. The rationale for the funding is to accelerate the demand for workforce development training, and increase the overall skill levels of the workforce within the pilot area. The pilot programme also serves as a means of reviewing the potential for rolling out similar initiatives across the whole of Wales and possibly the UK in the future.

Unlike other training support programmes in Wales, LWP does not restrict funding to individuals within a certain age category (as in Modern Apprenticeships in the past, although age limits in Wales have recently been lifted) and does not limit or vary the funding available to individuals on the basis of whether they are employed within a small, medium or large workplace. Indeed, the only restriction placed on individual employee participants is that they do not already possess a level 3 qualification or above prior to receiving the training. Any individual eligible under these conditions can then receive the training or education of their choice for free provided they gain the approval from their employer. This stems from a recommendation from the Wales Skills Task Force that all individuals with qualifications below level 3 should be given the opportunity of achieving this level of qualification through publicly-funded education or training.

The majority of learners participating in the programme has been employed in one of the large engineering and steel manufacturing plants operating in the area, although workers from smaller service-based companies, as well as some self-employed individuals, have also participated. In total, over 1,100 workers within the pilot area participated in learning funded by the programme during the first twelve months, exceeding the first year take-up target.

In order to analyse the degree to which the initiative has reached its initial aims and objectives, we collected empirical data from both the participating workers and their employers. At the time of survey only 900 of the overall 1,100 learners had enrolled in training courses and, as such, survey responses were restricted to these individuals. Data evidence was collected via questionnaires distributed to both learners and employers, along with a series of face-to-face discussions. Questionnaires were distributed to and collected from learners via the training providers involved, and as a consequence the response rate from learners was a high 35%. Questionnaires to employers were distributed and collected via freepost mail, which resulted in a response rate of 25%. Before outlining the results and analysis of the empirical data, we set out both the conceptual framework and theoretical context within which both the results and analysis should be interpreted.

The Skills Economy of Wales

The emergence of the knowledge economy has placed education and training policies in a position of paramount importance not only in Wales but also throughout the UK and the rest of the world. However, it is clear from new growth theory that under-investment in skills in Wales and the UK has led to deficient economic growth (Snower & Booth, 1996). A key challenge of Wales' competitiveness agenda is to develop and maintain a skilled workforce capable of adding value to an ever-changing portfolio of business, work and occupational requirements. This challenge is becoming increasingly heightened by patterns of globalisation and mobile capital location. As educational economists David Ashton and Francis Green convincingly argue, 'at no time in the history of capitalism has the education and training of the workforce assumed such widespread importance as at the

present conjuncture (Ashton & Green, 1996, p. 4). Whereas workers traditionally migrated to find enhanced and sustained work, in the future work will increasingly migrate to find a workforce capable of adding value. These processes will serve to raise the stock of workforces and the effectiveness of the means for their development. The potential importance of enterprise-based training for upgrading the skills of Wales' workforce is not in doubt, with such training playing a pivotal role in the skill formation system.

Work-related training has traditionally been organised around the principle of a training market in which the forces of supply and demand are allowed, as much as possible, to determine the level and quality of training that is provided. While the government provides considerable support for the training of young people, for the most part the training of adult workers has been left to employers or employees to fund and arrange (Green, 1998). The exception to this is government support for programmes that encourage firms as a whole to train, such as *Investors in People* in the UK. A key problem, however, with this approach is that such programmes do not provide an 'initiative-fit' for the vast numbers of small firms in most regions of the UK. Also, the supply and demand model has acted as a downward catalyst in certain regions, as local market forces perpetuate a cycle within which non-government funded training often proves unviable, due to a lack of critical mass within the potential employer market.

The Skills Economy Concept

It is the geography and demographics of a nation or region that necessarily have a profound effect not only on these economic factors, but also on the development of its social structure. There is also an obvious inter-play between the economic and the social, which in the 'world of work' — especially job creation and upgrading — is a key determinant of what can be defined as the *skills economy*. The skills economy incorporates the means by which the expectations of employers, employees and those outside the workforce influence the existing and potential skills-base of a region. The skills economy concept is a means of reflecting the linkage between skills and the performance of an economy, particularly in terms of its competitiveness. A skills economy approach, therefore, is subtly different from labour market studies, being focused more on long-term aspects and based on deficiencies and gaps, rather than merely shortages, i.e. those skills that should be demanded, rather than merely those that are demanded, if the economy is to embed itself in a more productive, and therefore wealthier environment. The conceptual framework underlying the skills economy approach is illustrated by figures 1 and 2.

The Skills Capacity and Performance of Wales

The following summarises the relative capacity and performance of the skills economy of Wales, based on a benchmarking of relevant indicators with the 11 counterpart regions comprising the UK (all data and ranks are shown in the summary matrix). Tables 1 and 2 are indicators of the potential skills base on which further and higher education can build, from the position of regional levels of achievement for 19-year-olds at the end of compulsory education and including NVQ level 2. Wales' skills base, measured in these terms, is lower than the UK

- **External Forces** – forces exerted by changes in the global economy that act as a driver of skills requirements. It is the global economy that is primary source of new sectors and therefore new occupations.
- **Capital Requirements** – the influence of changes in the global economy causes changes in the capital requirements of a nation, region or locality if it is to achieve any competitive or comparative advantages. In particular, changing human capital requirements result in the formation of skills gaps within the existing workforce.
- **Existing Resources** – the existing skill resources residing within firms, both indigenously and foreign-owned, is pushed by the demands of owners and managers as a result of their perception of the firm's requirements. This demand can affect the supply of skills in both a positive and/or negative manner – i.e. are they the right skills being demanded.
- **Current Skills Base** – the current skills base consists of the sum of the human capital residing within the existing workforce, as well as the unemployed and those not currently seeking employment. It is within this current skills base that new occupations will be developing and required.
- **Potential Skills Base** – the potential skills base consists of those individuals currently involved in education and training, and who should be developed to take-up the new occupations being created by new sectors and the resultant changing work practices.
- **Internal Forces** – internal forces represent the socio-economic, demographic and cultural make-up of an area and the influence this has on the collective aspirations, motivations and opportunities of a population

FIGURE 1. The Skills Economy Factors

average, being ranked only 8th with regard to the percentage of 19-year-olds with at least 5 GCSEs or above, and 6th in terms of GCSE examination achievements. Indeed, not only is Wales moderately placed, but for GCSE achievement and qualifications at age 19 (GCSEs + NVQ level 2), the region actually drops two places, indicating even more pronounced issues surrounding post-compulsory participation (see Table 10 for reference to UK diplomas).

Tables 3 and 4 indicate regional performance for non-compulsory schooling achievements (i.e. A-levels). In this case we can see that there is shift in performance towards the more southern regions of the UK. Column four is a broad indication of the take-up of non-compulsory school education. Disappointingly, Wales is at the bottom of the rankings, followed by the North East and Yorkshire and the Humber, which are also the among the UK's least competitive regions. Tables 5 and 6 are a measure of the current skills base within UK regions, based on National Vocational Qualification Level 3 and 4 attainment within the economically active population. In both cases the highest performing regions are London, Scotland and the South East, and the lowest the East and West Midlands along with the North East. Wales is among the middle ranked regional performers in 7th and 5th places, respectively. Table 7 highlights regional differences in the proportion of the current skill base that has attained a degree or equivalent. The fact that Wales is ranked 11th highlights the existence of a significant problem in terms of the skills capacity of the current workforce. Also, the more qualified an employee is, the higher is the likelihood that he will be engaged in job-related training (see: DfEE, 2000).

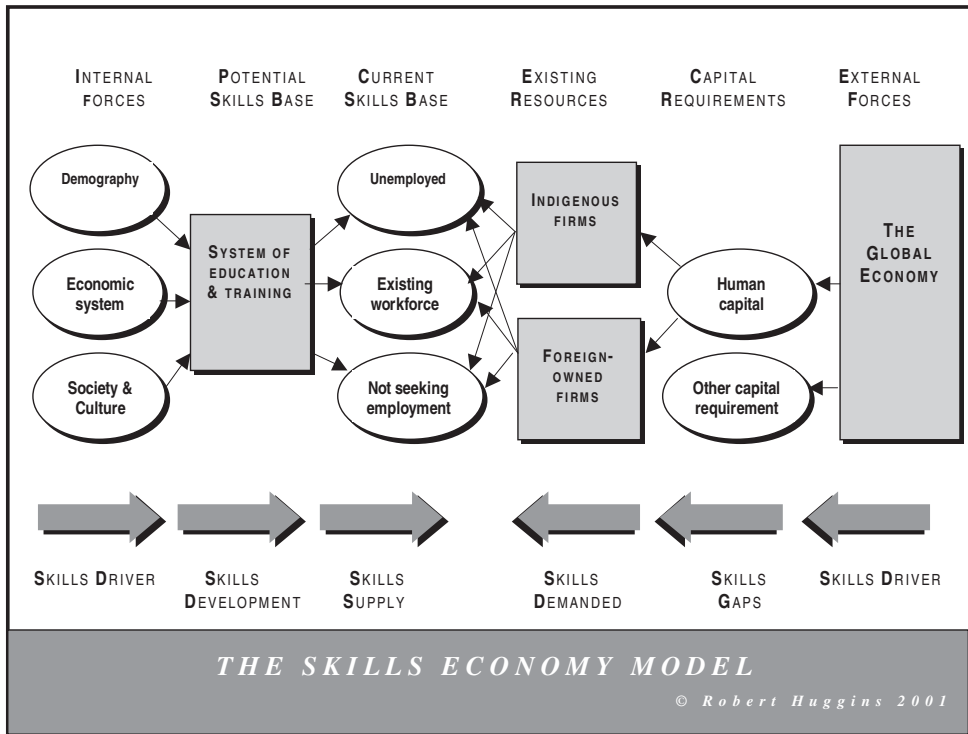


FIGURE 2. The Skills Economy Model

At this level of attainment, factors such as labour mobility and relocation play an important role in compounding the relationship, with the most competitive regions attracting graduates from their least competitive counterparts. For instance, in 2000 over 40% more graduates were employed in London than studied in the region, whilst in Wales, Yorkshire and the Humber, the North East and East Midlands approximately 40% less graduates work in these regions compared to the number educated there (HM Treasury, 2001). This human capital drain in the least competitive regions further compounds the proportion of the current skills base that possesses no qualifications at all.

Table 8 highlights the populations of working-age with no qualifications among the UK's regions. Once again Wales is ranked only 11th, indicating the existence of a workforce that has not been significantly engaged in the learning agenda. We are of the opinion that there is a strong connection between the current skills base of a region and the internal forces at play within its skills economy, especially relating to demography, society and culture. In essence, the make-up of the current skills base is a strong influencer on the shape of the lifestyle and aspirations of the future skills base. An interesting question this raises is the degree to which improvements in the current skills base, primarily through adult training, can influence relevant economic performance.

Table 9 highlights a regional breakdown of job-related training activity among employees of working age. Wales is ranked in 5th position, although the overall differential across regions is relatively small in this instance. In general, the

differential between the top and bottom performers is relatively small; however, this does not imply that job-related training does not improve performance. In summary, there are three major findings emerging from the above analysis: (1) There is clearly a positive relationship between competitiveness and qualification levels from NVQ level 3 (i.e. mainly technician level) upwards; (2) Wales' skills-base is markedly different depending on whether NVQ level 3 or 4, or degree level is being assessed — essentially, there appears to be a deficit of graduates in the Welsh labour market; and (3) At the lowest level, the percentage of the working population with no qualifications is far too high.

Workforce Development in the UK

The Engagement of Employers and Employees

Unfortunately, what we know about UK employers' investment in the training of their adult employees indicates that the potential of this catalytic role is at best patchy across the workforce as a whole (Keep and Mayhew, 2001). Nevertheless, approximately six times more adult training in the UK is instigated and funded by the employer, compared with that initiated by the individual, reflecting to a large degree the focus on previous policies and initiatives to stimulate the demand for training amongst employers. However, the role of the individual employee should not be overlooked, and there is scope to also increase training participation rates by stimulating the demand for learning and training amongst individual employees. Survey evidence from the UK in the 1990s of training sponsorship found that employers sponsored 63% of training spells and shared the costs in a further 21% of spells, also only 7% of trainees received any direct help with course fees from government (Greenhalgh, 1999).

In terms of current qualification levels, the occupational breakdown of employees in the UK qualified to at least NVQ level 3 or above is, as would be expected, one where the higher the occupation the increased likelihood of possessing the qualification (Campbell, 2002). From a Welsh perspective, it should be noted that, with the exception of Northern Ireland, it has the lowest proportion of employees qualified at NVQ level 3 or above within the UK. Overall, adult participation in learning has remained relatively constant across the UK since 1996, with 63% of adults having participated in some form of learning since completing full-time education (Campbell, 2002). Of those employees in the UK that have not undertaken job-related continuing education and training, there are seemingly a broad range of reasons for the lack of engagement, the most important being: (1) too busy/lack of time; (2) too expensive/no money; (3) too busy at work; and (4) lack of employer support (OECD, 2000; Pont, 2003).

An employer perspective on key barriers to workforce development have recently been analysed in a survey of small businesses in the UK (Kitching Blackburn 2002). The survey found that 40% of small-firm employers in the UK consider that the key barrier to training was the lost time this incurred and/or the financial cost of external training. The lack of 'cover' while skilled workers are being trained was cited as a problem by just over one-quarter of employers, with an equal proportion considering the lack of available subsidies was a constraint on training. A smaller proportion of employers (13%) highlighted a lack of relevant information concerning training opportunities or that they could not find the

external training required (13%), and in some cases the training was of poor quality (6%). The issue of lack of space to provide in-house learning or training was perceived as a barrier by 13% of employers, as was the lack of skills to provide in-house learning and training (Kitching & Blackburn, 2002).

Rates of Return on Skills and Workforce Development

There is evidence to suggest that the increasing prevalence of flexible labour markets in the UK has meant that employers have tolerated lower productivity by rewarding it with lower wages (see, for example, McKinsey, 1998). In contrast, France and Germany (taking re-unification economics out of the equation) have operated with less flexible labour markets, resulting in the elimination of many low-skilled jobs because the minimum cost of labour to employers is too high to sustain such work — therefore pushing up labour productivity. It is interesting to note that only 37% of the UK workforce are qualified at Level 3 or above, while the figure in Germany is 74% (interestingly in France it is only 36%) (Steedman, 1999).

Given these findings, it is useful to unpack the role of skills in Wales' (and the UK's) productivity equation. A study of engineering firms in the UK and Holland found that lower levels of workforce skills in the UK companies resulted in a productivity rate of 25–30% lower than their Dutch counterparts. Also, there is evidence of a strong connection between training and productivity across sectors in the UK, whereby an increase from 10% to 15% in proportion of the workforce undergoing training is associated with an increase in productivity of the order of 4% — which is, interestingly, more than twice as high as the respective increase in wages (1.6%) (Campbell, 2002). In other words, the benefits to employers of skills development training cannot be ignored, particularly if they are undertaken in tandem with other business competitiveness strategies. Other research in the UK has argued that a 1% point increase in the proportion of workers with higher qualifications would raise annual output by between 0.42 and 0.63% (Campbell, 2002). Therefore, as leading UK educationalist Mike Campbell argues 'There are economic costs associated with being a low skill locality and considerable economic benefits associated with being a high skills locality. Skill rich localities are almost always rich localities' (Campbell, 2002).

Research conducted by the Institute of Fiscal Studies (Dearden *et al.*, 2000) uncovers relatively high rates of return for most academic qualifications, with some of the highest returns associated with women. For instance, (1) GCSEs / O Levels produce a 12–21% return for men, and a 10–19% return for women; (2) GCE / A Level qualifications subsequently produce an additional 15–18% return for men, and 13–23% for women; and (3) first degree level qualifications lead to an additional 10–28% return for men, and an additional 21–26% return for women.

Previous research has revealed vocational qualifications to provide a comparatively lower rate of return than their academic counterparts, such as A-levels (Robinson, 1997). For example, the estimated return to males for gaining an ONC/OND is 7–12% for males and 8% for females. The return for males holding the City & Guilds higher and advanced qualifications are estimated at 4–7% and 7–10% respectively. However, vocational qualifications at NVQ Level 3 (See Table 10 for a reference to UK diplomas) or higher provide similar returns to academic

Summary Table (Tables 1 to 9)

Region	Table 1: Percentage of 19 Year-olds with at least 5 GCSEs at Grade C or above or an NVQ Level 2 (2001)		Table 2: Examination achievements by Region, 2000/01; Percentage achieving GCSE		Table 3: Examination Achievements by Region, 2000/01		Table 4: Examination achievements: 2000/01		Table 5: Percentage of Economically Active Adults (18-59/64) Qualified to at Least NVQ Level 3 (2001)		Table 6: Percentage of Economically Active Adults (18-59/64) Qualified to at Least NVQ Level 4 (2001)		Table 7: Population of working age with degree or equivalent (2002)		Table 8: Population of working age with no qualifications (2002)		Table 9: Employees of working age receiving job- related training (2002)	
	Percentage	Rank	Percentage of pupils (5 or more grades A*-C)	Rank	Percentage (Students in education achieving 2 or more A-Levels)	Rank	% (Average A/AS level and Advanced GNVQ point scores)	Rank	Percentage	Rank	Percentage	Rank	Percentage	Rank	Percentage with no qualifications	Rank	Percentage	Rank
East	73.6	10	54.0	5	40.6	2	17.4	6	46.2	6	25.9	6	14.7	4	13.5	3	14.6	11
East Midlands	73.9	9	49.1	7	34.7	7	17.2	8	44.4	10	23.1	11	12.6	10	16.8	6	15.6	9
London	75.3	7	48.6	8	36.1	6	16.3	9	55.3	1	38.8	1	24.9	1	14.2	4	17.7	2
North East	76.1	5	43.9	12	29.7	11	15.9	10	44.3	11	22.7	12	10.0	12	18.1	8	17.9	1
North West	75.8	6	48.0	9	34.1	9	17.9	3	47.9	5	25.7	7	12.6	9	18.4	9	16.3	7
Northern Ireland	82.0	2	56.7	2	37.8	5	.		44.5	9	25.5	8	13.7	6	24.1	12	14.0	12
Scotland	82.3	1	59.3	1	38.9	4	.		54.4	2	32.4	2	16.2	3	15.6	5	15.3	10
South East	77.0	4	55.5	3	42.7	1	18.0	1	49.1	3	29.9	3	19.2	2	11.4	1	17.7	3
South West	78.5	3	54.6	4	39.0	3	18.0	2	48.9	4	27.5	4	14.7	5	11.4	2	17.4	4
Wales	75.2	8	49.8	6	25.1	12	17.6	4	45.6	7	26.1	5	12.3	11	19.2	11	17.1	5
West Midlands	72.5	11	47.4	10	34.7	8	17.3	7	43.3	12	23.8	10	12.9	7	18.9	10	15.9	8
Yorkshire and Humberside	69.2	12	44.4	11	32.0	10	17.4	5	45.0	8	24.1	9	12.8	8	17.5	7	16.5	6
UK	75.7		51		36.2		17.4		48.3		28.1		15.8		15.7		16.5	

Source: Department of Trade and Industry; Department for Education and Skills.

TABLE 10. The National Qualifications Framework in the UK

Level of qualification	General	Vocationally-related	Occupational
4 and 5	higher education level qualifications		level 5 NVQ level 4 NVQ (supervisory and managerial)
3 advanced level	A levels — end of full secondary school	vocational A levels and advanced GNVQ	level 3 NVQ technician
2 intermediate level	GCSE grade A*-C — end of compulsory education	Intermediate GNVQ	level 2 NVQ — skilled worker
1 foundation level	GCSE grade D-G — end of compulsory education	Foundation GNVQ	level 1 NVQ — operative
entry level	certificate of (educational) achievement		

qualifications, when the time required to complete qualifications is taken into account. Indeed, annualised rates of return for men achieving ONC/OND are of the order of $5\frac{1}{2}$ – $9\frac{1}{2}$ % and annualising the rate of return of A levels for men equates to $7\frac{1}{2}$ –9%.

These findings are echoed in a comparison of HNC/HNDA and first degree qualifications, where HND/HNC qualifications produce an annualised rate of return of 5–12%, comparing favourably with degree level returns. These figures do not, however, hold true for women, where a persistent discrepancy between vocational and academic rates of return remain. Women, for example, gain an estimated return of 9– $11\frac{1}{2}$ % per annum for A Levels, compared with $6\frac{1}{2}$ % for an ONC/OND (Dearden *et al.*, 2000).

Low level vocational rates of return are at their highest when considering those with lowest prior ability. The returns to vocational qualifications at NVQ Levels 2, 3 and 4 for low ability individuals are double those of higher ability. Professional qualifications offer the highest rates of return, with women benefiting from the most favourable ranges. On average, for men, the rate of return for a professional qualification ranges from 15–35%, and for women 20–40% (Dearden *et al.*, 2000).

Even the lowest skilled jobs available within today's economy require some form of basic numeracy and literacy skills, with the gaining of such qualifications offering higher rates of return, and improving the probability of finding employment. Basic numeracy skills provide particular advantage, with substantial positive rates of return. Assuming a similar background, a person who acquires Level 1 numeracy skills is estimated to earn around 10% more than a person who never reaches this level. Cognitive, communicative, teamworking and generic IT skills are the generic skills most valued by employers. In particular, basic IT skills, (such as data input) provide a 6.5% pay premium for women, and a 4% premium for men; and additional basic IT (such as word processing) provides an estimated wage return rise of 13% for both sexes (Green, 1998).

Skills Investment

In general, low productivity and skill levels are a UK-wide problem strongly related to a long-term lack of investment in the UK education and training system (for either initial education and training, as well as continuing or further training). For instance, over a third of UK employees have never been offered training by their current employer, and there is still a major reluctance by many smaller firms to invest in training (Kitching and Blackburn, 2002). In the UK less than one-half of workers have received some form of vocational training, compared to approximately two-thirds of workers in the EU as whole. Also, UK training participation rates for youths are amongst the lowest in Europe; and the length of training for those receiving it amongst the shortest (Ashton & Green, 1996). In Wales, at least one-quarter of 16–18-year-olds are not in any form of part-time or full-time education or training (Huggins, Gordon & Lewis, 2003).

The lack of investment in education and training has been attributed to market failure caused by a range of institutional factors, such as short-term financial markets, adversarial craft unions, and weak employer organisations. This has led to many UK companies adopting lower skill strategies than their rivals in other countries, suppressing demand for training and trapping the UK economy in a low-skill equilibrium with low levels of innovation (Finegold, 1996). The key feature, therefore, of this low-skill equilibrium, or skills trap, is that there has not been an overwhelming requirement for an overly effective education and training system. This has further led to wage differentials between skilled and unskilled workers in the UK growing, resulting in any rising demand for skilled labour not being met by an equally rising supply-base. We consider that all the available evidence points to these factors being further accentuated in Wales.

Educationalist David Soskice has argued that the existence of a non-coordinated, as opposed to coordinated, market economy in the UK has had a negative impact on the respective education and training system (Soskice, 1990). To our minds, part of this non-coordination is resultant of the fact that many skilled occupations in the UK, particularly those in the manufacturing sector, have never acquired the social status enjoyed by the counterparts in the United States, Japan and Germany. Given that foreign investment into the UK originates from these nations, there are obvious implications on the stability of this investment and its ability to stimulate change in the perception of particular workforces. Interestingly, recent evidence has found training budgets in Wales to be 55% higher in foreign-owned companies compared with their indigenous counterparts (Huggins, 2001b). Also, the intensity and benefits of training are greater for those employees involved in producing technological changes, and in the UK it is foreign-owned companies that have the most positive attitude to novel technology and process innovation (CBI, 1998).

It is partly the historical nature of indigenous industry in the UK that has led to a low-skills strategy, resulting in the shortfalls in meeting the demand for skilled labour. Many business managers in the UK have traditionally operated in a confrontational system of industrial relations, where the culture has not required employees to 'think' — and where there is little scope for initiative and talent — with training acting as a positional good, of which more may threaten existing power relationships (Keep & Mayhew, 1996). Such an approach, however, is alien to the creation of competitive economies and the culture that underlies them.

Within the UK economy, managers should be key agents of change in organisations, and managerial competence is of vital importance in the drive to raise standards. However, the paucity of suitably trained and experienced managers in the UK means there is a requirement to create a culture for management that allows organisations in both the public and private sector to 'grow' managers from within. In general, the strategies adopted by government to promote management training and development, particularly in SMEs, have not been well defined or based upon focused research (Boocock *et al.*, 1999). Government training agents have often resorted to stealth in encouraging SMEs to take up 'feeder programmes' for generic management training and development initiatives.

Skill Gaps

Closely related to issues of skills investment is the prevalence of skill *gaps* within the workforce resulting from a lack of basic and more job-specific skills. These gaps refer to the difference between the level of existing skills possessed by current employees in a company, and the quotient it requires to meet its current and future business objectives. This cannot be defined in purely occupational or similar terms. It is consequently possible for a company not to be reporting any skill *shortages*, in the form of hard-to-fill vacancies, while simultaneously suffering skill gaps that are damaging to its performance and competitiveness. In general, skill shortages make employers accept staff with sub-optimal skills. This usually results in companies adopting sub-optimal working arrangements, and enduring production cuts, lost orders, and dissatisfied customers.

Across the UK, skills shortages are expected to rise in the period to 2010 unless there is a significant increase in economic activity rates (Campbell, 2002). Skill gaps typically produce the same effect of sub-optimal working but also carry an additional risk — the possibility that the skill *problem* remains unidentified by the employer. Factors such as company history, expectations of what skills are available, continued adjustment of processes and products to the skills available, and management weaknesses mean that opportunities for more productive working are not picked up, so that skill gaps go unnoticed. Interestingly, foreign-owned companies based in the UK consistently report higher levels of skill gaps than indigenous firms precisely because they have more 'intelligent' human resource techniques (Huggins, 2001b).

Within Wales, the Future Skills Wales (1998) study found that only 18% of employers reported that skills gaps exist within their current workforce. However, we consider that the actual measurement and identification of skill gaps is a major barrier preventing the establishment of remedies. The only real pointer to unidentified skill gaps comes in the form of productivity level comparisons. However, productivity is a problem for Wales, strongly suggesting the prevalence of hidden skill gaps. Given the lack of investment by Wales-based businesses in skills and workforce development, and the fact that we know the productivity of both the workforce and the economy is below par, we consider it to be highly likely that there are significant *hidden* skill gaps in Wales centred on the skills of business managers and owners.

Such hidden gaps are having a considerable negative effect on the performance of the businesses they operate, as well as the economies in which they are situated. These negative factors are particularly prevalent among small firms, most of

which do not have staff development plans, or if they do exist tend to focus upon developing lower level staff. Research in both Wales and across the UK has found that most owners and managers do not see themselves as the subject of staff development plans. Indeed, the development of management skills to underpin the achievement of longer-term business goals appears to be counter cultural to the majority of UK businesses, with the market for management training dominated by a small number of large companies (Huggins, 2001a).

An Analysis of the Learning Workers Pilot (LWP) Programme in Wales

The following section analyses the empirical evidence collected from the learners and employers participating in the Learning Workers Pilot programme in Wales. The section begins by assessing the increased participation generated by the programme, including the nature and level of qualifications gained in the process. We then proceed to examine the potential rates of return gained from the learning outcomes, and explore the question of who should pay for future participation. Finally, we analyse the potential for sustaining the learning participation rates generated from providing free learning to workers beyond the period of intervention.

Participation and Qualifications

The survey found that the majority of the learning participation through the LWP programme is at the lower end of the scale, which is to be expected given that the highest qualification level funded through the initiative is level 3. Almost two thirds (64%) of participants registered for courses leading to a level 2 qualification, while a third (33%) registered for courses leading to a level 3 qualification. The remaining 3% registered for courses leading to a level 1 qualification or an otherwise undisclosed qualification. Interestingly, this is almost the opposite in proportional terms of the full regional picture in Wales, whereby 58% of publicly-funded work-based learners participate in level 3 training and only 30% in level 2 (source: ELWa Workplace Training Database 2003).

This is not altogether surprising given that the initiative encourages *additional* learning and training, which in the majority of cases has resulted in broadening the participation rates amongst workers to include those that had not been involved in any previous training programmes. In many instances, therefore, participating workers started from a relatively low qualification base, and as such aimed for relatively modest increases in their qualification attainment.

Overall, 80% of participating workers upgraded their existing skill level through LWP funded training, with almost one in ten upgrading their qualifications by three levels, i.e. upgrading their skill levels from a position of no qualifications to achieving a level 3 qualification. A further 38% increased their skill base by 2 levels moving either from a previous level 1 qualification base to level 3, or in the majority of cases increasing from a base of no qualifications to achieving a level 2 qualification.

The survey data collected enabled us to assess the degree to which removing the financial burden of training influences benefits and returns, as well as the propensity of both employers and employees to continue future participation in lifelong learning activities. It was found that almost two-thirds (64%) of the learners participating in LWP indicated that they would not have participated in the

learning had the financial costs of the training not been removed. Only 15% of the learners claimed that they would have undertaken the training had there been direct financial costs. The remaining 21% were uncertain, which is unsurprising given Greenhalgh's (1999) findings — highlighted earlier — that the direct costs of work-related training are traditionally borne by the employer, and as such employee participation decisions do not usually require a direct financial cost consideration.

In the case of employers, less than one-quarter (23%) of respondents stated that they would have subscribed to the same amount and type of training even if the financial burden had not been removed. However, over a third (38%) reported that they would have considered similar training opportunities, but would have adopted stricter selection criteria in choosing individuals to participate if payment had been necessary for the training. This suggests that employers perceive the potential rate of return for similar levels of training to differ depending which individuals are actually undertaking the learning. It is our consideration that this evidence confirms that employers tend to offer the majority of cost-bearing training to workers who are most likely to offer the highest rate of return from such training.

From our survey findings so far, we also contend that removing training cost barriers significantly encourages those individuals previously excluded from training opportunities to participate in lifelong learning. Indeed, when employers were asked to describe the main differences between LWP funded training and either self-funded or other externally funded training, approximately, one-half stated that LWP had increased their capacity to offer training to staff employed within relatively junior positions and lower-grade occupations. Therefore, it is clear that removing cost barriers appears to widen the participation spectrum in lifelong learning. Only 8% of employers claimed that they would consider similar levels of training to those taken up through LWP for the same pool of workers even if the costs were shared equally between the learners and the employers. The remaining 31% stated that they would not consider the training at all if the costs remained.

Rates of Return

In essence, the above offers a fundamental overview of the potential cost/benefit approach that employers adopt in their training decision-making processes. Obviously, even when the full costs of training need to be met by the employer, there are cases when the perceived benefits outweigh these costs, facilitating a positive rate of return. However, in all cases removing the costs means that the benefits are not diluted, and at least have the potential to significantly influence a higher rate of return. From our evidence, it is clear that removing financial barriers encourages employers and employees to increase their training and education participation rates. This may hardly be surprising, and may simply confirm demand theory. Nevertheless, it does indicate that in Wales the direct cost of training is a significant contributor to the relatively poor demand for training identified by others (see, for example, Ashton *et al.*, 2003).

In order to add further evidence in terms of rates of return, it is important to analyse the perceived benefits that employers and employees gain from participation in training that is free of direct costs. The evidence we collected finds that in

those workplaces where participation increased, this increase did not necessarily equate to more of the same type/kind of training, but greater participation in a wider range of learning activities. In fact, it is clear that the LWP initiative has encouraged both employers and workers to participate in areas of training and learning that they would not otherwise have considered undertaking, with more than three-quarters (77%) of the employers indicating that involvement in LWP had lead to a diversification of training activities. However, from a rate of return perspective it is important to assess the influence this has on firm performance and rewards to the learner.

Perhaps the most important findings from the survey are that 67% of employers perceived that the learning outcomes would be highly beneficial in terms of establishing a better skilled workforce, and that all employers were of the impression that the learning outcomes would have at least some positive benefit on the productivity of the workforce (see Table 11). Also, 44% of employers indicated that the training would lead to direct increase in turnover and 49% to an increase in profitability. Overall, employers largely regarded the benefits of the learning to benefit the company in terms of motivation, commitment and stability. Therefore, we see a relatively positive picture within which employers see a very direct impact on workforce capability and enthusiasm, and where this is transferred overtime to increases in productivity and greater income generation and profitability. On a more negative note, it should be pointed out that employers do see a general dilution of these benefits, in terms of the overall impact on financial indicators. However, we would not expect to see like-for-like additionality across a range of both hard and softer indicators. This suggests that the removal of training cost barriers offers employers greater opportunities to adopt increasingly strategic approaches to workforce development, focusing on medium and long-term benefits, as opposed to restricting their training plans to short-term objectives.

As the benefits gained from the learning outcomes are not deflated in any way by the direct costs of the learning, then it can be said that all positive learning outcomes achieved from the LWP initiative create net positive returns to either, or both, the employer or the employee. However, the majority of the learning outcomes are at the lower end of the qualification spectrum and largely vocational in nature. Given that the findings of the Institute of Fiscal Studies (Dearden *et al.*, 2000) conclude that lower level qualifications, especially vocational qualifications,

TABLE 11. The benefits of cost free training as perceived by participating employers in the LWP programme

Perceived benefit	No Benefit	Some Benefit	Significant Benefit
Better skilled workforce	0%	33%	67%
Greater staff retention	8%	37%	55%
Greater employee commitment	0%	55%	45%
A happier workforce	0%	55%	45%
Increase staff responsibilities	9%	55%	36%
Increase productivity	0%	80%	20%
An increase in profits	51%	30%	19%
Increased turnover	56%	33%	11%

Source: LWP Evaluation Study (2003).

generate relatively low rates of return, it is likely that the net positive returns generated by LWP learning could in many cases be quickly eroded (this erosion echoing the dilution found above) if deflated even by relatively modest costs. Therefore, in overall terms, the private rates of return of the LWP learning outcomes are likely to be *relatively* low, and as such the cost sensitivity of participation is relatively high. However, the opportunities created by LWP do encourage a significant proportion of workers to step further up the lifelong learning ladder, and in many cases encourage workers to step on the all important first rung.

From the perspective of the learner, the perceived benefits of the training outlined by the survey respondents vary according to the level of qualification being studied (Table 12). The findings confirm previous studies inasmuch as the higher the qualification level sought the greater the potential internal rate of return (Wurzburg, 2002). The largest proportion of respondents aiming for level 2 and level 3 qualifications perceived the main benefit emerging from the learning outcome to be their ability to do their current job better. A larger proportion of level 2 participants, compared with level 3 learners, reported that they perceived this to be the main benefit of the learning outcome. Level 2 participants also perceived higher levels of increased job satisfaction and increased confidence, compared with their level 3 counterparts. On the other hand, a larger proportion of level 3 participants were of the opinion that the learning opportunity would enable them to get a new job or promotion. All respondents aiming for a level 1 qualification reported that they hoped the training would lead to a better job, although this refers to only a small percentage of participants.

Our interpretation of these findings is that participants aiming for a level 2 qualification perceive the benefits emerging from gaining the qualification to mainly influence the way they work, including their ability to enhance their current work performance. Outcomes of this nature can potentially be viewed as being equally beneficial to both the worker and the employer, or even possibly weighted towards the employer. Conversely, participants aiming at level 3 qualifications mainly perceive the outcomes of the learning to be most beneficial to themselves in the form of promotion, the opportunity to gain a new job or higher income. This indicates the potential — or at least the perceived — rate of return to training for the individual increases the higher the level of qualification sought. This raises the question who should pay for the learning?

TABLE 12. Benefits of training as perceived by learners according to qualification level undertaken within the LWP programme

Perceived benefit	Level 1	Level 2	Level 3
Get a new job	100%	10%	20%
Do my job better	0%	32%	26%
Keep my job	0%	7%	6%
Get Promoted	0%	11%	13%
Increase job satisfaction	0%	20%	13%
Set up own business	0%	0%	4%
Increase confidence	0%	16%	9%
Increase wage	0%	4%	7%
Don't know	0%	0%	2%

Source: LWP Evaluation Study (2003).

Who Should Pay?

The above suggests that, given the potential and perceived benefits, those individuals aiming for level 3 qualifications should at least contribute partially to the cost of the training given the direction of rewards. However, the response to this suggestion is largely dependent on the price elasticity of demand of learning at this level. Given that a significant proportion of workers (64%) would not have considered participation if they had to bear the cost of the training themselves, suggests that the demand for training amongst these workers is likely to be relatively elastic, and that even a small increase in training costs imposed upon the worker is likely to result in a relatively large proportional decrease in the demand for training, despite the perceived benefits that arise as a result. This is interesting from the perspective of highlighting that the cost sensitivities of learning are acute at least within the study area in Wales, and to a large extent endorses the rationale underlying the implementation of LWP in the first instance.

In order to test the overall direction of benefits, participants were asked to indicate their perceptions of who they thought would benefit most from the learning outcomes. Furthermore, these responses were cross-tabulated against who was the source of the idea to participant in the learning activity. Interestingly, almost one-half (48%) of participants who stated that it was their own idea to participate believed that they would be the main beneficiary, compared with less than one-quarter (23%) of learners who indicated that it was their employers' idea for them to participate. In total, 49% of respondents who were encouraged to participate by their employer perceived that both themselves and the employers would benefit equally from the learning outcomes, while the remaining 28% took the view that the employer would be the main beneficiary. Conversely, just over a third (36%) of respondents who were free to pursue the idea of training themselves were of the impression that the benefits of the learning outcomes would be shared equally between themselves and their employers, with less than 16% believing that all the benefits would be gained by the employer. Allowing learners sufficient autonomy to instigate the 'training idea' appears to have positive repercussions on the perceived benefits that they gain from it, although this may compromise the full impact of benefits to the employers. This is clearly an important element to bear in mind for policy measures aimed at stimulating the demand for learning through employees.

Lifelong Learning — Sustaining Participation Beyond Intervention

As well as stimulating the demand for direct and immediate learning participation, a key aim of the LWP initiative is to act as a lifelong learning catalyst stimulating the desire amongst employers and employees to participate in continuing learning opportunities, and encouraging resources from learners and/or employers to fund future learning. Determining the sustainability of the learning stimulus generated beyond the intervention period is a crucial factor in understanding the long-term impact of increasing the exposure to a learning environment. In many respects, this is dependent on the ability of the initiative to reach further than the objective of overcoming the cost barriers of learning, but to also address barriers to learning relating to cultural and attitudinal factors of both learners and employers.

Although almost one-third of responding employers (31%) claimed that their attitudes towards training had changed as a direct consequence of their involvement in LWP. For the majority (80%) this change in attitude has been based around the potential to encourage early participation in training. However, only one-in-five of these employers were converted to the attitude that training is a net investment rather than a potential or actual cost. This suggests obvious limitations to the sustainability of such an initiative, particularly in terms of the long-term engagement of employers. However, there is a degree of evidence to indicate that the sustainability stimulus of the initiative may come largely from the learners as opposed to the employers. Two-thirds of participating workers (65%) stated that they both enjoyed the learning experience and were considering participating in additional training. Indeed, even at an early stage 7% of respondents had already registered onto further learning courses following their LWP funded training.

Less than 1% of learning participants claimed that they had been 'put off' future training as a consequence of participating in LWP training, and only 10% claimed that they enjoyed the learning experience but would not consider further training. It is always the hope of educationalists and trainers that encouraging individuals to taste the positive experience of learning will draw them onto the lifelong learning escalator. Clearly, as can be seen from these results, this is not always the case. However, in the majority of cases there is real possibility that the initiative will act as an initial stimulus to establishing a culture of lifelong learning, particularly given that in many cases participating workers had not been involved in any other form of formal learning since leaving full-time education and in many instances held no nationally recognised qualifications prior to their LWP funded learning.

The breadth of participation amongst workers, particularly those excluded from previous training and learning opportunities, largely reflects the mode of delivery of training administered through the LWP initiative. Although participants were given — with the consent of their employers — the freedom to choose either vocational or non-vocational courses linked or otherwise to their current employment, the vast majority chose courses leading to a National Vocational Qualification (NVQ). Such courses are not delivered exclusively in a class environment and are largely workplace focused. Apart from some off-site tuition, portfolio development — and where required, written examinations — the majority of the courses were delivered and assessed at the place of work. This is obviously convenient for the employer who does not have to release staff for training to the same extent as he/she would for off-the-job training courses. It is also well suited to those employees that have an adverse perception of formal training environments and enables the training opportunities available to reach the previously self-excluded. However, the on-site nature of the majority of the training is not an in-built or core feature of the initiative and can be considered as a situation driven by-product. Nevertheless, the positive outputs that this mode of delivery has created should not be ignored, and should be borne in mind in establishing any future roll out intervention of this nature.

Barriers to Training Engagement

Although it is clear that costs are a real barrier to workforce development learning, they are by no means the only barrier to workforce development training. We

TABLE 13. Employee reasons for not participating in previous training opportunities

Reason for non participation	%
Too busy	58%
Too busy at work	57%
Family responsibilities	48%
Haven't got round to it	23%
Lack of confidence	18%
Too expensive	14%
Inconvenient time	12%
No suitable / Interesting / relevant courses	12%
Lack of qualifications	10%
Lack of information	8%
Lack of support from employer	7%
Health	4%
Feel too old	3%
Too far to travel / lack of transport	3%

Source: LWP Evaluation Study (2003).

have already touched on some of the other issues, including the perceived barrier held by some workers that they are not suited, or do not possess, the required abilities to participate in formal learning. However, most of the barriers faced by individual workers centralise around time availability (Table 13). In particular, those participants who had not previously participated in any form of training or education courses since leaving full-time education stated that this was either because they were too busy at work or outside work and/or that they had too many family responsibilities. These personal barriers are very difficult to alleviate even through the implementation of social education policy, but encouraging workplace-focused training similar to that administered through the NVQ training offered by LWP does directly address many of these issues, and again would appear to be a necessary ingredient to ensure the sustainability of the initiative beyond its pilot period.

For employers, the main barrier to training, after direct costs have been removed, is the cost (real and opportunity) of releasing staff from the firm's operations and the resultant trade off between staff development and meeting customer deadlines. When questioned as to whether or not being reimbursed for replacing staff in these instances would influence participation rates, 59% of employers claimed that they would consider encouraging greater training participation amongst their workers. These are predominantly employers within small and medium-sized companies, as opposed to large employers, where there is usually a higher level of constraints relating to training engagement. Evidence from elsewhere also indicates that salary replacement schemes can play an important role in raising participations, for example Gasskov's (1998) research on salary replacement schemes in France and Belgium.

All the above evidence points us to the conclusion that one of the real — but difficult to measure — barriers to training is the relatively low-value held by many employers for formal qualifications. To our minds, many employers in Wales do

not embrace a skills economy philosophy focusing on long-term aspects, based on skills that should be demanded as well as those that are currently needed. Kitching and Blackburn's (2002) research also confirms that most employers in the UK do not perceive that there is a requirement to train staff, and as such hold very little value to learning. Until this employer value of learning increases it may be very difficult to sustain heightened demand for learning beyond cost free incentives, even if it is increasingly sought by the learner.

Conclusion

Within an increasingly knowledge-based environment it will be the ability to compete on skills and talent that will form the frontline for winning the battle for productivity and profit. This goes as much regions and nations as it does for firms, and must be firmly set within a culture of lifelong learning. However, in most instances this culture is far from embedded, and an understanding of how to create and participate in an integrated skills economy remains elusive. As the American business strategist Edward Gordon has commented 'Mention "life-long learning" to a typical group of managers and you will most likely hear a groan or see blank stares of disbelief. It's just too damn intellectual! Let's face it — many people still talk about the year they "got out", not of prison, but of school. For most people schooling was not a very pleasant experience. It was a life phase to get through. Yet talk to these same people about systems and productivity applications, complex issues though they may be, and you will get all their attention.' (Gordon, 2000, p. xviii).

This statement epitomises the challenges the lifelong learning agenda faces, and the on-going battle to see workforce development and training as investment rather than a cost. As Brown *et al.* (2001) argue, a highly skilled society is not an inevitable feature of operating within a global knowledge-driven economy. It only occurs through the commitment of policymakers, employers, employees, as well as the education system as a whole, to aspire to its creation. This article has shown that within Wales the perception amongst employers and employees that training is a high cost, low return undertaking remains a significant barrier to stimulating the demand for skill development and the participation of the adult workforce in lifelong learning. This is echoed in the conclusions drawn from a report produced by the UK Government's Performance and Innovation Unit (2001) suggesting that a number of market failures exist limiting the demand for learning amongst employers and employees.

However, we have also seen that removing the direct cost of training does actually increase participation rates to include the previously excluded, as well as broadening and diversifying the training base. Furthermore, this widening of the training horizon has offered employers greater opportunity to adopt medium to long-term strategies for training investment. Although the training opportunities stimulated by the LWP programme generated positive benefits to both employers and employees, the learning outcomes remain cost sensitive, and as such the sustainability of the learning stimulus beyond the intervention period remains in doubt. However, the onus of future investment in workforce training and development may not necessarily remain entirely at the door of the employer, even for lower levels of training. We suggest that given sufficient autonomy to develop the

'learning idea' and the general direction of training, workers have at least the potential to drive forward the lifelong learning agenda — and in the process even 'educate' their employers.

Future policies aimed at stimulating the demand for adult participation in learning must not overlook the influence of the individual worker. However, the sustainability of such policy initiatives are as much about changing cultural and perceptual attitudes encouraging a realisation of the value of training outcomes, as they are about creating an immediate catalyst for the current demand for learning. The role of cultural attitudes is increasingly becoming a central feature of competitiveness policy, with regional — rather than national — variations forming the focus of programme and initiatives sensitive to diversity on many levels. The LWP programme has offered a relatively small but nevertheless important input to such policymaking.

Acknowledgements

We would like to thank all those involved in the evaluation and assessment study of the Learning Workers Pilot, with particular thanks to Bob Waller from the Welsh Assembly Government for allowing us to utilise the interim assessment data for this article. However, the information and views contained in this article reflect the position and opinion of the authors and not necessarily those of the Welsh Assembly Government. We are also grateful to Sioned Lewis, Hefin Thomas and Stephen Bussell at RHA for the collation and compilation of the survey data.

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